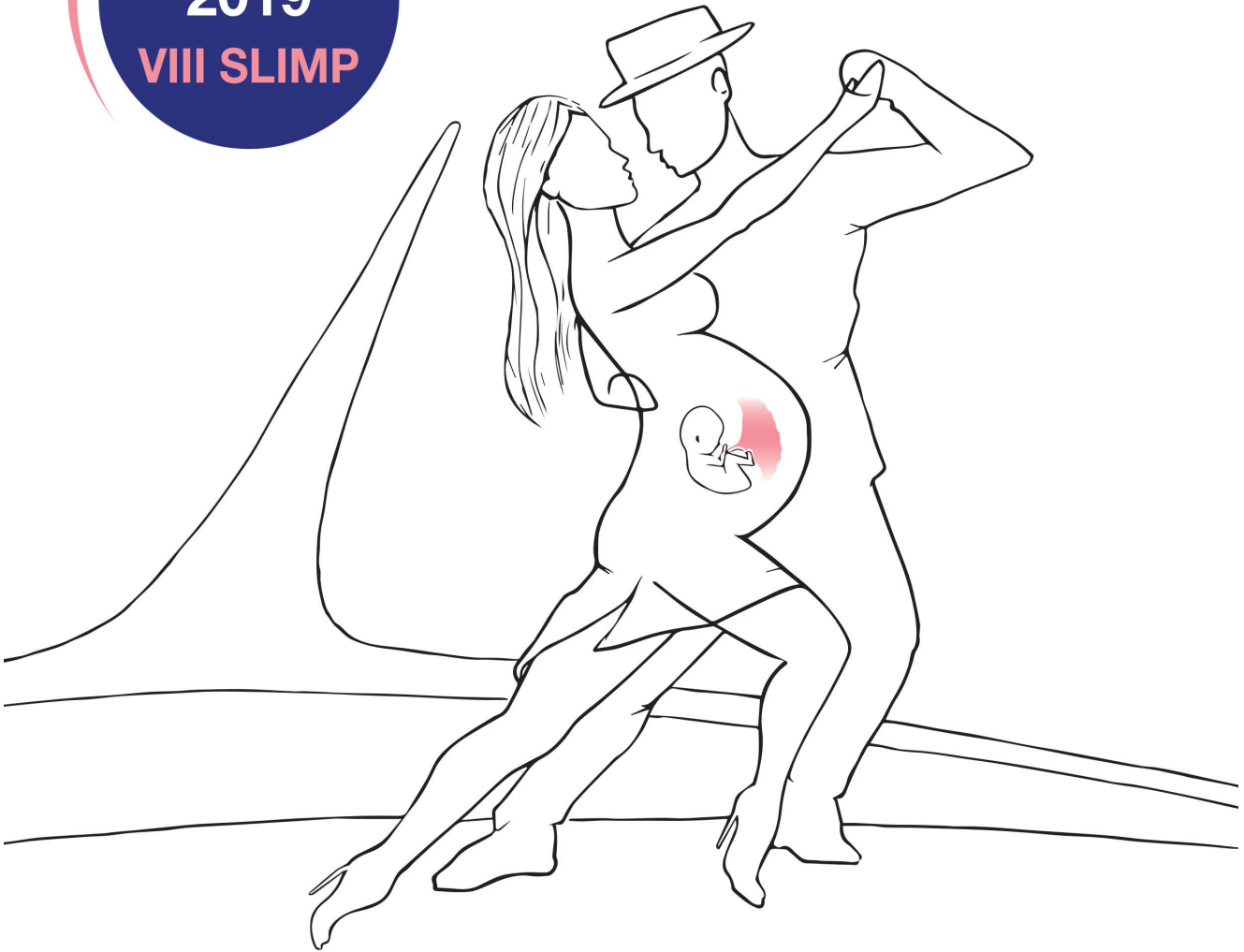


**IFPA  
2019  
VIII SLIMP**



# **IFPA 2019 - VIII SLIMP**

10 to 13 September 2019 • Buenos Aires, Argentina

**FULL PROGRAM BOOK**



**Latin American Society for Maternal Fetal  
Interaction and Placenta**

AUTHORITIES.....	1
WELCOME.....	4
COMMITTEES.....	7
SCIENTIFIC PROGRAMME OVERVIEW.....	9
GENERAL INFORMATION.....	13
IFPA 2019 CONGRESS APP.....	20
ORAL PRESENTATIONS INSTRUCTIONS.....	21
SPEAKER AND POSTER INSTRUCTIONS.....	23
SPEAKER BIOGRAPHIES- AWARDEES.....	26
SPEAKER BIOGRAPHIES.....	29
ABSTRACT BASED AWARDEES.....	41
PRE-MEETING CLINICAL SYMPOSIUM.....	45
SCIENTIFIC PROGRAMME.....	47
WORKSHOPS.....	62
EDUCATIONAL SESSIONS.....	74
MEET THE EXPERT SESSION.....	80
POSTER SESSION 1.....	82
POSTER SESSION 2.....	103
LATE SPEAKERS ABSTRACTS .....	127
LATE ABSTRACTS.....	129

**International Federation of Placenta Associations 2019 (IFPA2019)  
and 8<sup>th</sup> Latin American Symposium on Maternal-Fetal Interaction and  
Placenta (VIII SLIMP)**

*Placenta: the origin of pregnancy health and disease*

**IFPA 2019 LOCAL COMMITTEE**

**Chair** – Alicia Jawerbaum

**CoChair** – Estela Bevilacqua

**Secretary:** Evangelina Capobianco

**Members**

Alicia E. Damiano

Cecilia Varone

Nora Martínez

Alejandra Erlejman

## INTERNATIONAL FEDERATION OF PLACENTA ASSOCIATIONS (IFPA)

**President** – Claire Roberts

**Secretary** – Padma Murthi

**Treasurer** – Cathy Vaillancourt

**Executive Treasurer** – Helen Jones

## MEMBER ASSOCIATIONS AND EXECUTIVE COMMITTEE MEMBERS

### Australian & New Zealand Placenta Research Association

Claire Roberts  
Padma Murthi  
Joanna James  
Natalie Hannan

### European Placenta Group

Steve Charnock Jones  
Pascale Chavatte-Palmer (Spokesperson)  
Annetine Staff  
Lopa Leach  
(Alternates Udo Markert, Rohan Lewis)

### Japan Placenta Association

Keiichi Isaka  
Yoshiki Kudo  
Aikou Okamoto  
Kazuhiko Ino

### Placenta Association of the Americas

Isabella Caniggia (President of PAA)  
Nick Illsley  
Alicia Jawerbaum  
(Alternates Estela Bevilacqua, Luis Sobrevia)

## **Journal Editors**

Martin Knöfler (Placenta)  
Gendie Lash (Trophoblast Research)  
Anthony Perkins (Placenta).  
Yoel Sadovsky (Placenta)

## **Early Career Researcher Representatives**

Priya Pantham (USA)  
Josh Fisher (Australia)

## **Publications Committee Chair**

Leslie Myatt

## **Awards Committee Chair**

Padma Murthi



## **ALICIA JAWERBAUM**

### **Chair, IFPA 2019 – VIII SLIMP**

*CEFYBO-CONICET. School of Medicine, University of Buenos Aires, Buenos Aires, Argentina*

It is my pleasure to Welcome you to IFPA 2019 and VIII SLIMP. The long-term time for preparation reaches to end with the beginning of this exciting Meeting.

This is the second time that an IFPA Meeting is held in South America, and thus, this meeting in Argentina is highly expected in the countries of our region. On the other hand, IFPA Members from different countries will have the opportunity to experience the passionate nature of our South American cultures, and to meet an important number of Placental researches from Latin America. This interaction will nourish the progress of Placenta Research worldwide. The scientific and social program has a huge number of opportunities for this interaction.

The theme of this Meeting “Placenta: the origin of pregnancy health and disease” is highly comprehensive. We count with great International speakers, so I would like to thank all the speakers that will be part of this IFPA. It also has 12 workshops in different topics, and I would also like to thank the organizers in charge of them. It has long poster presentation sessions to allow having time to find and interact with your favorite presenting authors. We have included several ECR and educational activities, and I would like to thank those in charge of these interesting activities.

Now it is time to start and enjoy the program. During these four-day-meeting, I hope that all of you can enjoy, teach, learn and find something inspiring for the next step in your research in Placenta and Feto-Maternal interaction.

Welcome to IFPA 2019 Meeting in Buenos Aires! Bienvenidos!



## ESTELA BEVILACQUA

### Co-Chair, IFPA 2019 – VIII SLIMP

*Department of Cell and Developmental Biology, Institute of Biomedical Sciences, University of São Paulo, São Paulo, Brazil*

As a co-chair of the meeting, I would like to welcome you to the International Federation of Placenta Associations – IFPA 2019 conference and the VIII Meeting of the Latin America Society of Materno-Fetal Interaction and Placenta (VIII SLIMP). It is our pleasure to host this international event we hope you find stimulating and rewarding.

This year, the conference is being held in Buenos Aires on the campus of the Pontificia Catholic University, in Puerto Madero, at the edge of the river and just a 10-minute walk from downtown. Buenos Aires is a city full of charm, a combination of Latin and European ambient, with many cultural attractions, that should not be missed. We look forward to seeing you, and other conference participants, at this delightful venue. The conference starts on September 10, followed by sessions covering diverse aspects of the research and innovation related to placental science, which will happen up to September 13. You will have the opportunity to participate and to present your work, to establish essential scientific collaborations, and to see presentations from leading academics and practitioners in placenta field. The meeting also supports and promotes young scientists with travel grants and dedicated presentations. We have worked hard to create a program consisting of the best quality, state of the art in placenta science. We hope this makes the conference an exciting and memorable scientific event for you!

We look forward to seeing you all in Buenos Aires!



## CLAIRE ROBERTS

### President, IFPA

*Robinson Research Institute, University of Adelaide,  
Adelaide, South Australia*

It gives me great pleasure to welcome IFPA members and friends to Buenos Aires for the 2019 International Federation of Placenta Associations meeting held together with the 8<sup>th</sup> meeting of Sociedad Latinoamericana de Interaccion Materno-Fetal y Placenta (SLIMP). The meeting is chaired by Professor Alicia Jawerbaum, hosted by the Placenta Association of the Americas and sponsored by IFPA.

SLIMP was founded in 2000 by IFPA members attending the last Rochester Trophoblast and IFPA meeting in 2000. Since then Latin American placenta research has taken off encompassing comparative, basic and clinical placental science, as well as DOHAD research.

Latin America has an estimated 648 million people in 2019 with Argentina the 4<sup>th</sup> most populous with nearly 45 million people. Between 2015 and 2020 there will be over 52 million births in Latin America. At 10 million Latin American births each year and some very exotic eutherian and 73 metatherian (marsupial) species, the opportunities are endless for Latin American placenta researchers!

The IFPA/SLIMP 2019 program encourages new members and delegates from Latin America to join the IFPA network, to participate and contribute to global placenta research. We welcome new research priorities and collaborations on issues that impact the placenta and pregnancy success in the region and look forward to working further with SLIMP in the future.

The congress program has something for everyone in placenta science with both familiar and new faces. Importantly there are many opportunities for younger researchers to learn and engage with others in academic sessions, workshops and social functions. Take every opportunity you can.



## SCIENTIFIC COMMITTEE

## IFPA 2019 Scientific Committee

Aikou Okamoto  
Carlos Salomon  
Cathy Vaillancourt  
Chie Pen Chen  
Claire Roberts  
Cristina Ibarra  
Gil Mor  
Graham Burton  
Helen Jones  
Isabella Canniggia  
John Aplin  
Jürgen Pollheimer  
Larry Chamley  
Leslie Myatt  
Marijke Faas  
Melissa Westwood  
Michael Soares  
Nick Illsley  
Padma Murthi  
Silvia Daher  
Stacy Zamudio  
Theresa Powell  
Thomas Jansson  
Udo Markert  
Ulrike Kemmerling  
Vicki Clifton  
Yoel Sadovsky

## SLIMP 2019 Scientific Committee

Alexandre Boberly  
Ana María Franchi  
Andrea Leiva  
Angela Cadavid  
Carlos Escudero  
Cecilia Soñora  
Cilia Abad  
Claudia Pérez Leirós  
Débora Damasceno  
Dolores Busso  
Elisa Cezal  
Federico Jensen  
Graciela Panzetta  
Joelcio Abbade  
Julio Bueno  
Lawrence Hsu Lin  
Leandro Oliveira  
María Laura Ribeiro  
Mariana Farina  
Patricia Palmeira  
Reinaldo Marin  
Ricardo Fretes  
Rosanna Ramhorst  
Rossana Francisco  
Verónica White

## EARLY CAREER RESEARCHERS (ECR) COMMITTEE

### IFPA ECR Representatives

Priya Pantham and Josh Fisher

### Local Coordination

Daniel Paparini, Manuel Wolfson and Esteban Grasso

### Local Members

Ana Racca, Christian Castillo, Daiana Vota, Dalmiro Gómez Ribot, Erika Castaño Moreno, Flavia Sacerdoti, Jimena Beltrame, Julieta Aisemberg, Julieta Maymó, Jusciele Moreli, Mauricio Di Paola, Micaela Sordelli, Natalia Porthillo, Rodolfo Favaro

## CHAIR OF IFPA AWARDS COMMITTEE

Padma Murthi

## CHAIRS OF TROPHOBLAST RESEARCH AWARD COMMITTEE

Mark Dilworth and Lynda Harris

## CHAIR OF SLIMP AWARD COMMITTEE

Theresa Powell

### WEB PAGE AND SOCIAL MEDIA

Esteban Grasso

# SCIENTIFIC PROGRAM OVERVIEW



## September 10<sup>th</sup> (Tuesday)

	Aula Magna	Foyer JP II	Juan Pablo II
8:45			
9:00	By invitation: IFPA Executive Meeting and Lunch		
13:00			
13:30			
14:00			
14:15			Opening Ceremony and Opening Lecture.
15:00			
16:30			Hot topic Lectures: Stem Cells, MicroRNAs and 3D Technology
17:00		Coffee	
17:30			SLIMP New Investigator Award Lecture Elsevier Trophoblast Research New investigator Award Lecture. NIH Award Lecture.
18:00			
18:45			
19:00			Welcome Reception and YW Loke, Elsevier, NIH and SLIMP NI Awards Ceremony.
21:00			

# SCIENTIFIC PROGRAM OVERVIEW

## September 11<sup>th</sup> (Wednesday)

	Auditorium	Aula Magna	Foyer JP II	Juan Pablo II	Microcine	Outside the Venue	Sala de Lectura
8:00	Awards Committee Meeting - Orals By invitation.	Awards Committee Meeting - SLIMP By invitation.			Awards Committee Meeting - Posters TR NI Award By invitation.		
9:00		S#1: Metabolism & Programming.		S#2: Early Pregnancy.			
10:30			Coffee				
11:00							
12:15				Oral Presentations.			
13:00				IFPA Award in Placentology Lecture.			
14:00		ES#1 - Women in Science: Overcoming Challenges to Career Development. & lunch box		ES#2 - Getting Noticed - How to Compile and Publish a Paper & lunch box			
16:00	W#1: Mother-Fetus-Placenta Infection.	W#2: Preeclampsia and Fetal Growth Restriction: Similar or Different Placental Syndromes?		W#3: Feto-Maternal Communication Via Extracellular Vesicles - A Critical View.	W#4: Comparative Placentation – Animal Models.		
18:15							Poster Session #1
19:15			Early Career Research (ECR- New Investigators) Activity.				
19:30						Early Career Research (ECR -New Investigators) Social Activity.	
23:30							

# SCIENTIFIC PROGRAM OVERVIEW

## September 12<sup>th</sup> (Thursday)

	Auditorium	Aula Magna	Foyer JP II	Juan Pablo II	Microcine	Sala de Lectura
8:00	<i>Writing a Paper in English: Tips for Spanish Speakers.</i>	<i>Placenta/TR Editorial Board Meeting by invitation.</i>		<i>ES#3: Learning the Placenta Atlas Tool.</i>		
9:00						
9:30		<i>S#3: Inflammation.</i>		<i>S#4: Stem Cells and Cellularity.</i>		
10:30						
11:00			<i>Coffee</i>			
12:15				<i>Oral Presentations.</i>		
12:45				<i>Andre Gruslin Award Lecture.</i>		
13:45	<i>Regional Meeting JPA &amp; Lunch box.</i>	<i>Regional Meeting EPG &amp; Lunch box.</i>		<i>Regional Meeting PAA &amp; Lunch box.</i>	<i>Regional Meeting ANZPRA &amp; Lunch box.</i>	
14:15				<i>Plenary Lecture &amp; Mid Career Short Presentations</i>		
15:00						
17:15						<i>Poster Session #2</i>
19:15	<i>W#5: Cellular Signaling in the Placenta.</i>	<i>W#6: Novel Technologies in Placental Research.</i>		<i>W#7: Immunology in the Mother/Placenta/Fetus.</i>	<i>W#8: Newborn Size: Who Decides? Mother? Fetus? Placenta?</i>	
20:00		<i>Regional Meeting SLIMP.</i>				

# SCIENTIFIC PROGRAM OVERVIEW

## September 13<sup>th</sup> (Friday)

	Auditorium	Aula Magna	Foyer JP II	Juan Pablo II	Microcine	Sala de Lectura
8:00						
8:15						
9:00			Final Poster Selection SLIMP.	Mid Career Researchers - Short presentations		
10:00			Final Poster Selection Elsevier NI TR Award.			
10:30			Coffee			
12:50				Hot Topic Lectures: New Paradigms in Development.		
13:30				IFPA Meeting & Lunch Box.		
15:30	W#9: Preterm Birth and Labor.	W#10: Vascular Alteration in the Placenta: What is Happening Beyond Pregnancy Diseases.		W#11: Genetics and Epigenetics of the Placenta: Current Challenges.	W#12: Metabolic Diseases & Conse- quences in Offspring.	
16:00	Final Award Committee Meeting - Orals.	Final Award Committee Meeting - Posters TR NI Award.	Coffee		Final Award Committee Meeting - SLIMP.	
16:35				Plenary Lecture		
17:25				IFPA Senior Award in Placentology Lecture.		
18:00				Closing Lecture.		
18:30				Closing Ceremony.		
20:30						
23:50						Gala Dinner & Awards.

## GENERAL INFORMATION

## CONGRESS VENUE

The Universidad Católica Argentina (UCA), i.e. the Pontifical Catholic University of Argentina, is a private University, whose headquarters are located in Puerto Madero, Buenos Aires.

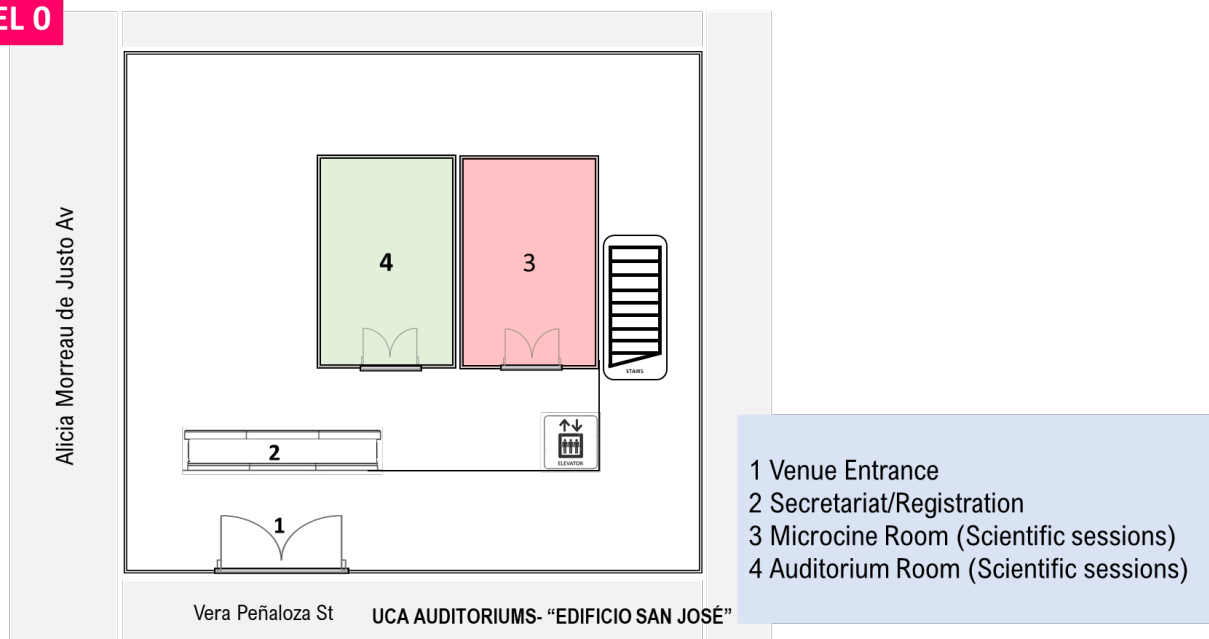
The Auditoriums of UCA are located in the modern, safe and comfortable neighborhood of Puerto Madero in the City of Buenos Aires. They are part of the UCA campus, which consists of four recycled docks, located in Dock 2 of this old Port. In the 1990s, the process of urbanization of the Old Puerto Madero began and this old port was incorporated to the City of Buenos Aires, combining the modern with the original design. In those days, UCA took the first steps towards building its campus in this neighborhood. The auditoriums were constructed with the latest technology and new designs, but also with noble materials recovered from the original construction.

## ADDRESS

Alicia Moreau de Justo 1680 - Puerto Madero. The access to the Meeting is by the street Rosa Vera Peñaloza. Name of the UCA Building **“EDIFICIO SAN JOSÉ”**.

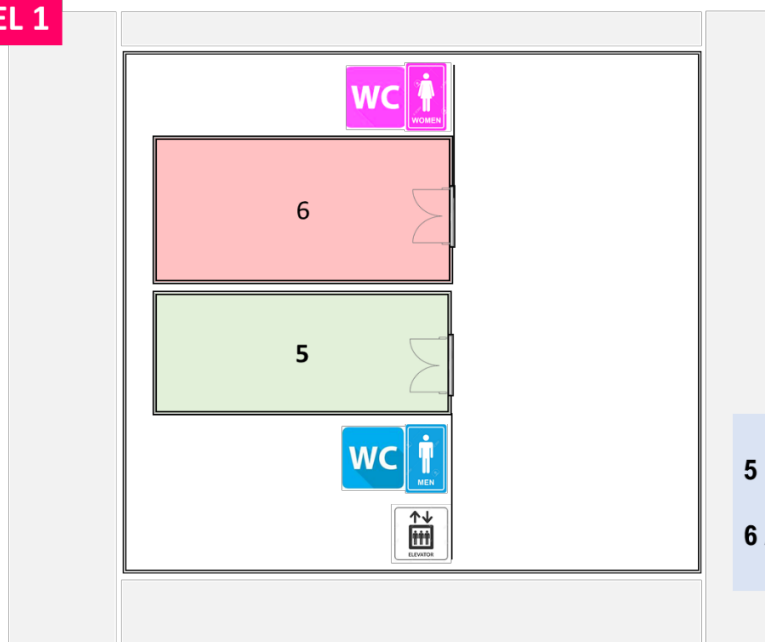
## ROOMS AND FACILITIES

### LEVEL 0



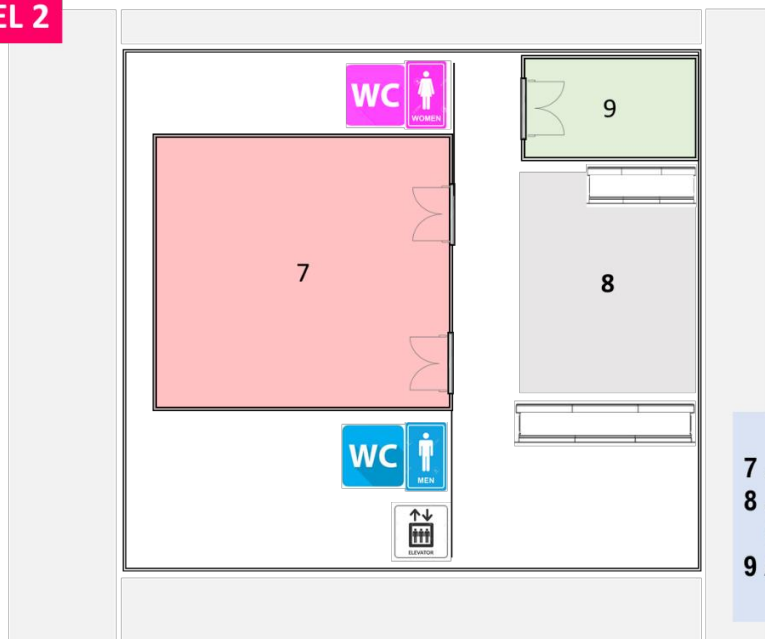
# GENERAL INFORMATION

## LEVEL 1



- 5 Sala de Lectura Room  
(Poster display/ Cofee break)
- 6 Aula Magna Room (Scientific sessions)

## LEVEL 2



- 7 Juan Pablo II Room (Scientific sessions)
- 8 Juan Pablo II Foyer  
(Poster display/ Coffee break)
- 9 Aula 203 Room (Speakers' room)



## GENERAL INFORMATION



## SECRETARIAT OPENING HOURS

Tuesday 10 September from 7:30 h to 18:00 h.

Wednesday 11 September from 7:30 h to 18:00 h.

Thursday 12 September from 7:30 h to 18:00 h.

Friday 13 September from 7:30 h to 18:00 h.

## EVENTS

### Welcome Reception and YW Loke, Elsevier, NIH and SLIMP NI Awards Ceremony

Tuesday 10 September at 19:00 h.

**Foyer Juan Pablo II. UCA.**

*Dress Code: Casual*

### Early Career Research Social Activity

Wednesday 11 September at 19:30 h

**La Fernetería Bar** - Serrano 1349

This requires pre-registration by sending an email to [ifpa2019ecr@gmail.com](mailto:ifpa2019ecr@gmail.com) before Wednesday 11 September at 10:00 h.

The bar is in Palermo neighborhood. New Investigators joining this social activity will meet from 19:15 to 19:30 at the entrance of UCA Auditorium.

Public transport (subway and 20 min walk) will be used to get there. The local ECR committee will help with this. If you will go by yourself, please ask for directions.

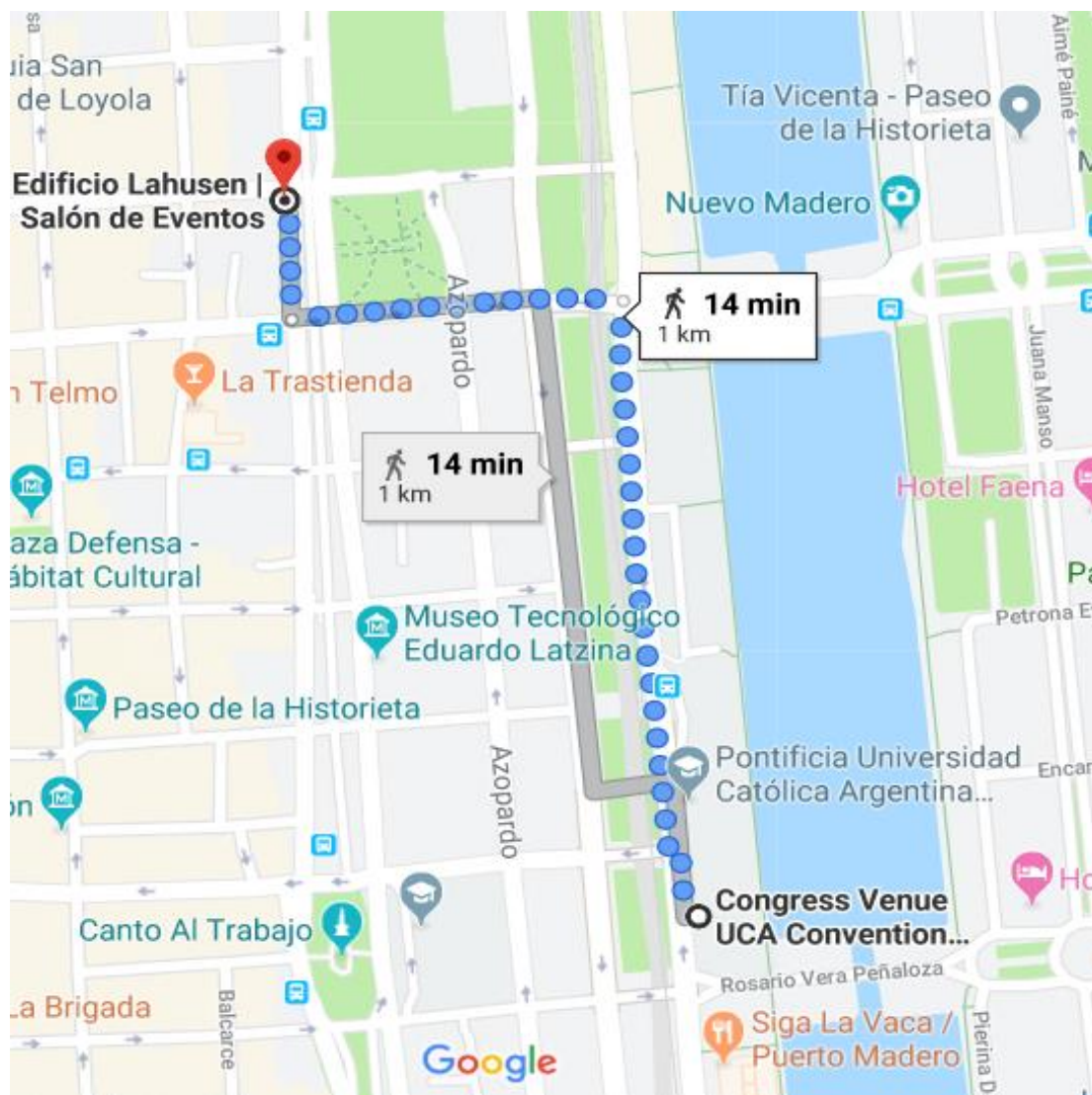
## GENERAL INFORMATION

### Gala Dinner & Awards

Friday 13 September at 20:30 h (Only for those registered for the Gala Dinner).

**Edificio Lahusen** - Av. Paseo Colón 301 (15 min walking from Congress Venue UCA Auditoriums).

*Dress Code: Smart casual or Elegant*



## GENERAL INFORMATION



### OFFICIAL APP FOR IFPA 2019

Available for attendees to access information about the full program, speakers and abstracts and to receive news on your mobile device

To download the app, please search for it in Apple Store/Google Play as IFPA 2019.

### WI FI

Free available for the meeting attendees

### SPEAKERS PREVIEW

Available from Tuesday 10 September, 7:30 h to Friday 13 September, 16:00 h at **room 203** (2<sup>nd</sup> floor). Please upload your presentation at least 2 h before the beginning of your session.

### CELL PHONES

Please keep them silent during all sessions

### PHOTO/VIDEO

Please do not take pictures/videos at the sessions unless specifically authorized by the speaker.

### SMOKING

Smoking is not allowed at UCA University.

### SECURITY

Please wear your name badge all the time.

Do not leave your personal belongings unattended at any moment.

We recommend to keep your passport at your hotel and only bring a copy or another type of identification document with you. We also recommend walking in groups or use a taxi after 22:30 h.

### CURRENCY/CREDIT CARDS

Only Argentine pesos but most credit/debit cards are acceptable at stores, bars and restaurants.

## GENERAL INFORMATION

### TIPPING

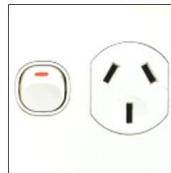
A 5 to 10 % is suggested at bars and restaurants, as it is usually not included. It is not needed at Taxi cabs.

### TAXIS

Usually found circulating within the city, but less frequently at Puerto Madero. Official App Buenos Aires Taxi (BA TAXI) at <https://www.buenosaires.gob.ar/taxis/ba-taxi-innovacion-para-mejorar-tus-viajes>

### ELECTRICITY

Electric current is uniformly 220 V/50 HZ. Please bring your adaptor.



PLUG OUTLET

TYPE I AUSTRALIAN AS/NZS 3112  
CHINESE CPCC-CCC  
ARGENTINE IRAM 2073 WALL OUTLET

## CERTIFICATES OF ATTENDANCE

The certificate of attendance will be available online from September 25 at [www.ifpa2019.org](http://www.ifpa2019.org).

## PUBLICATIONS



**ELSEVIER**

**Abstracts are published in *Placenta Journal*.**

*Placenta Issue 83*

*Pages e1 - e118*

## GENERAL INFORMATION



## FUNDING AGENCIES



FUNDACION  
HONORIO BIGAND

## SPONSORS



Biodynamics



*Sociedad Argentina de Biología*

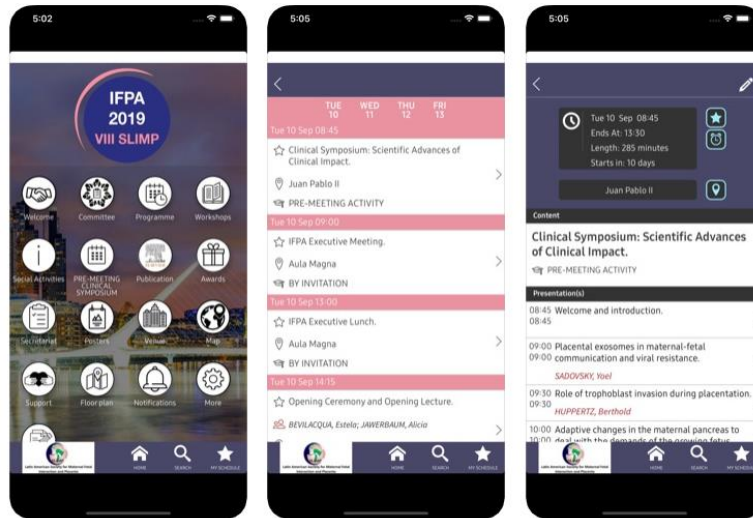
*Sociedad Argentina de Diabetes*

*Sociedad Argentina de Endocrinología Ginecológica y Reproductiva*

*Sociedad Argentina de Investigación Bioquímica y Biología Molecular*

*Sociedad Argentina de Investigación Clínica*

*Sociedad de Obstetricia y Ginecología de Buenos Aires (SOGIBA)*



The official IFPA 2019 Congress App is available as a free download for iPhone, Android and all tablets, and in a web version for all other devices.

- View all meeting information on your mobile device (program, abstracts, speakers, etc.).
- Browse the program by date and time, theme, and track.
- Search for individual abstracts, sessions and speakers.
- View full abstracts without the abstract booklet.
- Build a personalized schedule with built-in reminders.
- Receive important conference-related notifications and updates.

### Works across devices

- Mobile App for iPhone, Android and tablets.
- Web App for all other devices.
- Multi-device sync.

### Download the IFPA 2019 Congress App

- To download Mobile App, search IFPA 2019 in your Mac App store/Google Play store.

## SPEAKERS AND ORAL PRESENTATION INSTRUCTIONS



It is our great pleasure to welcome you as a speaker at **IFPA 2019 and VIII SLIMP** in Buenos Aires.

In order to ensure a smooth course during your session, we kindly ask you to consider the following instructions.

### **PLEASE PREPARE YOUR PRESENTATION ACCORDING TO THE ALLOWED TIME.**

Session moderators are instructed to rigorously enforce the schedule, i.e. to strictly obey the length of a presentation. We kindly ask you for your understanding and for your cooperation in keeping the schedule.

Please upload your presentation at least 2 hours before the session starts. For morning sessions, please upload your presentation the day before. Bring your presentation on a USB memory stick in Power Point format.

### **THE PRESENTATION SHOULD BE UPLOADED AT THE "ROOM 203", LOCATED AT THE 2ND FLOOR.**

You can there preview your presentation. Please bring your presentation to upload even if you plan to use your own computer (only allowed for Macintosh users and for presentations containing videos), so that will have a back up to switch to if needed.

A dataprojector and a PC will be available in all session rooms. The use of personal notebooks has to be announced to the technician in each session room before the session begins.

## POWERPOINT INSTRUCTIONS

Please prepare your presentation in PowerPoint and clearly identify your presentation, saving it with your family name as part of the file name.

### PICTURES/VIDEOS

JPG images are the preferred file format for inserted images. If you have embedded videos in your presentation; please test your presentation with the on-site PC several hours before your presentation. Generally, the WMV format should work with no difficulties. In case your video is not inserted in PowerPoint, it is possible to have it in other formats – MPEG 4 or MP4, AVI, MOV, or WMV. For MP4 or MOV the suggested codecs are H264, DivX and XviD.

*If you create your presentation using a Macintosh and/or moving images, please bring your own computer.*

The presentation laptop will be connected at the room. Nevertheless, please upload a copy at least 2 h before the session so that the room technician will have a back up to switch to if needed.

### OTHER INFORMATION

Your own computer for the presentation will be accepted only for Macintosh users and when required due to video Presentations. In this case, please do not forget to bring the adapter with you.

**ALL SPEAKERS ARE REQUESTED TO KEEP THE TIME OF THEIR PRESENTATION.**



# POSTER PRESENTATION INSTRUCTIONS



**ALL POSTERS SHOULD BE HANGED ON WEDNESDAY 11 SEPTEMBER FROM 8:00 TO 12:00 h.**

**Posters should be mounted as follows:**

**JUAN PABLO II ROOM:** P1.1 to P1.6 - P2.1 to P2.8 - LA1 to LA 8.

**JUAN PABLO II FOYER:** P1.7 to P1.61- P2.9 to P2.52.

**SALA DE LECTURA ROOM:** P1.61 to P1.155 - P2.53 to P2.161.

You can bring your own tape for hanging, and it will also be provided at the meeting.

## POSTER SESSION 1

**POSTER SESSION 1 WILL DEVELOP ON WEDNESDAY 11 SEPTEMBER FROM 16:00 TO 18:15 h.**

**IMPORTANT:** At this session new investigators presenting odd poster numbers should stay at their posters from 16:00 to 17:00 h to be judged. Those new investigators presenting even poster numbers should stay at their posters from 17:15 to 18:15 h to be judged.

### Topics in Poster Session 1:

#### **JUAN PABLO II ROOM:**

- *Anatomy and Pathology:* P1.1 to P1.6
- *Late Abstracts:* LA.1 to LA.8

#### **JUAN PABLO II FOYER:**

- *Angiogenesis/ Vasculature:* P1.7 to P1.13
- *Cell culture, proliferation and signaling:* P1.14 to P1.22
- *Developmental programming:* P1.23 to P1.27
- *Early pregnancy, implantation and invasion:* P1.28 to P1.33
- *Fetal growth restriction:* P1.34 to P1.41
- *Fetal Membranes/ Preterm labour and birth:* P1.43 to P1.51
- *Hormones/ Growth factors:* P1.52 to P1.61

#### **SALA DE LECTURA ROOM**

- *Immunology:* P1.62 to P1.69
- *Infection and inflammation:* P1.70 to P1.82
- *Metabolism and Metabolic Diseases:* P1.83 to P1.97
- *Periconceptional Health, embryo development and nutrition:* P1.98 to P1.104
- *Placental dysfunction:* P1.105 to P1.118

## POSTER PRESENTATION INSTRUCTIONS



- *Preeclampsia*: P1.120 to P1.133
- *Stem cells and cellularity*: P1.134 to P1.137
- *Transport/ Nutrients*: P1.138 to P1.145
- *Trophoblast biology*: P1.146 to P1.155

## POSTER SESSION 2

**POSTER SESSION 2 WILL DEVELOP ON THURSDAY 12 SEPTEMBER FROM 15:00 TO 17:15 h.**

IMPORTANT: At this session new investigators presenting odd poster numbers should stay at their posters from 15:00 to 16:00 h to be judged. Those new investigators presenting even poster numbers should stay at their posters from 16:15 to 17:15 h to be judged.

### Topics in Poster Session 2:

#### **JUAN PABLO II ROOM:**

- *Anatomy and pathology*: P2.1 to P2.8

#### **JUAN PABLO II FOYER:**

- *Angiogenesis/ Vasculature*: P2.9 to P2.15
- *Comparative/ Animal models*: P2.16 to P2.23
- *Developmental programming*: P2.24 to P2.29
- *Early pregnancy, implantation and invasion*: P2.30 to P2.37
- *Fetal growth restriction*: P2.38 to P2.44
- *Genomics, epigenomics and transcriptional regulation*: P2.45 to P2.52

#### **SALA DE LECTURA ROOM**

- *Imaging / New technologies*: P2.53 to P2.58
- *Immunology*: P2.59 to P2.67
- *Infection and inflammation*: P2.68 to P2.81
- *Metabolism and Metabolic Diseases*: P2.82 to P2.95
- *Metabolomics – Proteomics*: P2.96 to P2.98
- *Placental dysfunction*: P2.99 to P2.113
- *Preeclampsia*: P2.114 to P2.128
- *Stem cells and cellularity*: P2.129 to P2.135
- *Toxicology/ Oxidative Stress*: P2.136 to P2.143
- *Transport/ Nutrients*: P2.144 to P2.151
- *Trophoblast biology*: P2.152 to P2.161

## POSTER PRESENTATION INSTRUCTIONS

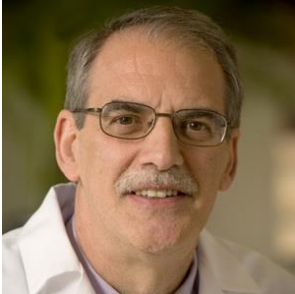


### **ALL POSTERS SHOULD BE RETIRED ON THURSDAY 12 SEPTEMBER from 19:00 to 20:00 h.**

On Thursday 12 September at 19:00 h we will announce through the app, email and social media, the 10 selected new investigators that will present their posters for final selection of the Elsevier Trophoblast Research New Investigator Award and the 10 selected New Investigators from Latin America that will present their posters for Final selection of the SLIMP Award. The selected New Investigators should mount their posters at the Juan Pablo II Foyer on Friday 13 September at 8:00 h. Selected New Investigators of the Elsevier Trophoblast Research New Investigator Award will present their posters on Friday 13, from 9:00 to 10:00 h. Selected New Investigators of the SLIMP Award will present their posters on Friday 13, from 8:15 – 9:15 h.

## POSTER PREPARATION INSTRUCTIONS

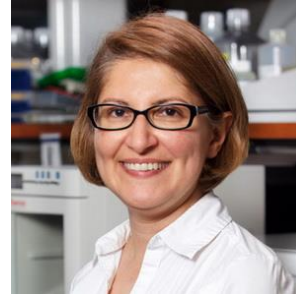
- The posters must be prepared entirely in English.
- Please prepare your posters in a material that allows an easy mounting with tape.
- The maximum usable surface of the display panels for the posters is 90 cm (width) x 140 cm (height).
- Please identify your poster with the number at the upper left side.
- Each poster should have the title, author's names, author's affiliations and contact author's email address on the upper part of the Poster.
  - The text of the poster should be concise and easily read at a distance of 2 meters. Diagrams should be simple. We recommend a font size of 22 pt or greater and lines at least 3 pt width.
  - Poster contents should include the objective, methods, results and conclusion of the work.
  - Posters not removed at Thursday 12 September 20:00 h will be dismantled and destroyed. Those posters selected for final award poster presentation on Friday Morning can be moved to the assigned place at the "Juan Pablo II Foyer" after 20:00 h or hanged on Friday 13 September at 8:00 h.



## IFPA SENIOR AWARD IN PLACENTOLOGY

**LESLIE MYATT**

Dr Myatt has served as Editor of Placenta (1997 to 2004) and President of IFPA (2002 to 2004). He studies the effects of maternal obesity, gestational diabetes and sexual dimorphism on mitochondrial respiration in the placenta and their relationship to epigenetic regulation of placental function and fetal programming. He has published over 280 papers.



## IFPA AWARD IN PLACENTOLOGY

**MANA PARAST**

Dr. Parast is a perinatal pathologist by clinical training, and placental biologist by research training. Her research focuses of the role of trophoblast stem/progenitor cells and their differentiated progeny in placenta-based complications of pregnancy and abnormal fetal growth.



## ANDRÉE GRUSLIN AWARD

**NATALIE HANNAN**

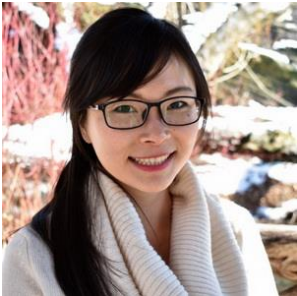
A/Prof Natalie Hannan has a dedicated focus on Women's health and understanding serious pregnancy complications, especially preeclampsia. Her preclinical research has attracted substantial funding support and has led to exciting clinical trials. A/Prof Hannan is President of the Australian and New Zealand Placental Research Association and is a veski Inspiring Women Fellow.



## NIH AWARD LECTURE

**TRACY BALE**

Tracy is a Professor of Pharmacology and Psychiatry, and Director of the Center for Epigenetic Research in Child Health and Brain Development in the School of Medicine, University of Maryland, USA. Dr. Bale completed her Ph.D. at the University of Washington and her postdoctoral work at the Salk Institute with Dr. Wylie Vale. She was previously a Professor of Neuroscience at the University of Pennsylvania for 15 years. Her research focuses on understanding the role of stress dysregulation in neurodevelopmental and neuropsychiatric diseases, and the sex differences that underlie disease vulnerability. Her groundbreaking work has uncovered the molecular mechanisms by which the environment influences parental germ cell signals and placental trophoblast development, altering fetal brain development and maturation. She has been the recipient of numerous awards for her research including the Richard E. Weitzman Memorial award from the Endocrine Society, the Medtronic Award from the Society for Women's Health Research, the Daniel H. Efron award from the American College of Neuropsychopharmacology and the Joseph Erlanger Distinguished Lecturer Award from the American Physiological Society.



**ELSEVIER TROPHOBLAST  
RESEARCH AWARD  
LECTURE**

**MANCY TONG**

Dr Mancy Tong is a postdoctoral associate in the laboratory of Dr Vikki Abrahams at Yale School of Medicine. Mancy obtained her PhD from The University of Auckland, New Zealand in 2017 under the mentorship of Dr Larry Chamley. Her current research looks at innate immune function and signalling at the materno-fetal interface.



**SLIMP NEW  
INVESTIGATOR AWARD  
LECTURE**

**CLAUDETTE CANTIN**

I am a biochemist from Pontificia Universidad Católica de Chile and I am currently working on my doctoral thesis focused on the characterization and effects of lipoproteins from hypercholesterolemic pregnant women on maternal vascular function.

## SPEAKER BIOGRAPHIES



**ANNETTINE STAFF**

Full-time Professor at the Faculty of Medicine, University of Oslo, Norway. Head of Research at the Oslo University Hospital, Division of Obstetrics and Gynaecology. Part-time work as a clinical consultant. Main research area is within molecular understanding of pregnancy complications, including preeclampsia, and future maternal cardiovascular health.



**BRIAN COX**

Brian Cox is an associate professor in the Dept. of Physiology at the University of Toronto and an expert in computational analysis of biological data sets with an emphasis on placental and trophoblast biology and pathology. He is an advisor to the NIH initiatives Placenta Atlas Tool and the Human Placenta Project.



**BERTHOLD HUPPERTZ**

Berthold is professor of cell biology and works on the human placenta since 25 years. He developed new concepts on the etiologies of preeclampsia and IUGR, pioneered the research on trophoblast apoptosis and identified new routes of trophoblast invasion. He has received the IFPA Award in Placentology (2009) and belongs to the most cited German speaking scientists in the field of reproductive biology (13,300 citations, h-index 60; google scholar).



**CLAIRE ROBERTS**

Claire Roberts is the Lloyd Cox Professorial Research Fellow at the University of Adelaide and Deputy Director of the Robinson Research Institute. She is the current President of IFPA. She has expertise in placental development in a range of species but has a particular focus on the role of the placenta and modifiable maternal exposures in women that impact pregnancy outcome.





**DAVID HILL**

David Hill is Scientific Director of the Lawson Health Research Institute in London, Ontario, Canada; is VP Research for London Health Sciences Centre and St. Joseph's Health Care London; and a Professor at Western University. His research has focused on the homeostatic mechanisms of  $\beta$ -cell expansion and insulin release, and the physiological changes underlying gestational diabetes and associated fetal development.



**ELENA ZAMBRANO**

Elena Zambrano is a biochemistry scientist in the programming field. Her current research is on the DOHaD in maternal undernutrition and obesity and the effects on offspring metabolism, behavior, sexual development and reproduction. Her team works with rodents as an experimental animal model. In the obesity model the current research focuses on maternal intervention before and during pregnancy to prevent offspring outcomes due to maternal obesity. Affiliation: Instituto Nacional de Ciencias Médicas y Nutrición Salvador Subirán, Reproductive Biology Department.



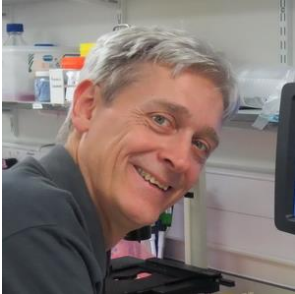
**ISABELLACANIGGIA**

Dr. Isabella Caniggia MD, PhD is a Senior Investigator at the Lunenfeld-Tanenbaum Research Institute of Sinai Health System and a Professor of Obstetrics and Gynaecology and Physiology at the University of Toronto. Dr. Caniggia is internationally recognized for her work on molecular mechanisms regulating normal placental development and diseases including preeclampsia and IUGR. More recently, she has established the relevance of sphingolipid metabolism in normal and pathological pregnancies and on placental cell death. She has received numerous honors and awards including the Ontario Women's Health CIHR Mid-Career Award, the Castellucci Award from IFPA and, more recently, the Canada Research Chair (Tier 1) in Placental Biology in Pregnancy and Disease for her innovative research. Her work is funded by CIHR, NIH and NSERC.



**GRAHAM BURTON**

Graham is the Marshall Professor of the Physiology of Reproduction at the University of Cambridge and the inaugural Director of the Centre for Trophoblast Research. He has a long-standing interest in the early development of the human placenta.



**JOHN APLIN**

John Aplin has spent many years researching implantation and placental development at the University of Manchester, UK. He has a particular interest in the development of in vitro models to overcome limitations in studying the early stages of pregnancy in human. He has contributed to IFPA meetings since the early days of the association.



**KENT THORNBURG**

Kent L.R. Thornburg is M. Lowell Edwards Chair and Professor of Medicine at Oregon Health & Science University where he directs the Center for Developmental Health. He studies how maternal influences alter placental function and fetal risk for later disease.



**MARTHA LAPPAS**

I am head of the Obstetrics, Nutrition and Endocrinology Group. I have published over 185 papers, 60 conference abstracts, 3 book chapters and delivered numerous lectures at national and international conferences. I have been the recipient of four postdoc fellowships and currently hold a University of Melbourne Senior Research Fellowship. My research interests include preterm birth and gestational diabetes. With respect to the gestational diabetes, a particular focus of the studies of my team is to unravel the cellular events involved in GDM, and test how modulating them can translate to improved outcomes.



**MARTIN KNÖFLER**

Martin Knöfler is Associate Professor at the Medical University of Vienna and the current European Editor of Placenta. 2001. His main research interests include molecular mechanisms and signalling pathways regulating human placental development, trophoblast differentiation, decidualization as well as the trophoblast-decidual cross-talk.



**MELISSA WESTWOOD**

Professor of Endocrinology, interested in determining how maternal signals influence molecular mechanisms governing human implantation and placental development/function. Chair of Local Organising Committee, IFPA 2017.



**MICHAL NEEMAN**

Dr. Neeman earned her Ph.D. in chemistry from the Weizmann Institute. She has developed multiple unique methods for imaging the process of angiogenesis or blood vessel formation and growth, especially in ovarian cancer, when tumor growth often relies on new blood vessels. She specializes in images by magnetic resonance and has focus in mechanisms of angiogenesis and the influence of hormonal changes in these processes. Her studies revealed important insights in developmental and tumoral processes.

Professor Michal Neeman received in 1998 the Morris L. Levinson Prize in Biology, in 1999 the Lindner Award from the Israel Endocrine Society, the Honorary Member Award of the International Society of Magnetic Resonance in Medicine and the Abisch-Frenkel Award for Excellence in Life Sciences. Dr. Neeman was Dean of the Faculty of Biology at the Weizmann Institute of Science, and professor in the Department of Biological Sciences. Since 2014 she is the Vice President of the Weizmann Institute.



**NICK ILLSLEY**

After time spent at the MRC in London, UCSF and Rutgers studying placental transport and metabolism, Dr Illsley is now a Senior Scientist at Hackensack University Medical Center. In the Center for Abnormal Placentation he is investigating the differentiation of cytotrophoblast into extravillous trophoblast and the abnormalities observed in invasion pathologies such as placenta accreta and preeclampsia.



**ORNELLA PAROLINI**

Professor Parolini is considered an international leader and reference point for placental stem cell research and their application in regenerative medicine. She is author of over 140 publications, 2 patents, 12 book chapters, and is Editor of a book entitled "Placenta the tree of life".

## SPEAKER BIOGRAPHIES



**PEGGY PETROFF**

Dr. Petroff was trained in the reproductive immunology laboratories of Joy Pate and Joan Hunt, and has made important contributions to our understanding of maternal immune tolerance to the fetus. Her work uses both human and murine models to understand mechanisms by which maternal immune cells respond to fetal antigens, and the contribution of the placenta in controlling this response.



**RICHARD MILLER**

Rich is Professor of Obs/Gyn, of Environmental Medicine and of Pathology and Clinical Laboratory Medicine. He is a founding member of IFPA and responsible for one of its predecessors – Rochester Trophoblast Conferences as well as Founding Editor of Trophoblast Research. He is Director of MotherToBaby UR Medicine and Co-Director of the NYS Children’s Environmental Health Center at URMC. His current research involves a number of NIH clinical studies in the USA and China focusing on the role of the placenta in predicting child health involving environmental exposures.

## SPEAKER BIOGRAPHIES



**ROHAN LEWIS**

Professor Lewis is Professor of Placental and Integrated Physiology at the University of Southampton. His research takes an integrated approach to the mechanisms underlying placental transfer including membrane transport, metabolism and placental structure. He is then seeking to understand how these different factors determine placental transfer through the use of computational modelling.



**STACY ZAMUDIO**

Dr. Zamudio was trained in Evolutionary Biology/Anthropology at the University of California, Los Angeles, and the University of Colorado in Boulder. Much of her work has focused on placental hypoxia (high altitude) and applied ultrasonography for quantification of blood flows, oxygen and nutrient delivery and uptake in mother and fetus. As Director of Research in the Department of Obstetrics and Gynecology and the Center for Abnormal Placentation at Hackensack University Medical Center, she has been engaged in studies of Abnormally Invasive Placenta (AIP, aka Placenta Accreta Spectrum-PAS). Clinical-translational work, funded by the NIH Human Placenta Project, has focused on ultrasound-based quantitative diagnosis of AIP, clinical outcomes in mother and neonate, and the pathophysiology of AIP at the molecular level.





**THOMAS JANSSON**

Dr. Jansson has a distinguished publication record, serves regularly on NIH study sections, and is Principal Investigator on numerous NIH grants and the recipient of several awards, such as the 2005 International Federation of Placenta Associations (IFPA) award and the 2017 President's Achievement Award of the Society for Reproductive Investigation. His translational research explores the cellular and molecular mechanisms that regulate placental function in normal pregnancy and in pregnancy complications and to investigate the role of the placenta in determining fetal growth and long-term health.



**VICKI CLIFTON**

Professor Vicki Clifton is a National Health and Medical Research Council Senior Research Fellow who is currently the Program leader of Mothers and Babies Theme at Mater Medical Research Institute in Brisbane Australia and Co Lead of the Brisbane Diamantina Health Partners Mothers and Babies Theme. Director of Clinical Research at the Lyell McEwin Hospital in Adelaide, Australia (2009-2014) and leader of the Allergy Research Priority. She is a past Editor of the Placenta Journal (2012-2018). She is currently an Executive member of the International Society of Endocrinology Board. Prof Clifton is internationally recognized for her research on asthma and pregnancy, birth cohort studies and her work in human placental physiology. Her current research focusses on the health of reproductive age couples and their children with a continued focus on pregnancy, placental function, fetal growth and childhood development. She leads the Queensland Family Cohort Study with a specific interest in the sex specific differences in the fetal-placental response to a complication of pregnancy.

## SPEAKER BIOGRAPHIES



**UDO MARKERT**

M.D. and professor, previous President of the American Society of Reproductive Immunology and President-Elect of the European Society of Reproductive Immunology, Editorial Board member of Placenta, JRI and AJRI (Associate Editor).



**YOEL SADOVSKY**

Executive Director, Magee Womens Research Institute, Elsie H Hillman Chair of Women's Health Research, Distinguished Professor of OBGYN, Microbiology and Molecular Genetics, Associate Dean, Women's Health Research and Reproductive Sciences.

## YW Loke New Investigator Travel Award

Awardeed	Affiliation	Country
Aldilane Lays X. Marques	Federal University of Alagoas	Brazil
Ashley Meakin	University of Queensland	Australia
Carlos Mario Rodríguez Colorado	Universidad de Antioquia	Colombia
Carlos Palma	The University of Queensland	Australia
Chanho (Peter) Park	Lunenfeld and Tanenbaum Research Institute	Canada
Cherie Hernandez	Pontificia Universidad Católica de Chile	Chile
Dalmiro Gomez Ribot	CEFYBO-CONICET - Universidad de Buenos Aires	Argentina
Emilie Hitzerd	Erasmus MC	Netherlands
Erika Castaño-Moreno	University of Chile	Chile
Gabriela Silva	Norwegian University of Science and Technology	Norway
Gudrun Meinhardt	Medical University of Vienna	Austria
Jonas Zaugg	University of Bern	Switzerland
Joshua Fisher	Griffith University	Australia
Julien Sallais	Institute of Medical Sciences, University of Toronto	Canada
Julieta Schander	CEFYBO-CONICET – Universidad de Buenos Aires	Argentina
Katrien De Clercq	KULeuven	Belgium
Lucila Gallino	IQUIBICEN- CONICET - Universidad de Buenos Aires	Argentina
Manuela Velásquez Berrio	University of Antioquia	Colombia
Mariana VALENTE	PARCC-HEGP-INSERM	France
Miira M. Klemetti	Lunenfeld and Tanenbaum Research Institute	Canada
Nadja Kupper	Medical University of Graz	Austria
Nanthini Jayabalan	The University of Queensland	Australia
Natalia Szpilbarg	IFIBIO Houssay- CONICET – Universidad de Buenos Aires	Argentina
Nicholas Maurice	Fred Hutchinson Cancer Research Center	USA
Nicole Protopapas	Queen's University	Canada
Pascale Robineau-Charette	University of Ottawa	Canada
Paula Accialini	CEFYBO-CONICET - Universidad de Buenos Aires	Argentina
Rabia Anwar	MDC	Germany
Ramiro Alarcón	Universidad Nacional del Litoral	Argentina
Rayane M. Botelho	Federal University of Alagoas	Brazil
Rona Karahoda	Charles University	Czech Republic
Ryan Guillies	Department of Pathology and Laboratory Medicine	Canada
Samantha Benton	University of Ottawa	Canada
Sampada Kallol	University of Bern	Switzerland
Sigrid Vondra	Medical University of Vienna	Austria
Sonya Frazier	University of Glasgow	United Kingdom
Thais Alves da Silva	Federal University of São Paulo	Brazil
Thaís Paula	UFMG	Brazil
Virginia Lorenz	Universidad Nacional del Litoral	Argentina
Viviana Arroyo-Jousse	University of Chile	Chile

## ELSEVIER New Investigator Award

Awardeed	Affiliation	Country
Anna Julia Pietrobon	University of São Paulo	Brazil
Barbara Fuenzalida	Pontificia Universidad Católica de Chile	Chile
Christian Castillo	University of Chile	Chile
Daiana Debora Fornes	CEFYBO-CONICET - Universidad de Buenos Aires	Argentina
Estefanía Peñaloza	Pontificia Universidad Católica de Chile	Chile
Fatima Merech	IQUIBICEN-CONICET-Universidad de Buenos Aires	Argentina
Gonzalo Fuentes	Pontificia Universidad Católica de Chile	Chile
Guillermina Calo	IQUIBICEN-CONICET-Universidad de Buenos Aires	Argentina
Jamille Dombrowski	University of São Paulo	Brazil
Karla Castro	University of São Paulo	Brazil
Kíssila Rabelo	Universidade do Estado do Rio de Janeiro	Brazil
Lisvaneth Medina	ICBM, Facultad de Medicina, Universidad de Chile	Chile
Lorena Carvajal	Pontificia Universidad Católica de Chile	Chile
María Jesús Varela	Universidad de Valparaíso	Chile
María José Moreira-Espinoza	Universidad Nacional Córdoba	Argentina
Mauricio Adriel Di Paola	Facultad de Farmacia y Bioquímica-Universidad de Buenos Aires	Argentina
Melisa Monteleone	Instituto de Investigaciones Biotecnológicas	Argentina
Rafaela Batista Molás	São Paulo State University	Brazil
Rinaldo R. dos Passos Junior	Federal University of Mato Grosso	Brazil
Sabrina Lorena Roberti	CEFYBO-CONICET - Universidad de Buenos Aires	Argentina
Tatiana Gámez	Pontificia Universidad Javeriana	Colombia
Thaís Garcia Santos	Universidad de Federal de Minas Gerais	Brazil
Yollyseth Medina	IFIBIO Houssay – CONICET- Universidad de Buenos Aires	Argentina

## National Institutes of Health New Investigator Travel Awards

<b>Awardeed</b>	<b>Affiliation</b>	<b>Country</b>
<b>Amanda Bowman</b>	Cincinnati Children's Hospital Medical Center	USA
<b>Amber Moore</b>	Stanford University	USA
<b>Haley Ragsdale</b>	Northwestern University	USA
<b>Jennifer Courtney</b>	Cincinnati Children's Hospital Medical Center	USA
<b>Jiaqi J O'Reilly</b>	The George Washington University	USA
<b>Ludwik Gorczyca</b>	The State University of New Jersey	USA
<b>Marisol Castillo-Castrejon</b>	University of Colorado Anschutz Medical Campus	USA
<b>Qian-Rong Qi</b>	University of California Irvine	USA
<b>Rebecca Wilson</b>	Cincinnati Children's Hospital Medical Center	USA

## SLIMP Mid-Career Travel Award

<b>Awardeed</b>	<b>Affiliation</b>	<b>Country</b>
<b>Andrea Leiva</b>	Pontificia Universidad Católica de Chile	Chile
<b>Carlos Escudero</b>	University of Concepción	Chile
<b>Enrique Guzman-Gutierrez</b>	Universidad de Concepción	Chile
<b>Erika Chavira-Suárez</b>	Universidad Nacional Autónoma de México	México
<b>Jaime Gutiérrez</b>	Universidad San Sebastián	Chile
<b>María Silvia Ventimiglia</b>	CEFYBO – CONICET - Universidad de Buenos Aires	Argentina
<b>Mariana Weigel Muñoz</b>	Instituto de Biología y Medicina Experimental	Argentina
<b>Mauricio Castro-Parodi</b>	Facultad de Farmacia y Bioquímica-Universidad de Buenos Aires	Argentina
<b>Romina Higa</b>	CEFYBO-CONICET - Universidad de Buenos Aires	Argentina
<b>Vanesa Hauk</b>	IQUIBICEN- CONICET- Universidad de Buenos Aires	Argentina

**“SCIENTIFIC ADVANCES OF CLINICAL IMPACT”**

ROOM “JUAN PABLO II”

September 10<sup>th</sup> (Tuesday)

**8:45 OPENING**

*Secretaries: DAMIANO, Alicia and VARONE, Cecilia*

**8:45-9:00 Welcome and introduction**

JAWERBAUM, Alicia and BEVILACQUA, Estela. IFPA 2019 chairs.

**SESSION 1 PLACENTATION AND MATERNAL-FETAL INTERACTIONS - NEW INSIGHTS**

*Chairs: DEMAYO, Sandra and VOTO, Liliana*

**9:00-9:30 Placental exosomes in maternal-fetal communication and viral resistance**

SADOVSKY, Yoel. University of Pittsburg. USA.

**9:30-10:00 Role of trophoblast invasion during placentation**

HUPPERTZ, Berthold. Medical University of Graz, Graz, Austria.

**SESSION 2 METABOLIC DISEASES IN PREGNANCY- NEW INSIGHTS**

*Chairs: GORBAN DE LAPERTOSA, Silvia and ROVIRA, Gabriela*

**10:00-10:30 Adaptive changes in the maternal pancreas to deal with the demands of the growing fetus**

HILL, David. The University of Western Ontario. Canada.

**10:30-11:00 The placenta and the epigenetic burden of programming**

THORNBURG, Kent. Oregon Health & Science University, Portland, USA.

**11:00-11:30 Coffee Break**

**SESSION 3 ROLE OF THE PLACENTA IN PREGNANCY DISEASES**

*Chairs: DI MARCO, Ingrid and BASUALDO, Natalia*

**11:30-12:00 Epidemiological, clinical and molecular insights into the pathophysiology of Abnormally Invasive Placenta (AIP)**

ZAMUDIO, Stacy. Hackensack University Medical Center, NJ, USA.

**12:00-12:30 Preeclampsia: current pathophysiological understanding**

STAFF, Annetine. Oslo University Hospital. Norway.

**SESSION 4 NEW TECHNOLOGIES IN PREGNANCY EVALUATION**

*Chairs: DI MARCO, Ingrid and BASUALDO, Natalia*

**12:30-13:00 MRI to evaluate placental function**

Michal Neeman. The Weizmann Institute of Sciences, Israel.

**13:00 CLOSURE**



September 10<sup>th</sup> (Tuesday)

Aula Magna BY INVITATION

09:00 - 13:00 IFPA Executive Meeting

Aula Magna BY INVITATION

13:00 - 14:00 IFPA Executive Lunch

Juan Pablo II IFPA 2019 Opening

14:15 - 15:00 *Chairs:* JAWERBAUM, Alicia and BEVILACQUA, Estella

**OPENING CEREMONY AND OPENING LECTURE**

**14:40 IFPA: At the forefront of placenta research**

ROBERTS, Claire. *University of Adelaide, South Australia.*

Juan Pablo II Hot Topic Lectures

15:00 - 16:30 *Chairs:* POLLHEIMER, Jürgen and PÉREZ LEIRÓS, Claudia

**STEM CELLS, MicroRNAs AND 3D TECHNOLOGY**

**15:00 Key molecular pathways and model system in human placental development**

KNÖFLER, Martin. *Medical University of Vienna, Austria.*

**15:30 Trophoblast communication with distant cells – messaging via extracellular vesicles and non-coding RNA**

MARKERT, Udo. *University Hospital Jena, Germany.*

**16:00 Multi-scale three-dimensional imaging of human placenta**

LEWIS, Rohan. *University, of Southampton, UK.*

Foyer JP II

16:30 - 17:00 Coffee Break

## September 10<sup>th</sup> (Tuesday)

### Juan Pablo II Award Session

*Chair:* BEVILACQUA, Estela  
**17:00 - 17:30 SLIMP NEW INVESTIGATOR AWARD LECTURE**

**17:00** **Supraphysiological maternal hypercholesterolemia modulates the composition and antiatherogenic functions of maternal and neonatal lipoproteins, beyond cholesterol levels during pregnancy**  
 CANTIN, Claudette. *Pontificia Universidad Católica de Chile, Chile.*

### Juan Pablo II Award Session

*Chair:* HARRIS, Lynda  
**17:30 - 18:00 ELSEVIER TROPHOBLAST RESEARCH NEW INVESTIGATOR AWARD LECTURE**

**17:30** **Neutrophil activation and extracellular trap formation at the fetal membranes: relevance for preterm birth**  
 TONG, Mancy. *Yale School of Medicine, USA.*

### Juan Pablo II Award Session

*Chair:* MYATT, Leslie  
**18:00 - 18:45 NIH AWARD LECTURE**

**18:00** **Parental stress delivery: somatic signals impacting development**  
 BALE, Tracy. *School of Medicine University of Maryland, USA.*

### Juan Pablo II SOCIAL ACTIVITY

**19:00 - 21:00 WELCOME RECEPTION AND YW LOKE, ELSEVIER, NIH AND SLIMP NI AWARDS CEREMONY**

September 11<sup>th</sup> (Wednesday)**Auditorium** BY INVITATION

08:00 - 09:00 Awards Committee Meeting - Orals &amp; Light breakfast

**Microcine** BY INVITATION

08:00 - 09:00 Awards Committee Meeting - Posters TR NI Award &amp; Light breakfast

**Aula Magna** BY INVITATION

08:00 - 09:00 Awards Committee Meeting - SLIMP &amp; Light breakfast

**Aula Magna** Symposium

09:00 - 10:30 *Chairs:* FRANCHI, Ana and ARANY, Edith  
**S#1: METABOLISM & PROGRAMMING**

09:00 *Glucose and O-GlcNAcylated protein regulation of maternal-placental interactions*  
WESTWOOD, Melissa. *The University of Manchester, UK.*

09:30 *Understanding the cross-talk between the placenta and the pancreas in the regulation of maternal metabolism during pregnancy*  
HILL, David. *Lawson Health Research Institute, Canada.*

10:00 *Interventions to prevent adverse fetal programming due to maternal obesity*  
ZAMBRANO, Elena. *Instituto Nacional de Ciencias Médicas y Nutrición Salvador Subirán, Mexico.*

**Juan Pablo II** Symposium

09:00 - 10:30 *Chairs:* FOURNIER, Thierry and GRAHAM, Charles  
**S#2: EARLY PREGNANCY**

09:00 *Trophoblast invasion and the etiologies of preeclampsia and IUGR*  
HUPPERTZ, Berthold. *Medical University of Graz, Austria.*

09:30 *Early steps in trophoblast differentiation*  
APLIN, John. *University of Manchester, UK.*

10:00 *Early placental development and the trophoblast-endometrial dialogue; new insights from organoid cultures*  
BURTON, Graham. *University of Cambridge, UK.*

September 11<sup>th</sup> (Wednesday)

## Foyer JP II

10:30 – 11:00 Coffee Break

## Juan Pablo II New Investigators Session

11:00 - 12:15 Chairs: VAN DIJK, Marie and SALOMON, Carlos

## ORAL PRESENTATIONS

11:00 Conditional Deletion of Phd2 in Spongiotrophoblasts Mimics Early Onset Preeclampsia

SALLAIS, Julien. *Institute of Medical Sciences, University of Toronto, Canada.*

11:15 Transcriptome profiling reveals unique spectra of macrophage activation in decidua basalis and parietalis

VONDRA, Sigrid. *Medical University of Vienna, Austria.*

11:30 Sex-dependent differences in placental serotonin handling

KARAHODA, Rona. *Faculty of Pharmacy, Charles University, Czech Republic.*

11:45 Effect of neonatal exposure to endosulfan on myometrial adaptation during early pregnancy and labor in rats

ALARCON, Ramiro. *Institute of Health and Environment of Litoral, Universidad Nacional del Litoral, Argentina.*

12:00 Circulating CD31+ Exosomes are Significantly Elevated with a Proliferative and Angiogenic but Anti-apoptotic mRNA Signature in Pregnant Women with Placenta Accreta Spectrum

RONG QI, Qian. *University of California Irvine, USA.*

## Juan Pablo II Award Session

12:15 - 13:00 Chairs: JANSSON, Thomas

## IFPA AWARD IN PLACENTOLOGY LECTURE

12:15 Human trophoblast stem/progenitor cells and differentiated progeny in placental development and disease

PARAST, Mana. *University of California San Diego, USA.*

## September 11<sup>th</sup> (Wednesday)

### Aula Magna Educational Session & Lunch

#### 13:00 - 14:00 ES#1 - WOMEN IN SCIENCE: OVERCOMING CHALLENGES TO CAREER DEVELOPMENT

*Organizers*

ZAMUDIO, Stacy  
ALEKSUNES, Lauren

### Juan Pablo II Educational Session & Lunch

#### 13:00 - 14:00 ES#2 - GETTING NOTICED - HOW TO COMPILE AND PUBLISH A PAPER

*Organizers*

SADOVSKY, Yoel  
KNÖFLER, Martin  
PERKINS, Anthony

### Auditorium Workshop

#### 14:00 - 16:00 W#1: MOTHER-FETUS-PLACENTA INFECTION

*Organizers*

IBARRA, Cristina  
KEMMERLING, Ulrike

### Aula Magna Workshop

#### 14:00 - 16:00 W#2: PREECLAMPSIA AND FETAL GROWTH RESTRICTION: SIMILAR OR DIFFERENT PLACENTAL SYNDROMES?

*Organizers*

FARINA, Mariana Gabriela  
STAFF, Annetine

### Juan Pablo II Workshop

#### 14:00 - 16:00 W#3: FETO-MATERNAL COMMUNICATION VIA EXTRACELLULAR VESICLES - A CRITICAL VIEW

*Organizers*

CHAMLEY, Larry  
SALOMON, Carlos

## September 11<sup>th</sup> (Wednesday)

### Microcine

### Workshop

14:00 - 16:00

**W#4: COMPARATIVE PLACENTATION – ANIMAL MODELS**

*Organizers*

PFARRER, Christiane

WILDMAN, Derek

Sala de Lectura  
Juan Pablo II  
Foyer JP II

### Poster Session

16:00 - 18:15

**POSTER SESSION #1 & COFFEE**

Foyer JP II

### Meet The Expert Session

18:15 - 19:15

**EARLY CAREER RESEARCH (ECR- NEW INVESTIGATORS) ACTIVITY**

OUTSIDE THE  
VENUE

### SOCIAL ACTIVITY

19:30 - 23:30

**EARLY CAREER RESEARCH (ECR -NEW INVESTIGATORS) SOCIAL ACTIVITY**

## September 12<sup>th</sup> (Thursday)

**Aula magna** BY INVITATION

**08:00 - 09:00** Placenta/TR Editorial Board Meeting

**Auditorium** Sponsored Educational Session

**08:00 - 09:00** WRITING A PAPER IN ENGLISH: TIPS FOR SPANISH SPEAKERS

*Chair:* CAPOBIANCO, Evangelina

*Organizer:* EUSEVI, María Victoria

**Juan Pablo II** Educational Session

**08:00 - 09:30** ES#3: LEARNING THE PLACENTA ATLAS TOOL

*Organizer*

COX, Brian

**Aula Magna** Symposium

*Chairs:* DESOYE, Gernot and RUDGE, Marilza

**09:00 - 10:30** S#3: INFLAMMATION

**09:00** *Novel mechanisms and long-term implications of maternal tolerance to the semiallogeneic fetus during pregnancy*

PETROFF, Peggy. *Michigan State University, USA.*

**09:30** *Role of adipose tissue mediators in regulating placental function in gestational diabetes*

LAPPAS, Martha. *The University of Melbourne, Australia.*

**10:00** *The regulation of placental inflammation by glucocorticoid receptor isoforms*

CLIFTON, Vicki. *University of Queensland, Australia.*

September 12<sup>th</sup> (Thursday)

## Juan Pablo II Symposium

- 09:30 - 10:30** *Chairs:* BURTON, Graham and MURTHI, Padma  
**S#4: STEM CELLS AND CELLULARITY**
- 09:30** *Amniotic membrane derivatives from bench to bedside: where do we stand?*  
PAROLINI, Ornella. *Università Cattolica del Sacro Cuore, Italy.*
- 10:00** *In vivo and in vitro comparisons of trophoblast development at single cell resolution*  
COX, Brian. *University of Toronto, Canada.*

## Foyer JPII

## 10:30 - 11:00 Coffee Break

## Juan Pablo II New Investigators Session

- 11:00 - 12:15** *Chairs:* VAILLANCOURT, Cathy and JAMES, Joanna  
**ORAL PRESENTATIONS**
- 11:00** **Effect of polyclonal Immunoglobulins-G purified from sera of patients with different clinical manifestations of the antiphospholipid syndrome on endothelial cells and monocytes: possible pro-thrombotic mechanism.**  
VELÁSQUEZ BERRIO, Manuela. *University of Antioquia, Colombia.*
- 11:15** **NLRP3 inflammasome expression by maternal and fetal cells in the decidua and its association with preeclampsia.**  
SILVA, Gabriela. *Norwegian University of Science and Technology, Norway.*
- 11:30** **Placental TRPV2 expression is indispensable for normal fetal growth.**  
DE CLERCQ, Katrien. *KU Leuven, Belgium.*
- 11:45** **A maternal diet enriched in olive oil prevents pro-inflammatory alterations in term placentas from diabetic pregnant women.**  
GOMEZ RIBOT, Dalmiro. *CEFYO-CONICET, University of Buenos Aires, Argentina.*
- 12:00** **Elucidating a role for Pw1/Peg3 in placental labyrinth formation and plasticity.**  
VALENTE, Mariana. *PARCC-HEGP-INSERM, France.*



September 12<sup>th</sup> (Thursday)

## Juan Pablo II Award Session

12:15 - 12:45 *Chair: CANIGGIA, Isabella*  
**ANDRE GRUSLIN AWARD LECTURE**

**12:15 Novel approaches to treat preeclampsia: from new drugs to innovative delivery**  
HANNAN, Natalie. *University of Melbourne, Australia.*

## Auditorium Regional Meeting

12:45 - 13:45 **REGIONAL MEETING JPA & LUNCH BOX**

## Aula Magna Regional Meeting

12:45 - 13:45 **REGIONAL MEETING EPG & LUNCH BOX**

## Juan Pablo II Regional Meeting

12:45 - 13:45 **REGIONAL MEETING PAA & LUNCH BOX**

## Microcine Regional Meeting

12:45 - 13:45 **REGIONAL MEETING ANZPRA & LUNCH BOX**

## Juan Pablo II Plenary Lecture

13:45 - 14:15 *Chairs: DAHER, Silvia and ZYGMUNT, Marek*  
**PLENARY LECTURE**

**13:45 The role of maternal adiponectin and placental mTOR signaling in fetal programming of adult disease.**  
JANSSON, Thomas. *University of Colorado Anschutz Medical Campus, USA.*

## September 12<sup>th</sup> (Thursday)

### Juan Pablo II MID CAREER SESSION

*Chairs:* DAHER, Silvia and ZYGMUNT, Marek

#### 14:15 - 15:00 SHORT PRESENTATIONS

**14:15 The role of the tumour suppressor BRCA1-associated protein 1 (Bap1) in regulating trophoblast differentiation and invasiveness**

PÉREZ GARCÍA, Vicente. *The Babraham Institute, UK.*

**14:35 Innate Lymphoid Cell Type 3 (ILC3s) antigen presentation potential and cytokine expression are regulated by local factors of early pregnancy**

MUZZIO, Damián. *University Medicine Greifswald, Germany.*

Sala de Lectura  
Juan Pablo II  
Foyer JP II

### Poster Session

#### 15:00 - 17:15 POSTER SESSION #2 & COFFEE

### Auditorium Workshop

#### 17:15 - 19:15 W#5: CELLULAR SIGNALING IN THE PLACENTA

*Organizers*

LEIVA, Andrea

POWELL, Theresa

### Aula Magna Workshop

#### 17:15 - 19:15 W#6: NOVEL TECHNOLOGIES IN PLACENTAL RESEARCH

*Organizers*

HARRIS, Lynda

MURTHI, Padma

September 12<sup>th</sup> (Thursday)

Juan Pablo II **Workshop**

17:15 - 19:15 **W#7: IMMUNOLOGY IN THE MOTHER/PLACENTA/FETUS**

*Organizers*

FAAS, Marijke

RAMHORST, Rosanna

Microcine **Workshop**

17:15 - 19:15 **W#8: NEWBORN SIZE: WHO DECIDES? MOTHER? FETUS? PLACENTA?**

*Organizers*

LEACH, Lopa

SALAFIA, Carolyn

Aula Magna **Regional Meeting**

19:15 - 20:00 **REGIONAL MEETING SLIMP**

September 13<sup>th</sup> (Friday)

## Juan Pablo II MID CAREER SESSION

*Chairs:* SFERRUZZI-PERRI, Amanda and BLOISE, Enrrico

**08:00 - 10:00** SHORT PRESENTATIONS

- 08:00** **Expression and localization of placental miRNAs in gestational diabetes mellitus pregnancies.**  
FAVARO, Rodolfo. *University Hospital Jena, Germany.*
- 08:20** **Genomic risk for schizophrenia converges into isoform-level coexpression network of the placental transcriptome.**  
URSINI, Gianluca. *Johns Hopkins University, USA.*
- 08:40** **Transcriptional co-activator TAZ controls extravillous trophoblast formation and function in the developing human placenta.**  
HAIDER, Sandra. *Medical University of Vienna, Austria.*
- 09:00** **Placental mTOR insufficiency during pregnancy predisposes female offspring to obesity-induced insulin resistance.**  
ALEJANDRO, Emilyn. *University of Minnesota, USA.*
- 09:20** **AMPK-GLUT3 mediated metabolic reprogramming in preeclamptic placenta.**  
TONG, Chao. *The First Affiliated Hospital of Chongqing Medical University, China.*
- 09:40** **Trophoblast fusion and function is regulated by biophysical features of the placental microenvironment during development and disease.**  
MORAES, Christopher. *McGill University, Canada.*

## Foyer JP II Poster Session

**08:15 - 09:00** FINAL POSTER SELECTION SLIMP AWARD

## Foyer JP II Poster Session

**09:00 - 10:00** FINAL POSTER SELECTION ELSEVIER NI TR AWARD

## Foyer JP II

**10:00 - 10:30** Coffee Break

## September 13<sup>th</sup> (Friday)

### Juan Pablo II Hot Topic Lectures

- 10:30 - 12:50** **Chairs:** HUPPERTZ, Berthold and CHAVATTE-PALMER, Pascale  
**NEW PARADIGMS ON DEVELOPMENT**
- 10:30** **Is the term villous human trophoblast a 2-layered organ?**  
THORNBURG, Kent. *Oregon Health & Science University, USA.*
- 11:05** **Placental exosomes: the knowns and the known unknowns**  
SADOVSKY, Yoel. *University of Pittsburg. USA.*
- 11:40** **MRI of embryo implantation**  
NEEMAN, Michal. *The Weizmann Institute of Sciences, Israel.*
- 12:15** **A multi-center national approach to studying the importance of the placenta to maternal-child health and environmental exposures: the NIH Environmental influences on Child Health Outcomes (ECHO) study**  
MILLER, Richard. *University of Rochester Medical Center, USA.*

### Juan Pablo II IFPA Meeting

**12:50 - 13:30** **IFPA MEETING & LUNCH BOX**

### Auditorium Workshop

**13:30 - 15:30** **W#9: PRETERM BIRTH AND LABOR**  
*Organizers*  
FRANCHI, Ana Maria  
JENSEN, Cristian Federico

### Aula Magna Workshop

**13:30 - 15:30** **W#10: VASCULAR ALTERATION IN THE PLACENTA: WHAT IS HAPPENING BEYOND PREGNANCY DISEASES**  
*Organizers*  
ESCUDERO, Carlos  
ROBERTS, James

September 13<sup>th</sup> (Friday)

Juan Pablo II **Workshop**

13:30 - 15:30 **W#11: GENETICS AND EPIGENETICS OF THE PLACENTA: CURRENT CHALLENGES**

*Organizers*

CASANELLO, Paola

ROBINSON, Wendy

Microcine **Workshop**

13:30 - 15:30 **W#12: METABOLIC DISEASES & CONSEQUENCES IN OFFSPRING**

*Organizers*

WADSACK, Christian

WHITE, Verónica

Auditorium **BY INVITATION**

15:30 - 16:00 **FINAL AWARD COMMITTEE MEETING – ORALS**

Aula Magna **BY INVITATION**

15:30 - 16:00 **FINAL AWARD COMMITTEE MEETING - POSTERS TR NI AWARD**

Microcine **BY INVITATION**

15:30 - 16:00 **FINAL AWARD COMMITTEE MEETING – SLIMP**

Foyer JP II

15:30 - 16:00 **Coffee Break**

## September 13<sup>th</sup> (Friday)

### Juan Pablo II Plenary Lecture

16:00 - 16:35 *Chair:* ILLSLEY, Nick  
**PLENARY LECTURE**

**16:00** **Me AMOT no me AMOT: faulty oxygen sensing mechanisms in preeclampsia disrupts angiomin function on trophoblast cell migration**  
CANIGGIA, Isabella. *University of Toronto, Canada.*

### Juan Pablo II Award Session

16:35 - 17:25 *Chair:* ROBERTS, Claire  
**IFPA SENIOR AWARD IN PLACENTOLOGY LECTURE**

**16:35** **Sexual dimorphism in regulation of trophoblast respiration and metabolic reprogramming with obesity and gestational diabetes**  
MYATT, Leslie. *Oregon Health and Science University, USA.*

### Juan Pablo II Plenary Lecture

17:25 - 18:00 *Chairs:* JAWERBAUM, Alicia and BEVILACQUA, Estela  
**CLOSING LECTURE**

**17:25** **Changes in time and space: the development of extravillous trophoblast in normal and pathological pregnancies**  
ILLSLEY, Nick. *Hackensack University Medical Center, USA.*

### Juan Pablo II Social Activity

18:00 - 18:30 **CLOSING CEREMONY**

**OUTSIDE THE  
VENUE**

**SOCIAL ACTIVITY**

20:30 - 23:50 **GALA DINNER & AWARDS**

## W#1: Mother-fetus-placenta Infection

Auditorium      Wed. Sep 11      14:00 - 16:00

### Organizers



**CRISTINA IBARRA**

Facultad de Medicina, Universidad de Buenos Aires,  
Argentina



**ULRIKE KEMMERLING**

Instituto de Ciencias Biomédicas, Facultad de Medicina,  
Universidad de Chile, Chile

**SUMMARY:** Infections during pregnancy lead directly and indirectly to a spectrum of adverse maternal and fetal/placental effects. Congenital transmission of pathogens is the consequence of complex interactions among the pathogen, maternal and fetal/newborn immune responses, and placental factors. Here we will discuss different topics about infection with different pathogens during pregnancy including the Shiga toxin producing *Echerichia coli*, *Trypanosoma cruzi* the protozoan parasite that causes Chagas disease and Zika virus. Intrinsic factors of the different pathogens, placental factors as well as the inflammatory/immune response triggered by these pathogens will be discussed.

### Speakers

- Huishu Liu, Guangzhou Women and Children's Medical Center, China.
- Alejandro Schijman, INGEBI, Argentina.
- Claudia Duarte dos Santos, Instituto Carlos Chagas, Fiocruz, Río de Janeiro, Brazil.
- Flavia Sacerdoti, Universidad de Buenos Aires, Argentina.
- María Laura Costa, UNICAMP, Brazil.
- Ulrike Kemmerling, Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad de Chile, Chile.



## W#2: Preeclampsia and Fetal Growth Restriction: similar or different placental syndromes?

Aula Magna      Wed. Sep 11      14:00 - 16:00

### Organizers



**ANNETINE STAFF**

MD, PhD. Professor, University of Oslo, Norway. Head of Research, Consultant, Division of Obstetrics and Gynecology, Oslo University Hospital, Norway.



**MARIANA FARINA**

Head of Laboratory of Physiopathology of Placenta, CEFYBO-UBA-CONICET, Bs As, Argentina

**SUMMARY:** This workshop is dedicated to discuss similarities and differences between the two common and life threatening placental syndromes preeclampsia and fetal growth restriction (FGR). The topics will include pathophysiology, placental morphology and function, biomarkers and relation to future maternal and offspring health. Dysfunctional placental function is common for both preeclampsia and FGR. Abnormal placentation and abnormal trophoblast invasion and function is common both for early-onset preeclampsia and FGR. New-onset hypertension after gestational week 20 and FGR is today one of the clinical criteria to define preeclampsia in many revised definitions, in the absence of new-onset proteinuria. In this workshop, we will discuss the similarities and differences between these placental syndromes and discuss whether they represent separate or partly overlapping etiologies and pathophysiologies.

### Speakers

- Chris Redman, University of Oxford, United Kingdom.
- Alicia E. Damiano, University of Buenos Aires, Argentina.
- Tu'uhevaha Kaitu'u-Lino, University of Melbourne, Australia.
- Juan Arroyo, Brigham Young University, UT, USA.
- Stefan Hansson, University of Lund, Sweden.

### W#3: Feto-maternal communication via extracellular vesicles - a critical view

Juan Pablo II      Wed. Sep 11      14:00 - 16:00

#### Organizers



**CARLOS SALOMON**

University of Queensland Centre for Clinical Research,  
Australia



**LARRY CHAMLEY**

University of Auckland, Auckland, New Zealand

**SUMMARY:** The past decade has observed an extraordinary explosion of research in the field of extracellular vesicles (EVs). There are different population of EVs including nanovesicles (some of which are exosomes) microvesicles and in the specific case of the human placenta, macrovesicles. As this very rapidly expanding field grows we are learning that within the different sized vesicle populations there are additional specialized subsets of EVs that may have specific functions. For example, exosomes may be sub-classified as exomeres, exo-S and exo-L (accordingly to their size) Regardless of the type, all EVs carry complex cargos including various nucleic acids, proteins and lipids all of which may be biologically active. Placental EVs are targeted to specific maternal organs and have the potential to regulate maternal cellular and organ function during pregnancy. Thus, placental EVs may be major players in feto-maternal communication. Since placental EVs are present in the maternal blood they are also potentially readily accessible biomarkers of fetal well-being

#### Speakers

- Yoel Sadovsky. University of Pittsburgh, USA.
- Udo Markert. University Jena, Germany.
- Luis Sobrevia. Pontificia Universidad Católica de Chile, Chile.
- Nanthini Jayabalan. The University of Queensland, Australia.
- Rodrigo Barbano. University of the Region of Joinville, Brazil.
- Miira Klemetti. Lunenfeld-Tanenbaum Research Institute, Canada.

## W#4: Comparative Placentation – Animal Models

Microcine Wed. Sep 11 14:00 - 16:00

### Organizers



**CHRISTIANE PFARRER**

University of Veterinary Medicine Hannover. Hannover, Germany



**DEREK E. WILDMAN**

University of South Florida (Tampa, USA)

**SUMMARY:** The placenta is one of the most variable features of mammalian anatomy and physiology. Because no other species has a placenta that is identical to the human it has been challenging to find appropriate animal models for comparative experimental studies. Each animal model species has advantages and disadvantages. In this workshop we will work to develop a workflow for deciding which species is appropriate for specific research questions. Some species may share anatomical or physiological features with human placentas while lacking good genomic resources while other species may have strong genomic and transgenic resources but have placental anatomy that diverges greatly from that seen in humans. We will also consider the placenta from the broad definition given by H.W. Mossman, any apposition of fetal and maternal tissue. With this broad definition in mind it is possible to consider placentation in non-mammalian species such as reptiles and invertebrate onychophoran velvet worms.

### Speakers

- Hanna Allerkamp, University of Auckland, NZ.
- Anthony Carter, U Odense, Denmark.
- Claudio Barbeito, National Scientific and Technical Research Council, Argentina.
- Julie Baker, Stanford, USA.
- Christiane Pfarrer, University of Veterinary Medicine Hannover, Germany.
- Derek Wildman, University of South Florida, USA.

## W#5: Cellular Signaling in the Placenta

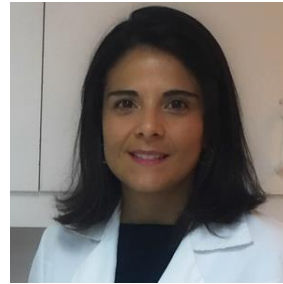
Auditorium Thu. Sep 12 17:15 - 19:15

### Organizers



**THERESA POWELL**

University of Colorado, Aurora, Colorado, USA.



**ANDREA LEIVA**

Pontifical Catholic University of Chile, Santiago, Chile.

**SUMMARY:** The human placenta is critical for pregnancy success through its roles as an endocrine organ, establishing the relationship between maternal and fetal blood supplies and in nutrient delivery and gas exchange to ensure adequate growth. Multiple cellular signaling pathways are responsible of the regulation of these critical functions. This workshop is aimed to review some of the placental cellular signaling critical for placental development and highlight the cellular signaling events that modulate placental function, pregnancy outcome and life long health.

### Speakers

- Amanda Sferruzzi-Perri, PhD, University of Cambridge, UK.
- Cathy Vaillancourt, PhD, Institut National de la Recherche Scientifique (INRS), Montreal, Canada.
- Martin Post, PhD, Hospital for Sick Children, Toronto, Canada.
- Theresa Powell, PhD, University of Colorado, USA.
- Elena Silva, PhD, University of Colorado, USA.
- Andrea Leiva, Pontifical Catholic University of Chile, Santiago, Chile.

## W#6: Novel technologies in Placental Research

Aula Magna Thu. Sep 12 17:15 - 19:15

### Organizers



**PADMA MURTHI**

Monash University, Melbourne, Australia.



**LYNDA HARRIS**

University of Manchester, UK

**SUMMARY:** The placenta plays many crucial roles for the maintenance of pregnancy. It is the chief regulator of fetal development by facilitation of transfer of nutrients, gases and waste products between the mother and fetus; synthesising hormones to support feto-placental growth; remodel the uterine spiral arterioles to establish an optimum vascular environment; and prevent and protect not only from immune-mediated rejection of the fetus but also from infectious agents and environmental insults. As such adequate placental function is instrumental for a successful pregnancy outcome and abnormalities of placental development and function contribute to major pathologies of pregnancy including spontaneous preterm birth, fetal growth restriction, and preeclampsia. Assessment of placental function across gestation is challenging due to the risks for the mother and the developing fetus. Thus far, reports on human placental development and function comes from studying placentas from pathological and uncomplicated pregnancies collected at third trimester or term deliveries. However, molecular changes in the placenta may initiate processes that lead to placental pathologies, well before clinical signs of pregnancy complications are detected. In this workshop we will discuss on novel technologies used in placental research in defining the structure and function of the human placenta, their use in clinical settings and also the model systems that have been developed to better understand abnormal development leading to pregnancy pathologies.

### Speakers

- Johann Urschitz. University of Hawaii, Honolulu, USA.
- Rebecca Wilson. Cincinnati, USA.
- Michal Neeman. The Weizmann Institute of Science, Israel.
- Sandra Haider. Medical University of Vienna, Austria.
- Olivia Nonn. Medical University of Graz, Austria.
- Alexandre Borbely. Federal University of Alagoas, Brazil.

## W#7: Immunology in the mother/placenta/fetus

Juan Pablo II Thu. Sep 12 17:15 - 19:15

### Organizer



**MARIJKE FAAS**

Department of Pathology and Medical Biology,  
University Medical Center Groningen, the Netherlands



**ROSANNA RAMHORST**

Immunopharmacology Laboratory. School of Sciences,  
IQUIBICEN-CONICET and University of Buenos Aires,  
Argentina.

**SUMMARY:** Summary: Immune responses during pregnancy change, in order to tolerate the fetal semiallograft. The importance of the adaptations to pregnancy are obvious from the fact that many pregnancy complications are associated with aberrant immunological adaptations. During this symposium immunological adaptations in the mother during healthy pregnancy are presented both peripheral immune changes as well as changes in the placental bed. Actors that may interfere with these immune responses will be discussed as well as aberrant immune responses in some pregnancy complications will be discussed. Finally, developing fetal immune responses will be discussed and how these could be influenced by various maternal factors. During the symposium there will be plenty of time for questions and discussions.

### Speakers

- Ana Zenclussen. Medical Faculty, Otto-von-Guericke University, Magdeburg, Germany.
- Silvia Daher. Department of Obstetrics Universidade Federal de São Paulo, Brazil.
- Claudia Pérez Leirós. School of Sciences, IQUIBICEN-CONICET and University of Buenos Aires, Argentina.
- Gendie Lash. Guangzhou Medical University, Guangzhou, China.
- Marijke Faas. University Medical Center Groningen, the Netherlands.

## W#8: Newborn size: who decides? Mother? Fetus? Placenta?

Microcine Thu. Sep 12 17:15 - 19:15

### Organizers



**LOPA LEACH**

School of Life Sciences, Faculty of Medicine, University of Nottingham, Nottingham, United Kingdom. Christiane Pfarrer University of Veterinary Medicine Hannover. Hannover, Germany



**CAROLYN SALAFIA**

Placental Modulation Laboratory. Institute for Basic Research and Placental Analytics LLC, New York, USA

**SUMMARY:** This workshop will ask 3 experts to each speak to their specialization- cutting edge evidence as to why they think that the mother, the fetus or the placenta dictates the size of the newborn. The audience will quiz them and we will reach a conclusion as to whether there is synthesis of physiology, maternal/fetal genes, parental imprinting in this era of epigenetics.

### Speakers:

- Carlos Salomon, University of Queensland. *Mother: Adipose Tissue-derived extracellular vesicles and their potential role in regulating placental metabolism and fetal growth.*
- Gernot Desoye, University of Graz, Austria. *Placenta: The Human Placenta in Diabetes and Obesity- Friend or Foe for the Foetus?*
- Tracy Bale, University of Maryland, USA. *Fetus: Fetal brain programming for lifetime growth.*
- Wrap up and future questions: Lopa Leach (University of Nottingham, UK) and Carolyn Salafia (Placental Analytics, New York, USA).

## W#9: Preterm Birth and Labor

Auditorium      Fri. Sep 13      13:30 - 15:30

### Organizers



**ANA FRANCHI**

Laboratory of Physiopathology of Pregnancy and Labor, CEFYBO (CONICET-UBA).



**FEDERICO JENSEN**

Laboratory for Immunology of Pregnancy, Center for Pharmacological and Botanical Studies, Medical Faculty, Buenos Aires University, Buenos Aires, Argentina.

**SUMMARY:** Preterm birth, defined as birth occurring before 37 weeks of gestation, is a leading cause of neonatal mortality and morbidity as well as the second cause of death in children under 5 years. 15 million babies are born prematurely every year, representing 5 to 18% of pregnancies worldwide. In addition, due to immaturity of multiple organ systems, neonates born preterm are more susceptible to develop short-term complications as well as neurodevelopmental disorders, such as cerebral palsy, intellectual disabilities, and vision and hearing impairments during post-natal life. Thus, despite extensive efforts, preterm birth has remained an intractable medical and public health challenge. Although it is considered a syndrome attributable to multiple pathogenic processes, intrauterine and systemic infection and/or inflammation are causally linked to preterm birth. In this workshop we will discuss the latest advances in the understanding of preterm birth pathophysiology.

### Speakers

- Nardhy Gomez-Lopez. Wayne State University School of Medicine, USA.
- Kang Chen. National Institute of Allergy and Infectious Diseases, National Institutes of Health, USA.
- Felipe Vadillo-Ortega. Universidad Nacional Autónoma de México. UNAM, School of Medicine, México.
- Gang Sun. School of Medicine, Shanghai Jiao Tong University, Shanghai, China.
- María Silvia Ventimiglia, Laboratory for Immunology of Pregnancy, CEFYBO –UBA-CONICET, Argentina.
- Julieta Schander, Laboratory of Physiopathology of Pregnancy and Labor, CEFYBO – UBA –CONICET, Argentina.



## W#10: Vascular alteration in the placenta: what is happening beyond pregnancy diseases

Aula Magna      Fri. Sep 13      13:30 - 15:30

### Organizers



**CARLOS ESCUDERO**

Red Iberoamericana de Alteraciones Vasculares Asociadas a Trastornos del Embarazo (RIVA-TREM).  
Universidad del Bio Bio.



**JAMES M. ROBERTS**

Global Pregnancy Collaboration and Magee-Womens Research Institute, Department of Obstetrics and Gynecology Epidemiology and Clinical and Translational Research University of Pittsburgh.

**SUMMARY:** Women with adverse pregnancy outcomes, including preeclampsia, gestational diabetes, preterm delivery, have excess risk of later life cardiovascular disease (CVD). Mechanisms of these disorders could be associated with an underlying high-risk vascular phenotype, that may have been programmed during intrauterine life. Since the placenta is a highly vascularized tissue, it may constitute a unique source of information of what and how vascular structure/function is affected in women with adverse pregnancy outcomes. Even more, placental evidence of impaired vascular function may serve as “a fingerprint” that may alert us to what would be the vascular response of women and their offspring in future life. In this symposium we aim to analyze evidence of impaired placental vascular structure/function and its relevance to future cardiovascular risk. This may suggest potential underlying mechanisms and pharmacological targets. The relationship of placental structure/function to later maternal disease could provide unique insights in the field and help us to move forward in both the understanding of cardiovascular disease in women and to alert health care systems about future cardiovascular risk.

### Speakers

- Janet Catov. University of Pittsburgh, Pittsburgh, PA, USA.
- William Parks. University of Toronto, Toronto, ON, Canada.
- Marta Viana. Facultad de Farmacia, CEU San Pablo University – CEU Universities, Madrid. Spain.
- Natalie Hannan. University of Melbourne, Heidelberg, Australia.

## W#11: Genetics and epigenetics of the placenta: current challenges

Juan Pablo II      Fri. Sep 13      13:30 - 15:30

### Organizers



**WENDY ROBINSON**

Department of Medical Genetics, University of British Columbia BC Children's Hospital Research Institute (BCCHR), Vancouver, Canada.



**PAOLA CASANELLO**

Departments of Obstetrics & Neonatology, School of Medicine Pontificia Universidad Católica de Chile, Santiago, Chile.

**SUMMARY:** The placenta field has been strongly molded in recent years by the concept of epigenetic determinants of health. From less than 5 papers published in this field in 2005 to more than 80 in 2018, we are gaining a glimpse of how DNA methylation and chromatin remodeling are associated with the way maternal conditions and exposures during pregnancy are sensed by the placenta and compromise fetal and postnatal physiological responses. Epigenetic marks have often been interrogated independently of genetic variation. However, there is strong evidence showing the interaction between genetics and environment in mediating epigenetic variation. In this workshop we will offer talks with different looks from senior and young researchers in the field, with the objective of setting a fructiferous discussion on the current challenges that genetic and epigenetic studies in the placenta confront today.

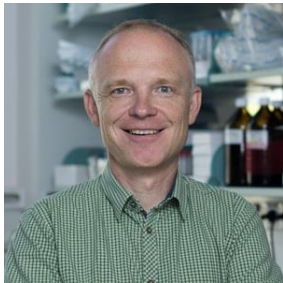
### Speakers

- Wendy Robinson. University of British Columbia BC Children's Hospital Research Institute (BCCHR), Vancouver, Canada.
- Claire Roberts. University of Adelaide, South Australia, Australia.
- Soumen Paul. The University of Kansas Medical Center. Kansas City, Kansas, USA.
- Paola Casanello. School of Medicine Pontificia Universidad Católica de Chile, Santiago, Chile.

## W#12: Metabolic diseases & consequences in offspring

Microcine      Fri. Sep 13      13:30 - 15:30

### Organizers



**CHRISTIAN WADSACK**

Assoc. Prof., PhD. Vice-dean of Doctoral Studies. Medical University of Graz, Department of Obstetrics and Gynecology. Doctoral Studies. Medical University of Graz, Department of Obstetrics and Gynecology.



**VERÓNICA WHITE**

Assoc. Inv. Faculty of Medicine, University of Buenos Aires, CEFYBO CONICET. Laboratory of Reproduction and Metabolism.

**SUMMARY:** Maternal metabolic derangements in pregnancy are a worldwide growing problem and can induce placental and fetal anomalies. Notably, as a result of the disturbed intrauterine environment offspring's metabolism might be compromised and may lead to long-lasting alterations as well. Affected newborns are at increased risk of developing related diseases like obesity, type-2 diabetes or cardiovascular disorders during life. The research in the field has explored and identified that excess of nutrients, a disturbed lipid profile, an altered hormonal milieu together with an imbalance of antioxidant/pro-inflammatory substances are the main stressors and causes of the anomalies observed in placentas, fetuses and offspring. This workshop focusses on the underlying mechanisms of these alterations on the feto-placental axis and offspring. A holistic view of this specific topical problem will be achieved through presentation of different experimental models and including the spatial-temporal axis of pregnancy.

### Speakers

- Pascale Chavatte Palmer. French National Institute for Agricultural Research, France.
- Christianne Albrecht. Universität Bern. UniBe, Bern, Switzerland.
- Veronique Ferchaud-Roucher. University of Colorado, Denver, USA.
- Ilaria Del Gaudio. Medical University of Graz, Graz, Austria.
- Dolores Busso. Pontifical Catholic University of Chile, Santiago de Chile, Chile.
- Jonas Zaugg. Universität Bern, UniBe, Bern, Switzerland,

Wednesday September 11: 13:00-14:00h

Aula Magna

ES 1: WOMEN IN SCIENCE: OVERCOMING CHALLENGES TO CAREER DEVELOPMENT

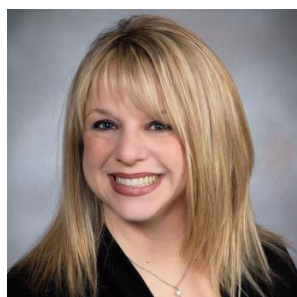
**ORGANIZERS**



**STACY ZAMUDIO**

*Hackensack University Medical Center. Department of Obstetrics and Gynecology, New Jersey, USA*

Dr. Zamudio was trained in Evolutionary Biology/Anthropology at the University of California, Los Angeles, and the University of Colorado in Boulder. Much of her work has focused on placental hypoxia (high altitude) and applied ultrasonography for quantification of blood flows, oxygen and nutrient delivery and uptake in mother and fetus. As Director of Research in the Department of Obstetrics and Gynecology and the Center for Abnormal Placentation at Hackensack University Medical Center, she has been engaged in studies of Abnormally Invasive Placenta (AIP, aka Placenta Accreta Spectrum-PAS). Clinical-translational work, funded by the NIH Human Placenta Project, has focused on ultrasound-based quantitative diagnosis of AIP, clinical outcomes in mother and neonate, and the pathophysiology of AIP at the molecular level.



**LAUREN ALEKSUNES**

*Department of Pharmacology and Toxicology, Ernest Mario School of Pharmacy, Rutgers, Environmental and Occupational Health Sciences Institute, New Jersey, USA*

Dr. Lauren Aleksunes is Professor in the Ernest Mario School of Pharmacy and the Environmental and Occupational Health Sciences Institute at Rutgers University. Director of the Rutgers Toxicology Graduate Program. In 2019, Lauren received the Outstanding Young Investigator Award from the Women in Toxicology

### SUMMARY

Women scientists have made significant contributions to placental research historically and in the present. While placental science has outstanding representation of women at the trainee and, more recently, mid-career levels, women are still under-represented at senior academic levels or their non-academic equivalents. Our panel of three highly successful mid-career women scientists is led by IFPA 2019 Andrée Gruslin Award winner Dr. Natalie Hannan (University of Melbourne, President of ANZPRA, our SLIMP's Pacific Rim sister society). Panelists will outline the greatest challenge they faced in becoming successful mid-career scientists. They will discuss how they resolved these challenges in the first half of our session. The second half will be dedicated to discussion, by panel and audience, of the two themes or questions regarding career development that have been identified by trainees attending IFPA 2019 as their most significant challenges.

### SPEAKERS



**NATALIE HANNAN**, recipient of the 2019 IFPA/Elsevier Andrée Gruslin Award for mid-career women scientists, Lead Scientist, Therapeutics Discovery and Vascular Function Group, Mercy Hospital for Women, University of Melbourne, Australia. Natalie's research is focused on developing therapeutic strategies that are safe in pregnancy and novel approaches to deliver therapies directly to the placenta.



**ALINE LORENZON**, Scientific Coordinator at Huntington Medicina Reproductiva. Aline's research is focused on early embryo implantation, placental development, gestational diseases and endoplasmic reticulum stress.



**NARDHY GOMEZ-LOPEZ**, Associate Professor, Obstetrics and Gynecology and Director of the Perinatal Immunobiology Unit (PRB) at Wayne State University School of Medicine, Michigan, USA. Nardhy's research is focused on immunological pathways dysregulated in preterm birth and adverse perinatal outcomes.

## Wednesday September 11: 13:00-14:00h

Juan Pablo II

### ES 2: GETTING NOTICED - HOW TO COMPILE AND PUBLISH A PAPER

#### ORGANIZERS



#### **YOEL SADOVSKY**

*University of Pittsburgh, Pennsylvania, USA.*

Executive Director, Magee Womens Research Institute, Elsie H Hillman Chair of Women's Health Research, Distinguished Professor of OBGYN, Microbiology and Molecular Genetics, Associate Dean, Women's Health Research and Reproductive Sciences.



#### **MARTIN KNÖFLER**

*Medical University of Vienna, Department of Obstetrics and Gynaecology, Vienna, Austria.*

Martin Knöfler is Associate Professor at the Medical University of Vienna and the current European Editor of Placenta. 2001. His main research interests include molecular mechanisms and signalling pathways regulating human placental development, trophoblast differentiation, decidualization as well as the trophoblast-decidual cross-talk.



#### **ANTHONY PERKINS**

*School of Medical Science, Griffith University, Queensland, Australia.*

Professor Tony Perkins is a biochemist with particular interests in anti-oxidant enzymes systems in the human placenta. His research is focused on mitochondrial dysfunction and how oxidative stress influences placental cell turnover in complications of pregnancy such as preterm birth, fetal growth restriction and preeclampsia. Academic for the Health Group (2012-2018). He is currently on research sabbatical.

### SUMMARY

In this educational session, the Editors of *Placenta* will discuss diverse aspects related to composing, assembling, writing, revising and publishing a scientific paper. In detail, Y. Sadovsky will summarize the structure of manuscript, explain the content of its different sections, and emphasize how previous published work is appropriately cited. A. Perkins will discuss the importance of choosing the right journal plus measures of publication quality such as the impact factors and citation rates. He will also elaborate on the peer-review process and the response to reviewers' critiques. Finally, M. Knöfler will report on the requirements for authorship, language and style of a paper, and discuss ethics and plagiarism in science. Attendees at the session will become familiar with the considerations, effort, activities, and processes required to successfully publish a paper. There will be time for questions and answers, and a lively discussion.

Thursday September 12: 8:00-9:00h

### Auditorium

Sponsored ES: WRITING A PAPER IN ENGLISH: TIPS FOR SPANISH SPEAKERS

**CHAIR: EVANGELINA CAPOBIANCO**

### **ORGANIZER**



#### **MARÍA VICTORIA EUSEVI**

*Biologist (University of Buenos Aires, Argentina), Certificate of Proficiency in English (University of Cambridge). Editor of scientific papers.*

### **SUMMARY**

Papers have a great importance in the life of any researcher, as their daily work involves not only reading but also writing papers.

Spanish-speaking researchers have the additional difficulty that English is not their language and thus need to find the best way to express their ideas and thoughts clearly.

Thus, this short talk has been designed to provide Spanish-speaking researchers with simple tips and tools to write their manuscripts with a correct, direct, and simple English language.



Thursday September 12: 8:00-9:30h

Juan Pablo II

ES 3: LEARNING THE PLACENTA ATLAS TOOL

### ORGANIZER



#### **BRIAN COX**

*Department of Obstetrics and Gynaecology, University of Toronto, Toronto, Canada.*

Brian Cox is an associate professor in the Dept. of Physiology at the University of Toronto and an expert in computational analysis of biological data sets with an emphasis on placental and trophoblast biology and pathology. He is an advisor to the NIH initiatives Placenta Atlas Tool and the Human Placenta Project.

### **SUMMARY**

In this interactive tutorial you will log on to the Placenta Atlas Tool (PAT) and run example case study investigations. You will learn the layout of the tool, available system resources and creation of a workspace to save your analysis results. Interested attendees should create an account at <https://pat.nichd.nih.gov>. The account is free. Tutorial will explore using PAT for investigating placental pathology and biology using key word libraries, images and gene expression analysis.

Foyer JP11

Wednesday September 11- 18:15-19:15 h

### EARLY CAREER RESEARCH (ECR- NEW INVESTIGATORS) ACTIVITY

#### 1. Do and don't in oral and poster presentations?

Peggy Petroff, Michigan State University, USA.

Paola Casanello, Catholic University of Chile, Chile.

Julio Bueno Sanchez, University of Antioquia, Colombia.

#### 2. How to make a successful presentation, worthy of a travel award or international funding

Thomas Jansson, University of Colorado, USA.

Amanda Sferruzzi-Perri, University of Cambridge, UK.

#### 3. How to have a great collaboration and how to make it successful

Larry Chamley, The University of Auckland, NZ.

Stefan Hansson, University of Lund, Sweden.

#### 4. Translational medicine: the best experimental model for a clinical question

Joelcio Abbade, UNESP – Paulista State University “Júlio de Mesquita Filho”, Brazil.

Grazzia Rey, University of the Republic, Uruguay.

### 5. How to choose the best journal to publish your data

Gernot Desoye, University of Graz, Austria.

Lynda Harris, University of Manchester, UK.

### 6. Challenges and opportunities for researchers from developing countries

Elena Zambrano, National Institute of Medical Sciences and Nutrition Salvador Subirán, Mexico.

Ulrike Kemmerling, University of Chile, Chile.

Udo Markert, University Hospital Jena, Germany.

### 7. Finding academic mentors

Gustavo Leguizamon, Unit of high risk pregnancy from CEMIC, Argentina.

Charles Graham, Queen's University, Canada.

## ANATOMY AND PATHOLOGY

### P1.1

#### CLUSTERED VILLOUS MINERALIZATION: A PLACENTAL FEATURE OF FETAL VASCULAR MALPERFUSION IN PROLONGED RETAINED STILLBIRTH

Jerzy Stanek

Cincinnati Children's Hospital Medical Center, Cincinnati, USA

### P1.2

#### ULTRASONOGRAPHIC ANALYSIS FOR EMBRYOLOGY OF UMBILICAL CORD TWIST DIRECTION DURING SECOND TRIMESTER

Masamitsu Nakamura<sup>1,2</sup>, Tomohiro Oba<sup>1</sup>, Taro Morimoto<sup>2</sup>, Hiroko Takita<sup>1</sup>, Mayumi Tokunaka<sup>1</sup>, Minako Goto<sup>1</sup>, Shoko Hamada<sup>1</sup>, Ryu Matsuoka<sup>1</sup>, Akihiko Sekizawa<sup>1</sup>

<sup>1</sup>Showa University School of Medicine, Tokyo, Japan. <sup>2</sup>Hatanodai Ladys' Clinic, Tokyo, Japan

### P1.3

#### PLACENTAL CAUSES ACCOUNT FOR NEARLY HALF OF PERINATAL DEATHS: A 15-YEAR RETROSPECTIVE REVIEW FROM A TEACHING HOSPITAL IN THAILAND

MANA TAWEEVISIT<sup>1</sup>, Paul Thorner<sup>2</sup>

<sup>1</sup>Chulalongkorn University, Pathumwan, Thailand. <sup>2</sup>University of Toronto, Toronto, Canada

### P1.4

#### IMPACT OF STANDARDIZED REVIEW OF PLACENTA PATHOLOGY

Parastou Tizro<sup>1</sup>, Julia Jiaqi O'Reilly<sup>2,3</sup>, Anna Penn<sup>2,4</sup>, Stephanie Barak<sup>1</sup>

<sup>1</sup>Pathology, The George Washington University School of Medicine and Health Sciences, Washington, USA. <sup>2</sup>Center for Neuroscience Research, Children's Research Institute, Children's National Medical Center, Washington, USA. <sup>3</sup>Institute for Biomedical Sciences, The George Washington University School of Medicine and Health Sciences, Washington, USA. <sup>4</sup>Fetal Medicine Institute and Neonatology, Children's National Medical Center, Washington, USA

### P1.5

#### IN IUGR PLACENTAS, ESTIMATES OF VILLOUS AND CAPILLARY VOLUMES OF PERIPHERAL VILLI CORRELATE WITH THE PLACENTAL WEIGHT

Sina Henschen, Nirav Barapatre, Hans-Georg Frank

LMU Munich, Dept. of Neuroanatomy, Munich, Germany

### P1.6

#### AN OPTIMIZED PLACENTAL COLLECTION METHOD FOR SIMULTANEOUS PRESERVATION OF TISSUE MORPHOLOGY AND NUCLEIC ACID INTEGRITY

Morgan Meads<sup>1,2</sup>, Peter De Hoff<sup>3,2</sup>, Devin Pontigon<sup>1,2</sup>, Donald Pizzo<sup>1,4</sup>, Seerat Sekhon<sup>1,2</sup>, Omar Farah<sup>1,2</sup>, Louise Laurent<sup>3,2</sup>, Mana Parast<sup>1,2</sup>

<sup>1</sup>Pathology/University of California, San Diego, San Diego, USA. <sup>2</sup>Sanford Consortium for Regenerative Medicine, La Jolla, USA. <sup>3</sup>Obstetrics, Gynecology and Reproductive Sciences/University of California, San Diego, San Diego, USA. <sup>4</sup>Sanford Consortium for Regenerative Medicine, La Jolla, USA

## ANGIOGENESIS/ VASCULATURE

### P1.7

#### VON WILLEBRAND DISEASE TYPE 1 IN A PORCINE MODEL INFLUENCES EXPRESSION OF INTEGRIN A<sub>v</sub>B<sub>3</sub>, MEMBERS OF THE VEGF/VEGFR-2 SYSTEM AND ANG/TIE RATIOS AT THE TIME OF PLACENTATION

Hanna Allerkamp<sup>1,2</sup>, Stefanie Lehner<sup>2</sup>, Carsten Detering<sup>2</sup>, Mahnaz Ekhlesi-Hundrieser<sup>2</sup>, Mario von Depka Prondzinski<sup>2</sup>, Christiane Pfarrer<sup>1</sup>

<sup>1</sup>University of Veterinary Medicine, Institute of Anatomy, Hannover, Germany. <sup>2</sup>Werlhof Institute, Hannover, Germany

### P1.8

#### PLACENTA-HEART AXIS: ABNORMAL CARDIOVASCULAR DEVELOPMENT AND VEGF EXPRESSION AFTER PERIGESTATIONAL ALCOHOL INTAKE AT MID-GESTATION IN MOUSE.

Martín Ventureira<sup>1</sup>, Cristian Sobarzo<sup>2</sup>, Gisela Gualdoni<sup>2</sup>, Claudio Barbeito<sup>3</sup>, Elisa Cebra<sup>1</sup>

<sup>1</sup>IBBEA - CONICET/UBA, Buenos Aires, Argentina. <sup>2</sup>INBIOMED - CONICET/UBA, Buenos Aires, Argentina. <sup>3</sup>Facultad de Veterinaria - UNLP, La Plata, Argentina

## P1.9

### THE EFFECT OF GESTATIONAL DIABETES MELLITUS ON THE TERM PLACENTAL GLYCOCALYX

Helen Wright, Shukla Das, Kenton Arkill, [Lopa Leach](#)  
University of Nottingham, Nottingham, United Kingdom

## P1.10

### ROLE OF CAVEOLAE IN THE FORMATION OF THE PLACENTAL MICROVASCULATURE AND ITS INTERACTION WITH AQP1 AND VEGFR2

[Julietta Reppetti](#)<sup>1</sup>, Matías N. Sierra<sup>2</sup>, Carlos A. Escudero<sup>3</sup>, Alicia E. Damiano<sup>1,2</sup>, Nora A. Martínez<sup>1</sup>  
<sup>1</sup>IFIBIO Houssay- UBA CONICET, Buenos Aires, Argentina. <sup>2</sup>Cátedra de Biología Celular y Molecular. Departamento de Ciencias Biológicas, Facultad de Farmacia y Bioquímica, UBA, Buenos Aires, Argentina. <sup>3</sup>Departamento de Ciencias Básicas, Universidad del Bío-Bío, Chillán, Chile

## P1.11

### EXPRESSION OF ECE1, IGFBP7 AND CALR IN A PORCINE MODEL FOR VON WILLEBRAND DISEASE (VWD) TYPE 1 AND 3

[Katharina Kaiser](#)<sup>1,2</sup>, Stefanie Lehner<sup>2</sup>, Hanna Allerkamp<sup>1,2</sup>, Carsten Detering<sup>2</sup>, Mahnaz Ekhlasi-Hundrieser<sup>2</sup>, Mario von Depka Prondzinski<sup>2</sup>, Christiane Pfarrer<sup>1</sup>

<sup>1</sup>Institute of Anatomy, Institute of Anatomy, University of Veterinary Medicine Hannover, Hannover, Germany. <sup>2</sup>Werl Hof Institute, Hannover, Germany

## P1.12

### IMPAIRED PLACENTAL VESSEL FORMATION IN MICE LACKING OF ADENOSINE A<sub>2A</sub> RECEPTOR

Daniela Rojas<sup>1</sup>, Jesenia Acurio<sup>2,3</sup>, Felipe Troncos<sup>2,3</sup>, Kurt Herlitz<sup>2,3</sup>, Ambart Covarrubias<sup>4</sup>, Claudio Aguayo<sup>5</sup>, Evelyn Lara<sup>2,3</sup>, [Carlos Escudero](#)<sup>2,3,6</sup>  
<sup>1</sup>University of Concepcion, Concepcion, Chile. <sup>2</sup>Vascular Physiology Laboratory, Chillan, Chile. <sup>3</sup>Group of Research and Innovation in Vascular Health, Chillan, Chile. <sup>4</sup>University San Sebastian, Concepcion, Chile. <sup>5</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepcion, Concepcion, Chile. <sup>6</sup>University of Bio Bio, Chillan, Chile

## P1.13

### PERICYTES MAPPING IN BOVINE PLACENTA

[Lucas Luiz Rocha Rosestolato](#)<sup>1</sup>, Igor Smirnow Carneiro<sup>1</sup>, Alexander Birbrair<sup>2</sup>, Maria Angelica Miglino<sup>1</sup>, Rodrigo da Silva Nunes Barreto<sup>1</sup>  
<sup>1</sup>University of Sao Paulo, São Paulo, Brazil. <sup>2</sup>Federal University of Minas Gerais, Minas Gerais, Brazil

## CELL CULTURE, PROLIFERATION AND SIGNALING

## P1.14

### DEVELOPMENT OF DECIDUALIZED AND 3D HUMAN ENDOMETRIAL MODELS FOR THE STUDY OF HUMAN IMPLANTATION AND ENDOCRINE PATHOLOGIES.

[Noelia Romina Carnovale](#)<sup>1</sup>, Maria Florencia Oviedo<sup>1</sup>, Daiana Ganiewich<sup>1</sup>, Florencia Oppenheimer<sup>2</sup>, Gustavo Jose Leiros<sup>2</sup>, Carla Noemi Olivares<sup>1</sup>, Mariela Andrea Bilotas<sup>1</sup>, Gabriela Fabiana Meresman<sup>1</sup>

<sup>1</sup>Instituto de Biología y Medicina Experimental (IBYME-CONICET), Ciudad Autónoma de Buenos Aires, Argentina. <sup>2</sup>Instituto de Ciencia y Tecnología Dr. César Milstein (CONICET), Ciudad Autónoma de Buenos Aires, Argentina

## P1.15

### IDENTIFICATION OF OPTIMAL CONDITIONS FOR HUMAN PLACENTAL-EXPLANT CULTURE

[Chandana Tekkattu](#)<sup>1</sup>, Rachel Sebastian<sup>1</sup>, Yan Zhang<sup>1,2</sup>, Jun Zhou<sup>1,2</sup>, Yukun Liu<sup>1,3</sup>, Morgan Meads<sup>4</sup>, Tzu Ning Liu<sup>1</sup>, Mana M. Parast<sup>4</sup>, Louise C. Laurent<sup>1</sup>  
<sup>1</sup>Department of Obstetrics, Gynecology, and Reproductive Sciences and Sanford Consortium for Regenerative Medicine, University of California, San Diego, La Jolla, CA, USA. <sup>2</sup>Department of Obstetrics, The Affiliated Hospital of Qingdao University, Qingdao, , Shandong, China. <sup>3</sup>Department of Obstetrics and Gynecology, SUN Yat-sen Memorial Hospital, SUN Yat-sen University, Guangzhou, Guangdong, China. <sup>4</sup>Department of Pathology and the Sanford Consortium for Regenerative Medicine, University of California San Diego, La Jolla, CA, USA

- P1.16**  
**APPLICATION OF IMPEDANCE SPECTROSCOPY FOR ANALYSIS OF BEWO CLONE B30 HUMAN CHORIOCARCINOMA CELL LINE**  
Sergey Nikulin<sup>1,2</sup>, Evgeny Knyazev<sup>1,3</sup>, Tatyana Gerasimenko<sup>1</sup>, Ildar Gazizov<sup>1</sup>, Vladimir Petrov<sup>1,4</sup>, Olga Kindeeva<sup>1,2</sup>, Dimitri Sakharov<sup>1,5</sup>  
<sup>1</sup>Scientific Research Centre BioClinicum, Moscow, Russian Federation. <sup>2</sup>Far Eastern Federal University, Vladivostok, Russian Federation. <sup>3</sup>Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russian Federation. <sup>4</sup>Institute of Nanotechnologies of Microelectronics of the Russian Academy of Sciences, Moscow, Russian Federation. <sup>5</sup>D.Mendeleev University of Chemical Technology of Russia, Moscow, Russian Federation
- P1.17**  
**THE HYALURONAN SYNTHESIS INHIBITOR 4-METHYLBELLIFERONE INHIBITS CELL PROLIFERATION AND WOUND HEALING ON IN VITRO ENDOMETRIOSIS MODELS.**  
Carla N Olivares<sup>1</sup>, Florencia Chiappini<sup>2</sup>, Bárbara A Mc Cormack<sup>3</sup>, Daniela Madanes<sup>3</sup>, Andrea Randi<sup>2</sup>, Rosa I Barañao<sup>3</sup>, Gabriela F Meresman<sup>1</sup>  
<sup>1</sup>Laboratorio de Fisiopatología Endometrial, Instituto de Biología y Medicina Experimental, Ciudad autónoma de Buenos Aires, Argentina. <sup>2</sup>Laboratorio de Efectos Biológicos de Contaminantes Ambientales, Facultad de Medicina, Universidad de Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina. <sup>3</sup>Laboratorio de Inmunología de la Reproducción, Instituto de Biología y Medicina Experimental, Ciudad Autónoma de Buenos Aires, Argentina
- P1.18**  
**HYPOXIA INDUCIBLE FACTOR-1 ALPHA IMPAIRS SYNCYTIALIZATION OF HUMAN TROPHOBLAST BEWO CELLS: ROLE OF ENDOCANNABINOID SYSTEM.**  
Tomás Etcheverry<sup>1</sup>, Paula Accialini<sup>1</sup>, Marcos Palligas<sup>2</sup>, Cyntia Abán<sup>3</sup>, Nora Saraco<sup>2</sup>, Nora Martínez<sup>4</sup>, Mariana Farina<sup>1</sup>  
<sup>1</sup>Centro de Estudios Farmacológicos y Botánicos (CEFyBO-UBA-CONICET), Buenos Aires, Argentina. <sup>2</sup>Hospital Garrahan (CONICET), Buenos Aires, Argentina. <sup>3</sup>FLENI (CONICET), Buenos Aires, Argentina. <sup>4</sup>IFIBIO (UBA-CONICET), Buenos Aires, Argentina
- P1.19**  
**DIFFERENTIAL ACTIVATION OF PLACENTAL NUTRIENT SENSOR PATHWAYS AMPK, INSULIN/IGF-1, AND mTOR IN SGA, AGA AND LGA NEWBORNS FROM HEALTHY MOTHERS**  
Maria-Luisa Lazo-de-la-Vega-Monroy<sup>1</sup>, Karen-Alejandra Mata-Tapia<sup>1</sup>, Martha-Isabel Gonzalez-Domínguez<sup>2</sup>, Juan-Antonio García-Santillán<sup>1</sup>, Angélica Corona-Figueroa<sup>1</sup>, Hector-Manuel Gomez-Zapata<sup>3</sup>, Juan-Manuel Malacara<sup>1</sup>, Leonel Daza-Benítez<sup>3</sup>, Gloria Barbosa-Sabanero<sup>1</sup>  
<sup>1</sup>Medical Sciences Department, Health Sciences Division, University of Guanajuato, Campus Leon, Leon, Guanajuato, Mexico. <sup>2</sup>Universidad de la Cienega del Estado de Michoacan de Ocampo, Trayectoria de Ingeniería en Nanotecnología, Sahuayo, Michoacan, Mexico. <sup>3</sup>UMAE No. 48 IMSS, Gynecology and Obstetrics Department, Leon, Guanajuato, Mexico
- P1.20**  
**DIFFERENTIAL ROLE OF CALCIUM-ACTIVATED POTASSIUM CHANNELS IN REGULATION OF NITRIC OXIDE SYNTHESIS BY INSULIN IN ENDOTHELIAL CELLS FROM GESTATIONAL DIABETES MELLITUS.**  
Emerita Basualto<sup>1</sup>, Susana Rojas<sup>1</sup>, Marcelo González<sup>1,2,3</sup>  
<sup>1</sup>Departamento de Fisiología, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile. <sup>2</sup>Departamento de Obstetricia y Ginecología, Facultad de Medicina, Universidad de Concepción, Concepción, Chile. <sup>3</sup>Group of Research and Innovation in Vascular Health (GRIVAS), Chillán, Chile
- P1.21**  
**ATTENUATION OF EZH2-MEDIATED H3K27 METHYLATION UP-REGULATES STAT5B EXPRESSION DURING TROPHOBLAST SYNCYTIALIZATION**  
Xiao-Wen Gan, Jiang-Wen Lu, Wang-Sheng Wang, Kang Sun  
Center for Reproductive Medicine, Ren Ji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China
- P1.22**  
**CYTOKINES PROFILE IN DIFFERENT POPULATIONS OF EXTRACELLULAR VESICLES DURING THE FIRST TRIMESTER OF PREGNANCY**  
Katherin Scholz-Romero<sup>1,2</sup>, Andrew Lai<sup>1</sup>, Gregory Duncombe<sup>1</sup>, Gregory Rice<sup>1</sup>, Carlos Salomon<sup>1,2</sup>  
<sup>1</sup>Exosome Biology Laboratory, Centre for Clinical Diagnostics, UQ centre for Clinical Research, Royal Brisbane and Women's Hospital, Faculty of Medicine + Biomedical Sciences, The University of Queensland, Brisbane, Australia. <sup>2</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Concepción, Chile

## DEVELOPMENTAL PROGRAMMING

**P1.23**  
**EXPERIMENTAL GESTATIONAL DIABETES INDUCES A PRO-INFLAMMATORY AND PRO-OXIDANT ENVIRONMENT IN MATERNAL AND FETAL LIVERS**  
Daiana Debora Fornes, María Florencia Heinecke, Evangelina Capobianco, Alicia Jawerbaum  
Centro de Estudios Farmacológicos y Botánicos (CEFYBO – CONICET – UBA), Buenos Aires, Argentina

**P1.24**  
**PLACENTAL ENDOCRINE MALFUNCTION PROGRAMS OVARIAN DEFECTS IN FEMALE MURINE OFFSPRING**  
Hannah Yong Yong<sup>1</sup>, Sijia Yao<sup>1</sup>, Jorge Lopez-Tello<sup>1</sup>, Efthimia Christoforou<sup>1</sup>, Ionel Sandovici<sup>1</sup>, Miguel Constanca<sup>1</sup>, Amanda Sferruzzi-Perri<sup>1,2</sup>  
<sup>1</sup>University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>University College London, London, United Kingdom

**P1.25**  
**PLACENTAL EXPRESSION OF GLUCOSE, AMINO ACIDS AND FATTY ACIDS TRANSPORTERS AND ASSOCIATION WITH BIRTH WEIGHT**  
Glória Barbosa-Sabanero<sup>1</sup>, Juan Antonio García-Santillán<sup>1</sup>, María Luisa Lazo-de-la-Vega-Monroy<sup>1</sup>, Martha Isabel González-Domínguez<sup>2</sup>, Héctor Manuel Gómez-Zapata<sup>3</sup>, Leonel Daza-Benites<sup>3</sup>, Juan Manuel Malacara-Hernández<sup>1</sup>  
<sup>1</sup>Medical Sciences Department, Health Sciences Division, University of Guanajuato, Leon Campus, Leon, Gto., Mexico. <sup>2</sup>State University of Ciénega Michoacan, Sahuayo de Morelos, Mich., Mexico. <sup>3</sup>UMAE No. 48, IMSS, Leon, Gto., Mexico

**P1.26**  
**PLACENTAL LIPID METABOLISM GENES ARE REGULATED BY DHA SUPPLEMENTATION IN WOMEN WITH PREGESTATIONAL OBESITY AND FOLATE/VITAMIN B12 UNBALANCE**  
Erika Castaño-Moreno<sup>1</sup>, Cherie Hernandez<sup>2</sup>, María Luisa Garmendia<sup>3</sup>, Ana María Ronco<sup>3</sup>, Paola Casanello<sup>4</sup>  
<sup>1</sup>University of Chile, Santiago, Chile. <sup>2</sup>Laboratory of Programming and Perinatal Epigenetics School of Medicine, Pontifical Catholic University of Chile, Santiago, Chile. <sup>3</sup>University of Chile, Santiago, Chile. <sup>4</sup>Pontifical Catholic University of Chile, Santiago, Chile

**P1.27**  
**IN PLACENTA OF WOMEN WITH PREGESTATIONAL OBESITY, DHA SUPPLEMENTATION GENERATES AN IMBALANCE IN THE EXPRESSION OF PRO AND ANTI-INFLAMMATORY GENES**  
Cherie Hernandez<sup>1</sup>, Erika Castaño-Moreno<sup>2</sup>, Bárbara Riquelme<sup>1</sup>, María Luisa Garmendia<sup>2</sup>, Paola Casanello<sup>1,3</sup>  
<sup>1</sup>Department of Obstetrics, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Institute of Nutrition and Food Technology, Universidad de Chile, Santiago, Chile. <sup>3</sup>Department of Neonatology, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

## EARLY PREGNANCY, IMPLANTATION AND INVASION

**P1.28**  
**UNDERSTANDING THE NATURAL SELECTION OF HUMAN EMBRYOS: BLASTOCYST QUALITY MODULATES THE GENERATION OF A TOLEROGENIC MICROENVIRONMENT BY DECIDUALIZED CELLS.**  
Laura Fernández<sup>1</sup>, María Soledad Gori<sup>1</sup>, Elizabeth Soczewski<sup>1</sup>, Daniel Papparini<sup>1</sup>, Gustavo Martínez<sup>2</sup>, Claudia Pérez Leirós<sup>1</sup>, Esteban Grasso<sup>1</sup>, Rosanna Ramhorst<sup>1</sup>  
<sup>1</sup>Laboratorio de Inmunofarmacología, CONICET, Universidad de Buenos Aires, Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), Buenos Aires, Argentina. <sup>2</sup>FERTILIS Medicina Reproductiva, San Isidro, Buenos Aires, Argentina

**P1.29**  
**NATURAL EMBRYONIC DEATH IN THE PLAIN VISCACHA LAGOSTOMUS MAXIMUS: ARE THERE PREVIOUS ANATOMO-HISTOLOGICAL VARIATIONS THAT WOULD INTERVENE IN THE DIFFERENTIAL SURVIVAL OF THE IMPLANTATIONS?**  
Francisco Acuña<sup>1,2</sup>, Claudio Gustavo Barbeito<sup>1,2</sup>, Guadalupe Ranea<sup>1</sup>, Enrique Leo Portiansky<sup>3,2</sup>, María Angélica Miglino<sup>4</sup>, Mirta Alicia Flamini<sup>1</sup>  
<sup>1</sup>Laboratorio de Histología y Embriología Descriptiva, Experimental y Comparada, Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata, La Plata, Argentina. <sup>2</sup>Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina. <sup>3</sup>Laboratorio de Análisis de Imágenes, Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata, La Plata, Argentina. <sup>4</sup>Departamento de Anatomía, Facultad de Medicina Veterinaria y Zootecnia, Universidad de San Pablo, San Pablo, Brazil

- P1.30**  
**REVISIT ROS IN EARLY PREGNANCY: ESSENTIAL FOR PLACENTATION BUT QUANTITY MATTERS**  
Chao Tong<sup>1</sup>, Chao Tong<sup>1</sup>, Hongbo Qi<sup>1</sup>, Philip Baker<sup>2</sup>  
<sup>1</sup>The First Affiliated Hospital of Chongqing Medical University, Chongqing, China. <sup>2</sup>University of Leicester, Leicester, United Kingdom
- P1.31**  
**THE DECIDUALIZATION BY VIP CONDITIONS ENDOMETRIAL RECEPTIVITY AND IMMUNE MICROENVIRONMENT THROUGH RETICULAR STRESS AND UNFOLDED PROTEIN RESPONSE**  
Soledad Gori<sup>1</sup>, Elizabeth Soczewski<sup>1</sup>, Esteban Grasso<sup>1</sup>, Laura Fernandez<sup>1</sup>, Lucila Gallino<sup>1</sup>, Marcela Irigoyen<sup>2</sup>, Thalita F. Lobo<sup>3</sup>, Gabriela Salamone<sup>4</sup>, Rosiane Mattar<sup>3</sup>, Silvia Daher<sup>3</sup>, Claudia Perez Leiros<sup>1</sup>, Rosanna Ramhorst<sup>1</sup>  
<sup>1</sup>CONICET, Universidad de Buenos Aires, Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales, Laboratorio de Inmunofarmacología, Buenos Aires, Argentina. <sup>2</sup>Fertilis Medicina Reproductiva, San Isidro, Buenos Aires, Argentina. <sup>3</sup>Universidade Federal de São Paulo, Faculdade de Medicina, Departamento de Obstetrícia, Laboratório de Obstetrícia Fisiológica e Experimental, São Paulo, Brazil. <sup>4</sup>CONICET, Academia Nacional de Medicina, Instituto de Medicina Experimental, Laboratorio de CPA y Respuesta Inflamatoria, Buenos Aires, Argentina
- P1.32**  
**HOW DO THE MECHANICAL INFLUENCES OF BLOOD FLOW IMPACT TROPHOBLAST PLUGGING AND UNPLUGGING OF THE SPIRAL ARTERIES IN EARLY PREGNANCY?**  
Rojan Saghian<sup>1,2</sup>, Gib Bogle<sup>1</sup>, Joanna James<sup>3</sup>, Alys Clark<sup>1</sup>  
<sup>1</sup>Auckland Bioengineering Institute, University of Auckland, Auckland, New Zealand. <sup>2</sup>The Hospital for Sick Children (SickKids), Toronto, Canada. <sup>3</sup>Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand
- P1.33**  
**VERSICAN IS A NOVEL REGULATOR FOR TROPHOBLAST EPITHELIAL-MESENCHYMAL TRANSITION AND INVASION**  
Keyla S. N. Pires<sup>1</sup>, Camilla M. Gonçalves<sup>1</sup>, Rayane M. Botelho<sup>1</sup>, Ana Lucia M. Silva<sup>1</sup>, Liliane P. G. Tenorio<sup>1</sup>, Jaqueline C. Santos<sup>1</sup>, Eloiza L. L. Tanabe<sup>1</sup>, Karen S. C. Borbely<sup>1</sup>, Suely V. Silva<sup>2</sup>, Vanessa M. Freitas<sup>2</sup>, Alexandre U. Borbely<sup>1</sup>  
<sup>1</sup>Cell Biology Laboratory, Institute of Health and Biological Sciences, Federal University of Alagoas, Maceió, Brazil. <sup>2</sup>Department of Cell and Developmental Biology, Institute of Biomedical Sciences, University of Sao Paulo, São Paulo, Brazil
- FETAL GROWTH RESTRICTION**
- P1.34**  
**EFFECTS OF ACUTE SEPSIS IN LIVER OF FEMALE AND MALE ADULT INTRAUTERINE GROWTH-RESTRICTED OFFSPRING EXPOSED TO A LOW PROTEIN DIET DURING GESTATION**  
Anastasiya Vinokurtseva<sup>1,2,3</sup>, Reza Khazaei<sup>2,4,3,5</sup>, Daniel B Hardy<sup>2,4,3</sup>, Ruud Veldhuizen<sup>2,4,5,3</sup>, Edith Arany<sup>1,2,5,6,3</sup>  
<sup>1</sup>Department of Pathology and Laboratory Medicine, London, Canada. <sup>2</sup>Schulich School of Medicine and Dentistry, London, Canada. <sup>3</sup>Western University, London, Canada. <sup>4</sup>Department of Physiology and Pharmacology, London, Canada. <sup>5</sup>Lawson Health Research Institute, London, Canada. <sup>6</sup>Children's Health Research Institute, London, Canada
- P1.35**  
**IN UTERO EXPOSURE OF Δ9-TETRAHYDROCANNABINOL CAUSES PLACENTAL INSUFICIENCY AND ALTERS PANCREAS DEVELOPMENT IN THE NEONATAL FEMALE OFFSPRING LEADING TO IMPAIRED GLUCOSE TOLERANCE IN ADULTHOOD**  
Ryan Guillies<sup>1,2,3</sup>, Kendrick Lee<sup>1,3</sup>, Farsad Jomani<sup>1,3</sup>, Savita Dhavantari<sup>1,4,3,2</sup>, Daniel B Hardy<sup>5,3</sup>, Edith Arany<sup>1,4,3,2</sup>  
<sup>1</sup>Department of Pathology and Laboratory Medicine, London, Canada. <sup>2</sup>Lawson Research Institute, London, Canada. <sup>3</sup>Western University, London, Canada. <sup>4</sup>Schulich School of Medicine and Dentistry, London, Canada. <sup>5</sup>Department of Physiology and Pharmacology, London, Canada
- P1.36**  
**COMPARISON BETWEEN FETAL GROWTH RESTRICTION THAT OCCURS AFTER NORMAL BIRTH WEIGHT VERSUS FETAL GROWTH RESTRICTION THAT RECURS-PREGNANCY OUTCOMES IN CORRELATION WITH PLACENTAL HISTOPATHOLOGY**  
Michal Levy<sup>1,2</sup>, David Alberti<sup>2</sup>, Michal Kovo<sup>3,2</sup>, Letizia Schreiber<sup>4,2</sup>, Liron Koren<sup>3</sup>, Jacob Bar<sup>3,2</sup>, Eran Weiner<sup>3,2</sup>  
<sup>1</sup>Departments of Obstetrics & Gynecology, Holon, Israel. <sup>2</sup>Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel. <sup>3</sup>Departments of Obstetrics & Gynecology, the Edith Wolfson Medical Center, Holon, Israel. <sup>4</sup>Department of Pathology, the Edith Wolfson Medical Center, Holon, Israel



- P1.37**  
**INVESTIGATION OF WIGGLESWORTH INTRAUTERINE GROWTH RESTRICTION MODEL USING DCE-MRI**  
Matthieu Dap<sup>1,2</sup>, Marine Beaumont<sup>3,4</sup>, Olivier Morel<sup>1,2,4</sup>, Anne Tarrade<sup>5</sup>, Enersto Palmero-Soler<sup>3,6</sup>, Ikrame Ramdhani<sup>6</sup>, Charline Bertholdt<sup>7,3,6</sup>  
<sup>1</sup>Obstetric and Fetal Medicine Unit, CHRU de Nancy, Nancy, France. <sup>2</sup>ADI, Université de Lorraine, Inserm, , Nancy, France. <sup>3</sup>ADI, Université de Lorraine, Inserm, Nancy, France. <sup>4</sup>CIC 1433 Innovation Technologique, CHRU Nancy, Université de Lorraine, Inserm, , Nancy, France. <sup>5</sup>UMR BDR, INRA, ENVA, Université Paris Saclay, , Jouy-en-Josas, France. <sup>6</sup>CIC 1433 Innovation Technologique, CHRU Nancy, Université de Lorraine, Inserm, Nancy, France. <sup>7</sup>Obstetric and Fetal Medicine Unit, CHRU de Nancy, Nancy, France
- P1.38**  
**REDUCED O-LINKED N-ACETYL-GLUCOSAMINE IMPACTS ON PLACENTAL STRUCTURE AND FETAL GROWTH IN A EXPERIMENTAL MODEL OF HYPERTENSION**  
Rinaldo R. dos Passos Junior<sup>1</sup>, Vanessa D. Justina<sup>2</sup>, Camila W. Bach<sup>1</sup>, Sebastian S. Martin<sup>3</sup>, Victor V. Lima<sup>1</sup>, Fernanda R. Giachini<sup>1</sup>  
<sup>1</sup>Federal University of Mato Grosso, Barra do Garças, Brazil. <sup>2</sup>Federal University of Goiás, Goiânia, Brazil. <sup>3</sup>Universidad de Valparaíso, Valparaíso, Chile
- P1.39**  
**EFFECT OF FETAL GROWTH RESTRICTION ON THE BIOMECHANICAL AND STRUCTURAL PROPERTIES IN HUMAN UMBILICAL AND CHORIONIC ARTERIES**  
Germán Arenas<sup>1</sup>, Jose Gonzalez<sup>1</sup>, Héctor Saavedra<sup>2</sup>, Alvaro Navarrete<sup>2</sup>, Sebastian Castillo-Galán<sup>1</sup>, Claudio García-Herrera<sup>2</sup>, Bernardo Krause<sup>1</sup>  
<sup>1</sup>Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Universidad de Santiago de Chile, Santiago, Chile
- P1.40**  
**ROLE OF THE UTERINE GLANDS IN THE EARLY EMBRYONIC DEATH OF MAMMALS USING A NATURAL MODEL: THE PLAINS VISCACHA LAGOSTOMUS MAXIMUS (RODENTIA, CHINCHILLIDAE)**  
Francisco Acuña<sup>1,2</sup>, Claudio Gustavo Barbeito<sup>1,2</sup>, Fabián Nishida<sup>3,2</sup>, Enrique Leo Portiansky<sup>3,2</sup>, María Angelica Miglino<sup>4</sup>, Mirta Alicia Flamini<sup>1</sup>  
<sup>1</sup>Laboratorio de Histología y Embriología Descriptiva, Experimental y Comparada, Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata, La Plata, Argentina. <sup>2</sup>Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina. <sup>3</sup>Laboratorio de Análisis de Imágenes, Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata, La Plata, Argentina. <sup>4</sup>Departamento de Anatomía, Facultad de Medicina Veterinaria y Zootecnia, Universidad de San Pablo, San Pablo, Brazil
- P1.41**  
**PLACENTAL MESENCHYMAL STEM/STROMAL CELLS (PMSCS): COULD THEY CONTRIBUTE TO PLACENTAL VASCULAR DYSFUNCTION IN FGR?**  
Anna Boss, Anna Brooks, Larry Chamley, Jo James  
The University of Auckland, Auckland, New Zealand

## FETAL MEMBRANES/ PRETERM LABOUR AND BIRTH

- P1.42**  
**REDUCED EXPRESSION OF ZONULA OCCLUDENS-1 IN FETAL MEMBRANES WAS ASSOCIATED WITH INFLAMMATORY INFILTRATION IN PREMATURE RUPTURE OF MEMBRANES**  
Huijuan Zhang<sup>1,2</sup>, Juan Li<sup>1</sup>, Weibin Wu<sup>3,2</sup>, Ying Wu<sup>4</sup>  
<sup>1</sup>Department of Pathology, International Peace Maternity and Child Health Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai, China. <sup>2</sup>Shanghai Key Laboratory of Embryo Original Disease, Shanghai, China. <sup>3</sup>Biobank, International Peace Maternity and Child Health Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai, China. <sup>4</sup>Department of Neonatology, International Peace Maternity and Child Health Hospital, Shanghai, China
- P1.43**  
**PLACENTAL MALARIA MODIFIES P-GLYCOPROTEIN (P-GP) AND ABCA1 TRANSPORTERS IN THE MOUSE VISCERAL YOLK SAC**  
Lilian M. Martinelli<sup>1</sup>, Klaus N. Fontes<sup>2</sup>, Mila W. Reginatto<sup>2</sup>, Cherley B. V. Andrade<sup>2</sup>, Victoria R. S. Monteiro<sup>2</sup>, Annamaria R. Vago<sup>1</sup>, Fernanda R. C. L. Almeida<sup>1</sup>, Patricia M. Martinelli<sup>1</sup>, Flavia F. Bloise<sup>2</sup>, Stephen G. Matthews<sup>3</sup>, Tania M. Ortega-Carvalho<sup>2</sup>, Enrico Bloise<sup>1</sup>  
<sup>1</sup>Department of Morphology, Federal University of Minas Gerais, Belo Horizonte, Brazil. <sup>2</sup>Laboratory of Translational Endocrinology, Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil. <sup>3</sup>Department of Physiology, University of Toronto, Toronto, Canada

- P1.44**  
**IS THERE A GENDER DEPENDENT PLACENTAL HISTOPATHOLOGY DIFFERENCES IN PRETERM BIRTHS?**  
Noa Gonen<sup>1,2</sup>, Yossi Mizrahi<sup>1,2</sup>, Letizia Schreiber<sup>3,2</sup>, Pollina Amiran<sup>2</sup>, Jacob Bar<sup>1,2</sup>, Michal Kovo<sup>1,2</sup>  
<sup>1</sup>Departments of Obstetrics & Gynecology, the Edith Wolfson Medical Center, Holon, Israel. <sup>2</sup>Tel Aviv University, Tel Aviv, Israel. <sup>3</sup>Departments of Pathology, the Edith Wolfson Medical Center, Holon, Israel
- P1.45**  
**PREVIOUS ZIKA VIRUS INFECTION IS A RISK-FACTOR TO POSTERIOR PREGNANCY: AN EPIDEMIOLOGICAL STUDY IN ALAGOAS STATE, NORTHEASTERN BRAZIL (2016-2019)**  
Séfora Braga, Alexandre Borbely  
Cell Biology Laboratory, Institute of Health and Biological Sciences, Federal University of Alagoas, Maceió, Brazil
- P1.46**  
**REDUCED EXPRESSION OF ZONULA OCCLUDENS-1 IN FETAL MEMBRANES WAS ASSOCIATED WITH INFLAMMATORY INFILTRATION IN PREMATURE RUPTURE OF MEMBRANE**  
HuiJuan Zhang<sup>1,2</sup>, Juan Li<sup>1</sup>, WeiBin Wu<sup>3,2</sup>, Ying Wu<sup>4</sup>  
<sup>1</sup>Departments of Pathology, International Peace Maternity and Child Health Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai, China. <sup>2</sup>Shanghai Key Laboratory of Embryo Original Disease, Shanghai, China. <sup>3</sup>Department of Bio-Bank, International Peace Maternity and Child Health Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai, China. <sup>4</sup>Departments of Neonatology, International Peace Maternity and Child Health Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai, China
- P1.47**  
**ENDOCANNABINOID SYSTEM IS INVOLVED IN THE TRIGGERING OF PRETERM LABOR BY LPS**  
Carolina Marvaldi, Julieta Schander, Julieta Aisemberg, Fernanda De la Cruz, Ana Franchi, Manuel Wolfson  
CEFyBO/UBA-CONICET, CABA, Argentina
- P1.48**  
**THE ROLE OF CERVICAL ENDOCANNABINOID SYSTEM IN THE MODULATION OF LIPOPOLYSACCHARIDE-INDUCED PROINFLAMMATORY RESPONSE**  
Carolina Marvaldi, Felisa Herrero Lo Giudice, Julieta Schander, Julieta Aisemberg, Ana Franchi, Manuel Wolfson  
CEFyBO (UBA-CONICET), CABA, Argentina
- P1.49**  
**MATERNAL ENRICHMENT OF THE ENVIRONMENT PROTECTS THE OFFSPRING AGAINST LPS-INDUCED INFLAMMATION DURING GESTATION: ARE THE PLACENTAS DIFFERENT?**  
Julieta Schander, Carolina Marvaldi, Fernanda De la Cruz, Julieta Aisemberg, Federico Jensen, Ana Franchi  
CEFyBO, CABA, Argentina
- P1.50**  
**THE ENDOCANNABINOID ANANDAMIDE REGULATES OXYTOCIN RECEPTOR IN HUMAN PLACENTA**  
Paula Accialini<sup>1</sup>, Tomás Etcheverry<sup>1</sup>, Cyntia Abán<sup>2</sup>, Mercedes Negri Malbrán<sup>3</sup>, Gustavo Leguizamón<sup>3</sup>, Sabina Maté<sup>4</sup>, Mariana Farina<sup>1</sup>  
<sup>1</sup>Laboratorio de Fisiopatología Placentaria (CEFyBO-CONICET), Ciudad de Buenos Aires, Argentina. <sup>2</sup>Fundación para la Lucha contra las Enfermedades Neurológicas de la Infancia (FLENI), Ciudad de Buenos Aires, Argentina. <sup>3</sup>Centro de Educación Médica e Investigaciones Clínicas Norberto Quirno (CEMIC), Ciudad de Buenos Aires, Argentina. <sup>4</sup>de Investigaciones Bioquímicas de La Plata (INIBIOLP-UNLP), La Plata, Argentina
- P1.51**  
**PROBIOTIC LACTOBACILLUS KEFIRI CIDCA 8348 ADMINISTRATION PREVENTS LPS-INDUCED PRETERM BIRTH BY REDUCING ACUTE INFLAMMATION IN GESTATIONAL TISSUES AND FAVORING PLACENTAL VASCULAR HOMEOSTASIS**  
MARIA SILVIA VENTIMIGLIA<sup>1</sup>, MARLON I POZO ALVÁN<sup>1</sup>, NATALIN VALEFF<sup>1</sup>, LORENA JURIO<sup>1</sup>, MARIA DE LOS ANGELES SERRADELL<sup>2</sup>, FERICO JENSEN<sup>1</sup>  
<sup>1</sup>CEFyBO, BUENOS AIRES, Argentina. <sup>2</sup>DEPARTAMENTO DE CS. BIOLÓGICAS - FACULTAD DE CS. EXACTAS, LA PLATA, Argentina

**HORMONES/ GROWTH FACTORS**

**P1.52**  
**CROSSTALK BETWEEN ER $\alpha$  AND NF $\kappa$ B TRANSCRIPTION FACTORS ON E<sub>2</sub> INDUCED LEPTIN EXPRESSION IN PLACENTAL CELLS.**  
Malena Schanton<sup>1</sup>, Maria Fernanda Camisay<sup>1</sup>, Antonio Pérez-Pérez<sup>2</sup>, Bernardo Maskin<sup>3</sup>, Roberto Casale<sup>3</sup>, Victor Sánchez Margalet<sup>2</sup>, Alejandra Erlejman<sup>1</sup>, Cecilia Varone<sup>1</sup>  
<sup>1</sup>Dpto. Química Biológica, FCEN, UBA, IQUIBICEN-CONICET, BUENOS AIRES, Argentina. <sup>2</sup>Dpto. de Bioquímica Médica y Biología Molecular, Universidad de Sevilla, Sevilla, Spain. <sup>3</sup>Hospital Alejandro Posadas, BUENOS AIRES, Argentina

**P1.53**  
**ANGIOTENSIN II UPREGULATES PLACENTAL LEPTIN AND HAS A POTENTIAL INFLAMMATORY ROLE IN EARLY GESTATION PLACENTA**  
Olivia Nonn<sup>1</sup>, Sabine Maninger<sup>1</sup>, Amin El-Heliebi<sup>1</sup>, Thomas Kroneis<sup>1</sup>, Désirée Forstner<sup>1</sup>, Jaqueline Guettler<sup>1</sup>, Monika Siwetz<sup>1</sup>, Florian Herse<sup>2</sup>, Ursula Hiden<sup>3</sup>, Denise Hoch<sup>3</sup>, Gernot Desoye<sup>3</sup>, Berthold Huppertz<sup>1</sup>, Martin Gauster<sup>1</sup>  
<sup>1</sup>Division of Cell Biology, Histology and Embryology, Gottfried Schatz Research Centre, Medical University of Graz, Graz, Austria. <sup>2</sup>Max Delbrueck Centre for Molecular Medicine, Experimental Clinical Research Centre Campus Buch, Charité, Berlin, Germany. <sup>3</sup>Department of Obstetrics and Gynaecology, Medical University of Graz, Graz, Austria

**P1.54**  
**LEPTIN PREVENTS CELLULAR STRESS UNDER HYPOXIC CONDITION IN TROPHOBLASTIC CELLS**  
Nataly de Dios<sup>1,2</sup>, Paula Balestrini<sup>3</sup>, Malena Schanton<sup>1,2</sup>, Rodrigo Riedel<sup>1,2</sup>, Mariana Jaime<sup>4</sup>, Bernardo Maskin<sup>4</sup>, Julieta Maymo<sup>1,2</sup>, Cecilia Varone<sup>1,2</sup>  
<sup>1</sup>Instituto de Qca. Biológica-CONICET, Capital federal, Argentina. <sup>2</sup>Facultad de Ciencias Exactas- UBA, Capital Federal, Argentina. <sup>3</sup>Instituto de Biología y Medicina Experimental IByME, Capital federal, Argentina. <sup>4</sup>Hospital Nacional Profesor Alejandro Posadas, Capital federal, Argentina

**P1.55**  
**ALTERED PLACENTAL ANDROGEN SIGNALLING CONTRIBUTES TO GROWTH RESTRICTED OUTCOMES**  
Ashley Meakin<sup>1</sup>, Zarqa Saif<sup>1</sup>, Ratana Lim<sup>2</sup>, Martha Lappas<sup>2</sup>, Vicki Clifton<sup>1</sup>  
<sup>1</sup>Mater Medical Research Institute - University of Queensland, Brisbane, Australia. <sup>2</sup>University of Melbourne, Melbourne, Australia

**P1.56**  
**EFFECTS OF MATERNAL HYPOTHYROXINEMIA OVER THE ADIPOSE TISSUE IN THE ADULT THE PROGENY**  
Arturo Alba<sup>1</sup>, Bárbara Gutierrez<sup>1</sup>, Natalia De Luca<sup>1</sup>, Andrea Vecchiola<sup>2,3,4</sup>, Maricarmen Osses<sup>5</sup>, Felipe Gomez<sup>5</sup>, Johana Santos<sup>6</sup>, Luis Mendez<sup>1,2</sup>, Daniel Aguayo<sup>5</sup>, Claudia Riedel<sup>1,2</sup>, Maria Cecilia Opazo<sup>1,2</sup>  
<sup>1</sup>Departamento de Ciencias Biológicas, Facultad de Ciencias de la Vida, Univerdad Andres Bello, Santiago, Chile. <sup>2</sup>Millennium institute on immunology and immunotherapy, Santiago, Chile. <sup>3</sup>Department of Endocrinology, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>4</sup>Center of Translational Endocrinology (CETREN), Faculty of Medicine, Endocrinology Department, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>5</sup>Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias de la Vida, Universidad Andrés Bello, Santiago, Chile. <sup>6</sup>Facultad de Medicina Veterinaria y Agronomía, Carrera de Medicina Veterinaria, Universidad de las Américas, Santiago, Chile

**P1.57**  
**THE OFFSPRING GESTATED IN HYPOTHYROXINEMIA HAS HIGHER PARACELLULAR INTESTINAL PERMEABILITY AND SIGNS OF INTESTINAL INFLAMMATION**  
Barbara Gutierrez<sup>1,2</sup>, Maria C. Opazo<sup>1,2</sup>, Maximo Diaz<sup>1,2</sup>, Jacques Gonzalez<sup>3</sup>, Philippe Aubert<sup>3</sup>, Hélène Boudin<sup>3</sup>, Michel Neunlist<sup>3</sup>, Alexis M Kalergis<sup>2,4,5</sup>, Susan M Bueno<sup>2,4</sup>, Claudia A Riedel<sup>1,2</sup>  
<sup>1</sup>Departamento de Ciencias Biológicas, Facultad de Ciencias de la Vida, Univerdad Andrés Bello, Santiago, Chile. <sup>2</sup>Millennium institute on immunology and immunotherapy, Santiago, Chile, Santiago, Chile. <sup>3</sup>Institut des Maladies de l'Appareil Digestif, Nantes, Francia. <sup>4</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile, Santiago, Chile. <sup>5</sup>Departamento de Endocrinología, Escuela de Medicina, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile, Santiago, Chile

**P1.58**  
**THE OFFSPRING GESTATED IN HYPOTHYROIDISM COUNT WITH LESS FUNCTIONAL TREG CELLS DUE TO CD25 LOCALIZES IN THE INTRACELLULAR INCREASING THEIR AUTOIMMUNE RESPONSE DURING EAE.**

Máximo Díaz<sup>1</sup>, María Cecilia Opazo<sup>1,2</sup>, Bárbara Gutierrez<sup>1,2</sup>, Luis Méndez<sup>1,2</sup>, Alexis Kalergis<sup>2,3,4</sup>, Susan Bueno<sup>2,3</sup>, Claudia Riedel<sup>1,2</sup>

<sup>1</sup>Laboratorio de Endocrino-Immunología, departamento de Ciencias Biológicas, Facultad de Ciencias de la Vida, Universidad Andrés Bello, Santiago, Chile, Santiago, Chile. <sup>2</sup>Millennium Institute on Immunology and Immunotherapy, Santiago, Chile, Santiago, Chile. <sup>3</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile, Santiago, Chile. <sup>4</sup>Departamento de Endocrinología, Escuela de Medicina, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile, Santiago, Chile

**P1.59**  
**LOW LEVELS OF FREE THYROXINE IN UMBILICAL CORD BLOOD IS ASSOCIATED WITH A REDUCE IN DEIODINASE 2 ACTIVITY IN HUMAN TROPHOBLAST FROM GESTATIONAL DIABETES PREGNANCIES**

E Guzman-Gutierrez<sup>1</sup>, S Gutierrez-Vega<sup>1,2</sup>, E Castro<sup>2</sup>, M Gonzalez<sup>3</sup>, A Leiva<sup>4</sup>

<sup>1</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, Universidad de Concepción, Concepcion, Chile. <sup>2</sup>Faculty of Health Sciences, Universidad San Sebastian, Concepcion, Chile. <sup>3</sup>Department of Obstetrics and Gynecology, Faculty of Medicine, Universidad de Concepción, Concepcion, Chile. <sup>4</sup>Cellular and Molecular Physiology Laboratory (CMPL), Division of Obstetric and Gynecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

**P1.60**  
**SEROTONIN REUPTAKE INHIBITORS ALTER PLACENTAL AROMATASE ACTIVITY IN HUMAN PRIMARY VILLOUS TROPHOBLASTS**

Andrée-Anne Hudon Thibeault, Yossef López de Los Santo, Doucet Nicolas, J Thomas Sanderson, Vaillancourt Cathy  
INRS-Centre Armand Frappier Santé Biotechnologie, Montreal, Canada

**P1.61**  
**TROPHOBLASTIC CELL INVASION IS INDUCED BY LEPTIN INVOLVING  $\beta$ -CATENIN/WNT PATHWAY**

Tamara Fernández Aranguren<sup>1</sup>, Rodrigo Riedel<sup>1</sup>, Malena Schanton<sup>1</sup>, Ayelén Toro<sup>1</sup>, Mariana Jaime<sup>2</sup>, Bernardo Maskin<sup>2</sup>, Julieta Maymó<sup>1</sup>, Cecilia Varone<sup>1</sup>

<sup>1</sup>Departamento de Química Biológica FCEN-UBA. Instituto de Química Biológica FCEN, IQUIBICEN, CONICET, Buenos Aires, Argentina. <sup>2</sup>Hospital nacional Profesor Alejandro Posadas, Buenos Aires, Argentina

**IMMUNOLOGY**

**P1.62**  
**INF $\gamma$  AND IL-10 SERIC AND PLACENTAL PROFILE DURING PORCINE GESTATION.**

Carolina Lucía Vélez<sup>1</sup>, Delia Williamson<sup>1</sup>, Mariángeles Clazure<sup>1</sup>, Mirta Koncurat<sup>1</sup>, Claudio Barbeito<sup>2</sup>

<sup>1</sup>Facultad de Ciencias Veterinarias UNLPam, General Pico, La Pampa, Argentina, Argentina. <sup>2</sup>Facultad de Ciencias Veterinarias UNLP, La Plata, Buenos Aires, Argentina

**P1.63**  
**MEDIATORS EXPRESSION IN AMNIOTIC MEMBRANE OF PREGNANT WOMEN WITH AND WITHOUT GESTATIONAL DIABETES MELLITUS**

Thiago PB De Luccia<sup>1</sup>, Erika Ono<sup>1</sup>, Karen PT Pendeloski<sup>1</sup>, Eloiza LL Tanabe<sup>2</sup>, Ana Lúcia M Silva<sup>2</sup>, Alexandre U Borbely<sup>2</sup>, Rosiane Mattar<sup>1</sup>, Silvia Daher<sup>1</sup>

<sup>1</sup>Universidade Federal de São Paulo-Escola Paulista de Medicina São Paulo, São Paulo, Brazil. <sup>2</sup>Instituto de Ciências Biológicas e da Saúde, Universidade Federal de Alagoas, Maceió, Brazil

**P1.64**  
**ANTICOAGULATION IN PREGNANT WOMEN WITH ANTIPHOSPHOLIPID ANTIBODY SYNDROME, HEART DISEASE AND THROMBOCYTOPENIA**

ANNIE CAROLINE MAGALHÃES SANTOS, ROGÉRIO CAIXETA MORAES DE FREITAS  
UNIVERSITY HOSPITAL JULIO MULLER, Cuiabá, Brazil

**P1.65**  
**HIV-1 INHIBITION BY IFN- $\gamma$  ADJUVANTS IN NAONATAL MACROPHAGES**

ANNA JULIA PIETROBON<sup>1,2</sup>, FÁBIO SEITI YAMADA YOSHIKAWA<sup>1</sup>, LUANA DE MENDONÇA OLIVEIRA<sup>1</sup>, NATALLI ZANETE PEREIRA<sup>1</sup>, TAIS APARECIDA MATOZO DE SOUZA<sup>2</sup>, BRUNA CUNHA DE ALENCAR BARGIERI<sup>2</sup>, ALBERTO JOSÉ DA SILVA DUARTE<sup>1</sup>, MARIA NOTOMI SATO<sup>1</sup>

<sup>1</sup>Laboratory of Dermatology and Immunodeficiencies (LIM-56) School of Medicine - University of São Paulo, São Paulo, Brazil. <sup>2</sup>Institute of Biomedical Sciences - University of São Paulo, São Paulo, Brazil

**P1.66**  
**MATERNAL OBESITY INDUCES CHANGES IN THE EXPRESSION OF INFLAMMATORY GENES IN THEIR OFFSPRING'S MONOCYTES AND GESTATIONAL DHA SUPPLEMENTATION DIFFERENTIALLY REGULATES PCG1 $\alpha$  EXPRESSION.**

Macarena L pez<sup>1</sup>, B rbara Riquelme<sup>1</sup>, Cherie Hern ndez<sup>1</sup>, Karina Carrasco<sup>1</sup>, Mar a Luisa Garmendia<sup>2</sup>, Paola Casanello<sup>1</sup>  
<sup>1</sup>Pontificia Universidad Cat lica de Chile, Santiago, Chile. <sup>2</sup>Universidad de Chile, Santiago, Chile

**P1.67**  
**EXPRESSION OF HLA-G, HLA-E AND HLA-F IN THE CHORIODECIDUAL INTERFACE OF COMPLETE HYDATIDIFORM MOLES**

Lawrence Lin, Marcello Toscano, Mara Hoshida, Regina Schultz, Koji Fushida, Rossana Francisco  
University of Sao Paulo, Sao Paulo, Brazil

**P1.68**  
**DECIDUAL IMMUNE CELL INFILTRATION AND PROGRESSION TO POST-MOLAR TROPHOBLASTIC NEOPLASIA**

Lawrence Lin, Marcello Toscano, Mara Hoshida, Regina Schultz, Koji Fushida, Rossana Francisco  
University of Sao Paulo, Sao Paulo, Brazil

**P1.69**  
**MACROPHAGE-MEDIATED REGULATORY EFFECT OF *F. NUCLEATUM* ON TROPHOBLAST CELLS.**

Rebekka Einenkel, Dami n Muzzio, Jens Ehrhardt, Marek Zygmunt  
Department of Obstetrics and Gynecology, University Medicine Greifswald, Greifswald, Germany

**INFECTION AND INFLAMMATION**

**P1.70**  
**SERUM CONCENTRATION LEVELS OF INTERLEUKIN-17A (IL-17A) IN HIV INFECTED HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART) TREATED AND UNINFECTED NORMOTENSIVE VERSUS PRE-ECLAMPTIC BLACK SOUTH AFRICAN WOMEN**

Wendy Phoswa<sup>1</sup>, Thajasvarie Naicker<sup>2</sup>, Veron Ramsuran<sup>3,4</sup>, Jagidesa Moodley<sup>5</sup>  
<sup>1</sup>Discipline of Obstetrics and Gynecology, Nelson R Mandela School of Medicine, University of Kwa Zulu-Natal, Durban, South Africa. <sup>2</sup>Optics and Imaging Centre, University of Kwa Zulu-Natal, Durban, South Africa. <sup>3</sup>Kwa Zulu-Natal Research Innovation and Sequencing Platform (KRISP), School of Laboratory Medicine and Medical Sciences, University of Kwa Zulu-Natal, Durban, South Africa. <sup>4</sup>Centre for the AIDS Programme of Research in South Africa (CAPRISA), Durban, South Africa. <sup>5</sup>Women's Health and HIV Research Group, University of Kwa Zulu-Natal, Durban, South Africa

**P1.71**  
**ROLE THE NF-KAPPA B SIGNAL PATHWAYS DURING THE EX VIVO INFECTION OF HUMAN PLACENTA WITH *TRYPANOSOMA CRUZI* AND *TOXOPLASMA GONDII***

Ana Liempi<sup>1,2</sup>, Christian Castillo<sup>2</sup>, Lisvaneth Medina<sup>1,2</sup>, Catalina Espinoza<sup>2</sup>, Emilia Corradi<sup>2</sup>, Victor Hugo Parraguez<sup>3</sup>, Ulrike Kemmerling<sup>2</sup>  
<sup>1</sup>Programa Doctorado en Ciencias Silvoagropecuarias y Veterinarias, Campus Sur, Universidad de Chile, Santiago, Chile. <sup>2</sup>Programa de Anatom a y Biolog a del Desarrollo, ICBM, Facultad de Medicina, Universidad de Chile, Santiago, Chile. <sup>3</sup>Departamento de Ciencias Biol gicas, Facultad de Ciencias Veterinarias y Pecuarias, Universidad de Chile, Santiago, Chile

**P1.72**  
**HMGB1 ROLE IN PLACENTAL BARRIER INFECTION BY *TRYPANOSOMA CRUZI***

Christian Castillo<sup>1</sup>, Paloma Lazo-B ez<sup>2</sup>, Andrea Jimenez-Pais<sup>2</sup>, Ana Liempi<sup>1</sup>, Lisvaneth Medina<sup>1</sup>, Ulrike Kemmerling<sup>1</sup>  
<sup>1</sup>Institute of Biomedical Sciences, Faculty of Medicine, University of Chile, Santiago, Chile. <sup>2</sup>Medicine Student, Faculty of Medicine, University of Chile, Santiago, Chile

**P1.73**  
**FITZ-HUGH-CURTIS SYNDROME: PERIHEPATITIS AND SEPSIS IN PUERPERIUM**

Annie Caroline Magalhaes Santos, Rog rio Caixeta Moraes De Freitas  
University Hospital Julio Muller, Cuiaba, Brazil

- P1.74**  
**VERTICAL TRANSMISSION OF ZIKA VIRUS AND PERINATAL MICROCEPHALY**  
Rogério Caixeta Moraes De Freitas, Annie Caroline Magalhães Santos, Wagner Izidoro De Brito  
University Hospital Julio Muller, Cuiabá, Brazil
- P1.75**  
**GROUP B STREPTOCOCCUS INDUCES TROPHOBLAST REDUCED MOTILITY: PREECLAMPSIA IMPLICATIONS AND UVAOL TREATMENT**  
Ana Lucia M. Silva<sup>1</sup>, Rayane M. Botelho<sup>1</sup>, Liliane Patrícia G. Tenorio<sup>1</sup>, Eloiza L. L. Tanabe<sup>1</sup>, Keyla S. N. Pires<sup>1</sup>, Camilla M. Gonçalves<sup>1</sup>, Jaqueline C. Santos<sup>1</sup>, Aldilane Lays X. Marques<sup>1</sup>, Marie-Julie Allard<sup>2</sup>, Julie L. Bergeron<sup>3</sup>, Guillaume Sebire<sup>4,3</sup>, Karen S. C. Borbely<sup>1,5</sup>, Alexandre U. Borbely<sup>1</sup>  
<sup>1</sup>Cell Biology Laboratory, Institute of Health and Biological Sciences, Federal University of Alagoas, Maceio, Brazil. <sup>2</sup>Department of Pediatrics, McGill University, Montreal, Canada. <sup>3</sup>Department of Pediatrics, Université de Sherbrooke, Sherbrooke, Canada. <sup>4</sup>Department of Pediatrics, McGill University, Montreal, Canada. <sup>5</sup>Faculty of Nutrition, Federal University of Alagoas, Maceio, Brazil
- P1.76**  
**UVAOL EFFECTS IN GROUP B STREPTOCOCCUS-INDUCED TROPHOBLAST CELL DEATH AND INFLAMMATION**  
Rayane M. Botelho<sup>1</sup>, Liliane Patrícia G. Tenorio<sup>1</sup>, Ana Lucia M. Silva<sup>1</sup>, Eloisa L. L. Tanabe<sup>1</sup>, Keyla S. N. Pires<sup>1</sup>, Camilla M. Gonçalves<sup>1</sup>, Jaqueline C. Santos<sup>1</sup>, Marie-Julie Allard<sup>2</sup>, Julie D. Bergeron<sup>3</sup>, Guillaume Sebire<sup>2,3</sup>, Karen S. C. Borbely<sup>1,4</sup>, Alexandre U. Borbely<sup>1</sup>  
<sup>1</sup>Cell Biology Laboratory, Institute of Health and Biological Sciences, Federal University of Alagoas, Maceio, Brazil. <sup>2</sup>Department of Pediatrics, McGill University, Montreal, Canada. <sup>3</sup>Department of Pediatrics, Université de Sherbrooke, Sherbrooke, Canada. <sup>4</sup>Faculty of Nutrition, Federal University of Alagoas, Maceio, Brazil
- P1.77**  
**ZIKA VIRUS AND PLACENTA: HISTOPATHOLOGICAL INVESTIGATION, INFLAMMATORY PROFILE AND ULTRASTRUCTURAL ANALYSIS IN GESTATIONS RESULTING IN CASES OF MICROCEPHALY OR NOT**  
Kíssila Rabelo<sup>1</sup>, Luiz José de Souza<sup>2</sup>, Natália Gedeão Salomão<sup>3</sup>, Lara Nascentes Machado<sup>2</sup>, Priscila Gomes Pereira<sup>1</sup>, Elyzabeth Avvad Portari<sup>4</sup>, Rodrigo Basílio-de-Oliveira<sup>5</sup>, Jorge José de Carvalho<sup>1</sup>, Marciano Viana Paes<sup>3</sup>  
<sup>1</sup>Laboratório de Ultraestrutura e Biologia Tecidual, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil. <sup>2</sup>Faculdade de Medicina de Campos, Campos dos Goytacazes, Brazil. <sup>3</sup>Laboratório Interdisciplinar de Pesquisas Médicas, Instituto Oswaldo Cruz, Rio de Janeiro, Brazil. <sup>4</sup>Anatomia Patológica, Instituto Fernandes Figueira,, Rio de Janeiro, Brazil. <sup>5</sup>Anatomia Patológica, Universidade Federal do Estado do Rio de Janeiro,, Rio de Janeiro, Brazil
- P1.78**  
**DIFFERENTIAL SECRETION OF INFLAMMATORY CYTOKINES BY HUMAN TROPHOBLAST IN THE PRESENCE OF *E. COLI* AND TWO LACTOBACILLUS STRAINS.**  
Ali Alhouseini<sup>1,2</sup>, Felipe Vadillo-Ortega<sup>3,1,2</sup>, Berenice Palacios-Gonzalez<sup>4,1,2</sup>, Kevin Theis<sup>2,1</sup>, Andrew Winters<sup>2</sup>, Sonia Hassan<sup>2,1</sup>, Noemi Meraz-Cruz<sup>4,1,2</sup>  
<sup>1</sup>Perinatology Research Branch, NICHD, Detroit, USA. <sup>2</sup>Wayne State University School of Medicine, Detroit, USA. <sup>3</sup>Unidad de Vinculación de la facultad de Medicina UNAM en el INMEGEN, Mexico City, Mexico. <sup>4</sup>Unidad de Vinculación de la Facultad de Medicina UNAM en el INMEGEN, Mexico City, Mexico
- P1.79**  
**CHRONIC INTERVILLOSITIS LINKED TO PLATELET ALLOIMMUNIZATION—A NEW ENTRY PORT TO UNDERSTANDING A RARE BUT IMPORTANT PLACENTAL LESION**  
Nora Hersoug Nedberg<sup>1</sup>, Gitta Turowski<sup>2</sup>, Katarzyna Guz<sup>3</sup>, Ewa Przytuła<sup>4</sup>, Małgorzata Uhrynowska<sup>3</sup>, Borghild Roald<sup>2,5</sup>, Mariana Eksteen<sup>1</sup>, Anne Husebekk<sup>1</sup>, Marzena Dębska<sup>6</sup>, Ewa Brojer<sup>4</sup>, Heidi Tiller<sup>1,7</sup>  
<sup>1</sup>Immunology Research Group, Department Of Medical Biology, Faculty Of Health Sciences, UiT- The Arctic University Of Norway, Tromsø, Norway. <sup>2</sup>Department of Pathology, Center for Perinatal and Pregnancy-Related Pathology, Oslo University Hospital-Ullevål, Oslo, Norway. <sup>3</sup>Department of Hematological and Transfusion Immunology, Institute of Hematology and Transfusion Medicine, Warsaw, Poland. <sup>4</sup>Department of Pathology, Medical Centre for Postgraduate Education, Warsaw, Poland. <sup>5</sup>Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, Oslo, Norway. <sup>6</sup>2nd Department of Obstetrics and Gynecology, Medical Centre of Postgraduate Education, Warsaw, Poland. <sup>7</sup>Department of Obstetrics and Gynecology, University Hospital North Norway, Tromsø, Norway

**P1.80**  
**THE INVOLVEMENT OF ANNEXIN A1 IN HUMAN PLACENTAL RESPONSE TO MATERNAL ZIKA VIRUS INFECTION**  
Rafaela Batista Molás<sup>1</sup>, Milene Rocha Ribeiro<sup>1</sup>, Denise C. M. Vaz Oliani<sup>2</sup>, Antonio Hélio Oliani<sup>2</sup>, Suchita Nadkarni<sup>3</sup>, Maurício Lacerda Nogueira<sup>4</sup>, Juscielle Brogin Moreli<sup>5,6</sup>, Sonia Maria Oliani<sup>1</sup>

<sup>1</sup>Department of Biology, School of Biosciences, Humanities and Exact Sciences, São Paulo State University (UNESP), , São José do Rio Preto, Brazil. <sup>2</sup>Department of Gynecology and Obstetrics, São José do Rio Preto School of Medicine (FAMERP), São José do Rio Preto, Brazil. <sup>3</sup>The William Harvey Research Institute, Barts and the London School of Medicine, Queen Mary University of London, London, Brazil. <sup>4</sup>Department of Dermatological, Infectious, and Parasitic Diseases, São José do Rio Preto School of Medicine (FAMERP), São José do Rio Preto, Brazil. <sup>5</sup>Post-graduation in Structural and Functional Biology, Federal University of São Paulo (UNIFESP, São Paulo, Brazil. <sup>6</sup>Faceres School of Medicine, São José do Rio Preto, Brazil

**P1.81**  
**PLACENTAL CHARACTERIZATION OF ZIKA VIRUS INFECTION DURING 2016 OUTBREAK IN CAMPINAS/SP-BRAZIL**  
Maria Laura Costa<sup>1</sup>, Guilherme de Moraes Nobrega<sup>2</sup>, Ana Paula Samogim<sup>2</sup>, Emanuella Meneses Venceslau<sup>1</sup>, José Paulo de Siqueira Guida<sup>1</sup>, Arthur Antolini Tavares<sup>1</sup>, Rodolfo Rosa Japecanga<sup>1</sup>, Eliana Amaral<sup>1</sup>, José Luiz Proença Modena<sup>2</sup>  
<sup>1</sup>CAISM-Unicamp-Women's Hospital Prof. Dr. José Aristodemo Pinotti, University of Campinas, Campinas-SP, Brazil. <sup>2</sup>IB-Unicamp-Departament of Genetics, Evolution, Microbiology and Immunology, Institute of Biology, University of Campinas, Campinas-SP, Brazil

**P1.82**  
**PLACENTAL SUBMICROSCOPIC MALARIA: HISTOPATHOLOGY AND EXPRESSION OF GENES ASSOCIATED WITH HYPOXIA, APOPTOSIS AND INFLAMMATION.**  
Olga María Agudelo-García, Jaime Carmona-Fonseca, Eliana Arango  
Grupo Salud y Comunidad-César Uribe Piedrahíta, Universidad de Antioquia., Medellín, Colombia

## METABOLISM AND METABOLIC DISEASES

**P1.83**  
**MATERNAL DIETS ENRICHED IN SUNFLOWER AND CHIA OIL MODULATE PPAR PATHWAYS IN THE DECIDUA FROM DIABETIC RATS DURING EARLY POSTIMPLANTATION**  
Sabrina Lorena Roberti, Hugo Sato, Cintia Romina Gatti, Romina Higa, Alicia Jawerbaum  
Laboratory of Reproduction and Metabolism - CEFyBO-UBA-CONICET - School of Medicine - University of Buenos Aires, Buenos Aires, Argentina

**P1.84**  
**MORPHOMETRIC ANALYSIS SHOWS THERE IS ENHANCED SURFACE DENSITY OF HUMAN PLACENTAL VILLI IN PREGNANT WOMEN WITH HIGH, VS. DEFICIENT, 25 HYDROXYCHOLECALCIFEROL LEVELS**  
Mai He<sup>1</sup>, Robert Wu<sup>2</sup>, Lin Chen<sup>1</sup>, Augusto A. Litonjua<sup>3</sup>, Scott T. Weiss<sup>3</sup>, D. Michael Nelson<sup>1</sup>  
<sup>1</sup>Washington University School of Medicine, St. Louis, USA. <sup>2</sup>Penn State College of Medicine, Hershey, USA. <sup>3</sup>Harvard Medical School, Boston, USA

**P1.85**  
**ROLE OF KISSPEPTIN AND ITS THERAPEUTIC POTENTIAL IN FETOPLACENTAL DYSFUNCTION OF HYPOTHYROID RATS**  
Jeane Martinha dos Anjos Cordeiro<sup>1</sup>, Luciana Santos Oliveira<sup>1</sup>, Bianca Reis Santos<sup>1</sup>, Isabella Oliveira Macedo<sup>1</sup>, Erikles Macêdo Barbosa<sup>1</sup>, Raphael Escorsim Szawka<sup>2</sup>, Rogéria Serakides<sup>2</sup>, Juneo Freitas Silva<sup>1</sup>  
<sup>1</sup>Universidade Estadual de Santa Cruz, Ilhéus, Brazil. <sup>2</sup>Univesidade Federal de Minas Gerais, Belo Horizonte, Brazil

**P1.86**  
**TYPE 2 DIABETES MELLITUS DEVELOPMENT IN LOW-INCOME MOTHER-INFANT PAIRS OF BRAZILIAN WOMEN WITH PREVIOUS GESTATIONAL DIABETES MELLITUS: A 5-11 YEARS OF FOLLOW-UP RETROSPECTIVE COHORT STUDY**  
Marilza Vieira Cunha Rudge<sup>1</sup>, Mariana Alvarez Arantes<sup>1</sup>, Lucas Pontes de Camargo<sup>1</sup>, Carlos Antonio Negrato<sup>1</sup>, Grasiela Bossolan<sup>1</sup>, Lakshmana Shetty Raghavendra Hallur <sup>1</sup>, Débora Damasceno<sup>1</sup>, Iracema de Mattos Paranhos Calderon<sup>1</sup>, Roberto Costa<sup>1</sup>, Claudia Garcia Magalhães<sup>1</sup>, Joelcio Francisco Abbade<sup>1</sup>, Angélica Mercia Pascon Barbosa<sup>2</sup>  
<sup>1</sup>Department of Gynecology and Obstetrics, Botucatu Medical School, São Paulo State University (UNESP), Botucatu, Brazil. <sup>2</sup>Department of Physiotherapy and Occupational Therapy, School of Philosophy and Sciences, São Paulo State University (UNESP), Marília, Brazil

**P1.87**  
**PRE-PREGNANCY METABOLIC SYNDROME ON SHORT AND LONG-TERM ADVERSE CONSEQUENCES FOR THE OFFSPRING: A COHORT STUDY OF LOW INCOME BRAZILIAN MOTHERS**

Marilza Vieira Cunha Rudge<sup>1</sup>, Lucas Pontes de Camargo<sup>1</sup>, Mariana Alvarez Arantes<sup>1</sup>, Carlos Antonio Negrato<sup>1</sup>, Grasiela Bossolan<sup>1</sup>, Lakshmana Shetty Raghavendra Hallur<sup>1</sup>, Claudia Garcia Magalhães<sup>1</sup>, Roberto Costa<sup>1</sup>, Joelcio Francisco Abbade<sup>1</sup>, Guilherme Augusto Rago Ferraz<sup>1</sup>, Debora Cristina Damasceno<sup>1</sup>, Iracema de Mattos Paranhos Calderon<sup>1</sup>, Angélica Mercia Pascon Barbosa<sup>2</sup>

<sup>1</sup>Department of Gynecology and Obstetrics, Botucatu Medical School, São Paulo State University (UNESP), Botucatu, Brazil. <sup>2</sup>Department of Physiotherapy and Occupational Therapy, School of Philosophy and Sciences, São Paulo State University (UNESP), Marília, Brazil

**P1.88**  
**CHANGES IN PLACENTAL LIPIDOMICS WITH OBESITY AND GESTATIONAL DIABETES: SEXUAL DIMORPHISM**

Leslie Myatt<sup>1</sup>, Eric Wang<sup>2</sup>, Kelly Stratton<sup>3</sup>, Lisa Bramer<sup>3</sup>, Bobbie-Jo Webb-Robertson<sup>3</sup>, Jennifer Kyle<sup>3</sup>, Kristin Burnum-Johnson<sup>3</sup>

<sup>1</sup>Oregon Health & Science University, Portland, USA. <sup>2</sup>Oregon Health & Science University, Portland, USA. <sup>3</sup>Pacific Northwest National Laboratory, Richland, USA

**P1.89**  
**EXPRESSION AND FUNCTION OF ENZYMES INVOLVED IN TRYPTOPHAN METABOLISM IN HUMAN PLACENTA; EFFECT OF GESTATION AGE.**

Cilia Abad, Rona Karahoda, Mary Christina Cynthia Rohini Raj, Frantisek Staud

Department of Pharmacology and Toxicology, Faculty of Pharmacy in Hradec Kralove, Charles University, Hradec Kralove, Czech Republic

**P1.90**  
**DISRUPTION OF IMPRINTING AT THE IGF2-H19 LOCUS IN THE PLACENTAL ENDOCRINE ZONE AFFECTS MATERNAL SYSTEMIC METABOLISM**

Jorge Lopez-Tello, Hannah EJ Yong, Efthimia R Christoforou, Tina Napso, Ionel Sandovici, Miguel Constancia, Amanda N Sferruzzi-Perri  
Centre for Trophoblast Research. University of Cambridge, Cambridge, United Kingdom

**P1.91**  
**MATERNAL DIABETES INDUCES FOXO1 AND CONNEXIN 43 ALTERATIONS IN THE HEART OF THE DEVELOPING EMBRYO**

Hugo Sato<sup>1</sup>, Sabrina Roberti<sup>1</sup>, Daniel Musikant<sup>2</sup>, Alicia Jawerbaum<sup>1</sup>, Romina Higa<sup>1</sup>

<sup>1</sup>Center of Pharmacological and Botanical Studies CEFyBO-UBA-CONICET, Buenos Aires. Argentina. <sup>2</sup>Departamento de Química Biológica, FCEyN-UBA, Buenos Aires, Argentina

**P1.92**  
**PATERNAL DIABETES PROGRAMS METABOLIC DISORDERS IN THE PLACENTA AND THE FETUS**

Daiana Debora Fornes, Verónica White, Alicia Jawerbaum, Evangelina Capobianco

Centro de Estudios Farmacológicos y Botánicos (CEFyBO – CONICET – UBA), Buenos Aires, Argentina

**P1.93**  
**MATERNAL TREATMENT WITH SODIUM BUTYRATE PREVENTS FETAL MACROSOMIA AND REDUCES THE EXPRESSION OF LIPID TRANSPORTERS IN PLACENTAS FROM OVERWEIGHT RATS.**

María Florencia Heinecke, Dalmiro Gómez Ribot, Alicia Jawerbaum, Verónica White

Centro de Estudios Farmacológicos y Botánicos (CEFyBO – CONICET – UBA), Ciudad Autónoma de Buenos Aires, Argentina

**P1.94**  
**USE OF METFORMIN FOR GESTATIONAL DIABETES TREATMENT AND ITS EFFECTS IN PLACENTAL NUTRIENT TRANSPORTERS EXPRESSION.**

Romario Rivera-Sanabria, Herney Andrés García-Perdomo, Mildrey Mosquera-Escudero

Universidad del Valle, Cali, Colombia

**P1.95**  
**MATERNAL SUPRAPHYSIOLOGICAL DYSLIPIDEMIA INDUCES ARGINASES-INCREASE IMPAIRING FETO-PLACENTAL ENDOTHELIAL FUNCTION IN PREGNANCIES WITH GESTATIONAL DIABETES MELLITUS**

Susana Contreras, Lorena Carvajal, Claudette Cantin, Barbara Fuenzalida, Andrea Leiva

Pontificia Universidad Católica de Chile, Santiago, Chile



**P1.96**  
**ALTERATIONS OF PLASMA MEMBRANE FLUIDITY, PLASMA MEMBRANE POTENTIAL AND NITRIC OXIDE BIOAVAILABILITY IN HUVECS FROM GESTATIONAL DIABETES**

Natalia Vallejos<sup>1</sup>, Susana Rojas<sup>2</sup>, Susana Sánchez<sup>3</sup>, Marcelo González<sup>1</sup>

<sup>1</sup>Departamento de Obstetricia y Ginecología, Facultad de Medicina, Universidad de Concepción, Concepción, Chile. <sup>2</sup>Departamento de Fisiología, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile. <sup>3</sup>Departamento de Polímeros, Facultad de Ciencias Químicas, Universidad de Concepción, Concepción, Chile

**P1.97**  
**METABOLISM OF TRYPTOPHAN IN THE HEALTHY AND PREECLAMPTIC HUMAN PLACENTA**

Michelle Broekhuizen, Theo Klein, Emilie Hitzerd, Rugina Neuman, Yolanda De Rijke, Sam Schoenmakers, Peter Sedlmayr, Jan Danser, Daphne Merkus, Irwin Reiss  
Erasmus MC, Rotterdam, Netherlands

**PERICONCEPTIONAL HEALTH, EMBRYO DEVELOPMENT AND NUTRITION**

**P1.98**  
**IMPACTS OF MATERNAL IRON DEFICIENCY ON THE MOUSE PLACENTAL-HEART AXIS**

Jacinta Kalisch-Smith<sup>1</sup>, Nikita Ved<sup>1</sup>, Dorota Szumska<sup>1</sup>, Shelly Harris<sup>1</sup>, Aimee Jacquemot<sup>1</sup>, Magda Wolna<sup>1</sup>, Fabrice Prin<sup>1</sup>, Emily Hardman<sup>2</sup>, Timothy Mohun<sup>3</sup>, Samira Lakhal-Littleton<sup>1</sup>, Duncan Sparrow<sup>1</sup>

<sup>1</sup>The University of Oxford, Oxford, United Kingdom. <sup>2</sup>The Francis Crick Institute, London, United Kingdom. <sup>3</sup>The Francis Crick Institute, Oxford, United Kingdom

**P1.99**  
**EXPOSURE TO BISPHENOL A OR 17-A-ETHINYL ESTRADIOL DURING EARLY PREGNANCY NEGATIVELY AFFECTS THE REMODELING OF UTERINE SPIRAL ARTERIES AND FETAL GROWTH/SURVIVAL IN MICE**

Nicole Meyer<sup>1</sup>, Clarisa Guillermina Santamaria<sup>2</sup>, Judith Elisabeth Müller<sup>1</sup>, Anne Schumacher<sup>1</sup>, Maria Laura Zenclussen<sup>2</sup>, Horacio Adolfo Rodriguez<sup>2</sup>, Ana Claudia Zenclussen<sup>1</sup>

<sup>1</sup>Experimental Obstetrics and Gynecology, Magdeburg, Germany. <sup>2</sup>Instituto de Salud y Ambiente del Litoral, Santa Fe, Argentina

**P1.100**  
**mTOR SIGNALING INHIBITION DURING ORGANOGENESIS IN THE RAT INCREASES RESORPTION RATE AND IMPAIRS EMBRYO DEVELOPMENT BY AFFECTING FOLATE AVAILABILITY**

Romina Higa<sup>1</sup>, Fredrick Rosario<sup>2</sup>, Theresa Powell<sup>2</sup>, Thomas Jansson<sup>2</sup>, Alicia Jawerbaum<sup>1</sup>

<sup>1</sup>Center of Pharmacological and Botanical Studies. CEFYBO-CONICET-UBA, Buenos Aires, Argentina. <sup>2</sup>Department of Obstetrics & Gynecology, University of Colorado Anschutz Medical Campus, Denver, USA

**P1.101**  
**RELEVANCE OF CYSTEIN-RICH SECRETORY PROTEINS FOR FERTILIZATION, FERTILITY AND EARLY EMBRYO DEVELOPMENT**

Mariana Weigel Muñoz<sup>1</sup>, Ludmila Curci<sup>1</sup>, Nicolas Brukman<sup>1</sup>, Daniela Rojo<sup>2</sup>, Marcelo Rubinstein<sup>2</sup>, Vanina Da Ros<sup>1</sup>, Patricia Cuasnicu<sup>1</sup>

<sup>1</sup>Instituto de Biología y Medicina Experimental, Buenos Aires, Argentina. <sup>2</sup>Instituto de Investigaciones en Ingeniería Genética y Biología Molecular, Buenos Aires, Argentina

**P1.102**  
**IMPACT OF LIPID-BASED NUTRIENT SUPPLEMENTATION ON PLACENTAL mTOR SIGNALING AND IGF-1 GENE METHYLATION AND FETAL GROWTH**

Marisol Castillo-Castrejon<sup>1</sup>, Ivana Yang<sup>1</sup>, Elizabeth Davidson<sup>1</sup>, Sarah J Borengasser<sup>1</sup>, Jamie Westcott<sup>1</sup>, Jennifer Kemp<sup>1</sup>, Ana Garces<sup>2</sup>, Ali Sumera<sup>3</sup>, Lester Figueroa<sup>2</sup>, Michael Hambidge<sup>1</sup>, Nancy Krebs<sup>1</sup>, Thomas Jansson<sup>1</sup>, Theresa Powell<sup>1</sup>

<sup>1</sup>University of Colorado Anschutz Medical Campus, Aurora, USA. <sup>2</sup>Instituto de Nutrición de centro America y Panama (INCAP), Guatemala, Guatemala. <sup>3</sup>Aga Khan University, Karachi, Pakistan

**P1.103**

**PREDICTIVE VALUE OF BLOOD IMMUNOLOGICAL MARKERS FOR EARLY DETECTION OF PREGNANCY COMPLICATIONS ASSOCIATED WITH POOR PLACENTAL FUNCTION IN HIGH OBSTETRIC RISK PATIENTS.**

Paula Arbildi<sup>1</sup>, Sebastián Rosano<sup>2</sup>, Valentina López<sup>2</sup>, Nahir Correa<sup>3,4</sup>, Claudio Rodríguez-Camejo<sup>1</sup>, Valentina Zubiaurre<sup>2</sup>, Mariana Cora<sup>2</sup>, Leonardo Sosa<sup>2</sup>, Ana Hernández<sup>1</sup>, Cecilia Sónora<sup>1,3</sup>

<sup>1</sup>Laboratorio de Inmunología, Facultad de Ciencias/Facultad de Química UDELAR, Montevideo, Uruguay. <sup>2</sup>Clínica Médica B-Hospital de Clínicas, Facultad de Medicina, UDELAR, Montevideo, Uruguay. <sup>3</sup>EUTM-Facultad de Medicina, UDELAR-Uruguay., Montevideo, Uruguay. <sup>4</sup>Laboratorio Clínico-Hospital de Clínicas, Facultad de Medicina, UDELAR, Montevideo, Uruguay

**P1.104**

**THE EFFECT OF FOLIC ACID SUPPLEMENTATION IN THE OVARY AND UPON EMBRYO DEVELOPMENT**

Reyna Penailillo, Judith Eckert, Graham Burdge, Tom Fleming, Karen Lillycrop  
University of Southampton, Southampton, United Kingdom

**P1.105**

**SPHINGOSINE-1-PHOSPHATE METABOLISM AND SIGNALING ATTENUATES VASCULAR DYSFUNCTION AT THE FETO-PLACENTAL ENDOTHELIUM.**

Ilaria Del Gaudio, Sebastian Hendrix, Uwe Lang, Christian Wadsack  
Medical University of Graz, Graz, Austria

**P1.106**

**ALTERED PLACENTAL B-OXIDATION CAPACITY IN FEMALE INFANTS IN PREGNANCIES COMPLICATED BY MATERNAL OBESITY**

Veronique Ferchaud-Roucher<sup>1,2</sup>, Kelsey Barner<sup>1</sup>, Thomas Jansson<sup>1</sup>, Theresa, L Powell<sup>3</sup>

<sup>1</sup>University of Colorado, OB/Gyn Department, Denver, USA. <sup>2</sup>University of Nantes-INRA, PhAN, Nantes, France. <sup>3</sup>University of Colorado, Pediatrics Department, Denver, USA

**P1.107**

**DIFFERENTIAL EXPRESSION  $\gamma$ -H2AX AND RAGE IN THE PLACENTA OF GESTATIONAL DIABETES MELLITUS (GDM), PRETERM LABOR (PTL) AND PREECLAMPSIA PATIENTS AND IN INVASIVE TROPHOBLAST CELLS.**

Kary YF Tsai, Paul Reynolds, Juan Arroyo  
Brigham Young University, Provo, USA

**P1.108**

**ALTERATIONS IN MITOCHONDRIAL DYNAMICS IN PLACENTAE FROM WOMEN WHO SMOKE DURING PREGNANCY**

Jonathan Ausman<sup>1</sup>, Katelyn Bell<sup>2</sup>, Alex Post<sup>2</sup>, Nichole Pederson<sup>2</sup>, Jessica Pudwell<sup>1</sup>, Graeme Smith<sup>1,2</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Queen's University, Kingston, Canada. <sup>2</sup>Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Canada

**P1.109**

**MATERNAL MORBIDITY AND MORTALITY RELATED TO PLACENTA ACCRETA FROM 2007 TO 2016 IN BAGHDAD MEDICAL CITY**

Tagreed Hatem  
Baghdad Medical City, Baghdad, Iraq

**P1.110**

**PLACENTAL HISTOPATHOLOGY LESIONS AND PREGNANCY OUTCOME IN PREGNANCIES COMPLICATED WITH ANTERIOR VS. POSTERIOR PLACENTA PREVIA**

Daniel Tairy, Eran Weiner, Hadas Miremberg, Roni Hochman, Jacob Bar, Michal Kovo  
The Edith Wolfson Medical Center, Holon, Israel

**P1.111**

**ASSOCIATION OF MATERNAL LIPID PROFILE WITH THE PRESENCE OF PLACENTAL INFARCTS AND INTIMA-MEDIA THICKNESS OF FETAL ABDOMINAL AORTIC**

Oswaldo Rafael Ramírez-Ibarra<sup>1</sup>, Lorena del Rocío Ibarra-Reynoso<sup>1</sup>, Yeniley Ruiz-Noa<sup>1</sup>, Juana Rosalba García-Ramírez<sup>2</sup>, María Luisa Lazo de la Vega<sup>1</sup>, Francisco Javier Anaya-Torres<sup>3</sup>, Maria Francia Pineda-Cubillan<sup>1</sup>, Mónica Preciado-Puga<sup>4</sup>, Gonzalo Arroyo-Díaz<sup>5</sup>

<sup>1</sup>Medical Sciences Department. Health Science Division, University of Guanajuato, Leon, Mexico. <sup>2</sup>Pathology Department. General Hospital Leon, Leon, Mexico. <sup>3</sup>Medica Campestre, Leon, Mexico. <sup>4</sup>Medicine and Nutrition Department. Health Science Division, University of Guanajuato, Leon, Mexico. <sup>5</sup>National Institute of perinatology, Ciudad de Mexico, Mexico

**P1.112**

**MATERNAL OBESITY AND ITS ASSOCIATION WITH PLACENTAL VILLOUS HYPOPLASIA AND DOPPLER ULTRASONOGRAPHY OF THE FETAL ABDOMINAL AORTA**

Lorena del Rocío Ibarra-Reynoso<sup>1</sup>, Oswaldo Rafael Ramírez-Ibarra<sup>1</sup>, Yeniley Ruiz-Noa<sup>1</sup>, Juana Rosalba García-Ramírez<sup>2</sup>, María Luisa Lazo de la Vega Monroy<sup>1</sup>, Francisco Javier Anaya-Torres<sup>3</sup>, Alan Joel Ruiz-Padilla<sup>4</sup>, Gonzalo Arroyo-Díaz<sup>5</sup>

<sup>1</sup>Medical Sciences Department. Health Sciences Division, University of Guanajuato, Leon, Mexico. <sup>2</sup>Pathology Department. Leon General Hospital, Leon, Mexico. <sup>3</sup>Medica Campestre, Leon, Mexico. <sup>4</sup>Pharmacy Department. Natural and Exact Sciences Division, University of Guanajuato, Guanajuato, Mexico. <sup>5</sup>National Institute of Perinatology, Ciudad de Mexico, Mexico

**P1.113**

**CHARACTERIZATION OF THE EXPRESSION OF CALCIUM-ACTIVATED POTASSIUM CHANNELS (BKCA AND IKCA) IN PLACENTA OF GESTATIONAL DIABETES MELLITUS**

Fernanda Neira<sup>1</sup>, Nataly Neira<sup>1</sup>, Camila Loyola<sup>1</sup>, Susana Rojas<sup>2</sup>, Marcelo González<sup>3</sup>

<sup>1</sup>Departamento de Obstetricia y Puericultura, Facultad de Medicina, Universidad de Concepción, Concepción, Chile. <sup>2</sup>Departamento de Fisiología, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile. <sup>3</sup>Departamento de Obstetricia y Ginecología, Facultad de Medicina, Universidad de Concepción, Concepción, Chile

**P1.114**

**T2\* WEIGHTED PLACENTAL MRI IN RELATION TO PLACENTAL HISTOPATHOLOGY AND BIRTH WEIGHT**

Anne Sørensen<sup>1,2</sup>, Marianne Sinding<sup>1</sup>, Ditte Nymark Hansen<sup>1,2</sup>, David Peters<sup>3</sup>, Jens Brøndum Frøkjær<sup>4,2</sup>, Astrid Petersen<sup>5</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Aalborg University Hospital, Aalborg, Denmark. <sup>2</sup>Department of Clinical Medicine, Aalborg University, Aalborg, Denmark. <sup>3</sup>Department of Clinical Engineering, Aarhus University Hospital, Aarhus, Denmark. <sup>4</sup>Department of Radiology, Aalborg University Hospital, Aalborg, Denmark. <sup>5</sup>Department of Pathology, Aalborg University Hospital, Aalborg, Denmark

**P1.115**

**TRANSFER AND EFFECT OF ENDOTHELIN RECEPTOR ANTAGONISTS IN THE HUMAN PLACENTA: AN EX VIVO PERFUSION STUDY OF THE ISOLATED COTYLEDON**

Emilie Hitzler<sup>1,2</sup>, Rugina I. Neuman<sup>2,3</sup>, Michelle Broekhuizen<sup>1,2,4</sup>, Sinno H.P. Simons<sup>1</sup>, Sam Schoenmakers<sup>3</sup>, Irwin K.M. Reiss<sup>1</sup>, Birgit C.P. Koch<sup>5</sup>, Anton H. van den Meiracker<sup>2</sup>, Jorie Versmissen<sup>2</sup>, Willy Visser<sup>2,3</sup>, A.H. Jan Danser<sup>2</sup>

<sup>1</sup>Department of Pediatrics, Erasmus MC, Rotterdam, Netherlands. <sup>2</sup>Department of Internal Medicine, Erasmus MC, Rotterdam, Netherlands. <sup>3</sup>Department of Obstetrics and Gynecology, Erasmus MC, Rotterdam, Netherlands. <sup>4</sup>Department of Cardiology, Erasmus MC, Rotterdam, Netherlands. <sup>5</sup>Department of Pharmacy, Erasmus MC, Rotterdam, Netherlands

**P1.116**

**PLACENTAL HISTOPATHOLOGY AND PREGNANCY OUTCOMES IN "EARLY" VS. "LATE" PLACENTAL ABRUPTION**

Noa Gonen<sup>1,2</sup>, Michal Kovo<sup>1,2</sup>, Letizia Schreiber<sup>3,2</sup>, Lilach Kornblit Noy<sup>2</sup>, Giulia Barda<sup>1,2</sup>, Eldar Volpert<sup>1,2</sup>, Jacob Bar<sup>1,2</sup>, Eran Weiner<sup>1,2</sup>

<sup>1</sup>Departments of Obstetrics & Gynecology, the Edith Wolfson Medical Center, Holon, Israel. <sup>2</sup>Tel Aviv University, Tel Aviv, Israel. <sup>3</sup>Department of Pathology, the Edith Wolfson Medical Center, Holon, Israel

**P1.117**

**A NEW PIPELINE FOR CLINICO-PATHOLOGICAL AND MOLECULAR PLACENTAL RESEARCH UTILIZING FFPE TISSUES**

Jiaqi J O'Reilly<sup>1,2</sup>, Stephanie Barak<sup>1</sup>, Anna Penn<sup>2,1</sup>

<sup>1</sup>The George Washington University, Washington, USA. <sup>2</sup>Children's National Health System, Washington, USA

**P1.118**

**INTERMEDIATE-CONDUCTANCE CALCIUM-ACTIVATED POTASSIUM CHANNELS (IKCA) EXPRESSION IN PLACENTA AND ITS ASSOCIATION WITH NEONATAL INTRAUTERINE GROWTH CURVE AND NEONATAL PONDERAL INDEX IN GESTATIONAL DIABETES MELLITUS**

Nataly Neira<sup>1</sup>, Fernanda Neira<sup>1</sup>, Marcelo González<sup>2</sup>

<sup>1</sup>Departamento de Obstetricia y Puericultura, Facultad de Medicina, Universidad de Concepción, Concepción, Chile. <sup>2</sup>Departamento de Obstetricia y Ginecología, Facultad de Medicina, Universidad de Concepción, Concepción, Chile

**PREECLAMPSIA**

**P1.119 – Withdrawn**

**P1.120**

**GLYCAN EXPRESSION IN PLACENTAL VILLI HISTOCULTURES AND BEWO CELLS: DIFFERENCES BETWEEN HEALTHY PREGNANT VS. EARLY-ONSET SEVERELY PREECLAMPTIC WOMEN AND IMMUNOMODULATORY EFFECTS ON CIRCULATING NATURAL KILLER CELLS.**

Julio C. Bueno-Sánchez<sup>1</sup>, Marisol Campuzano<sup>1</sup>, Bernardo Agudelo-Jaramillo<sup>1</sup>, Juan Carlos Quintana-Castillo<sup>2</sup>, Juan Guillermo Maldonado-Estrada<sup>1</sup>, Gerard Chaouat<sup>3</sup>

<sup>1</sup>University of Antioquia, Medellín, Colombia. <sup>2</sup>Universidad Cooperativa de Colombia, Medellín, Colombia. <sup>3</sup>Inserm, Paris, France

**P1.121**

**REGULATION OF RECK EXPRESSION BY TGF- $\beta$ 1 AND OXYGEN IN HUMAN FIRST-TRIMESTER TROPHOBLAST CELLS**

Felipe Gallardo<sup>1</sup>, Cecilia Cornjeo<sup>1,2</sup>, Rodrigo Escalona<sup>1</sup>, Jaime Gutierrez<sup>1,2</sup>

<sup>1</sup>Cellular Signaling and Differentiation Laboratory (CSDL), Faculty of Health Sciences, Universidad San Sebastian, Santiago, Chile. <sup>2</sup>Cellular and Molecular Physiology Laboratory (CMPL), Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

**P1.122**

**ASPIRIN PROTECTS AGAINST TNF- $\alpha$ -INDUCED OXIDATIVE STRESSINTROPHOBLAST VIA NRF-2 ACTIVATION**

Kaimin Guo, Huishu Liu

Department of Obstetrics and Gynecology, Guangzhou Women and Children's Medical Center, Guangzhou, China

**P1.123**

**RETINOIC ACID-INDUCED PLACENTAL VASCULAR HYPOPLASIA**

Kazuhiro Kajiwara<sup>1,2</sup>, Ritsuko Kobayashi<sup>1</sup>, Osamu Samura<sup>1</sup>, Jean-Francois Mouillet<sup>2</sup>, Yoel Sadovsky<sup>2</sup>, Aikou Okamoto<sup>1</sup>

<sup>1</sup>The Jikei University School of Medicine, Tokyo, Japan. <sup>2</sup>Magee-Womens Research Institute, Pittsburgh, USA

**P1.124**

**PREECLAMPSIA: ANALYSIS OF SUBCELLULAR FRAGMENTS RELEASED FROM THE PLACENTAL TROPHOBLAST AND THEIR EFFECT ON ADULT ENDOTHELIAL CELLS UTILIZING A NOVEL FLOW-SYSTEM**

Nadja Kupper<sup>1</sup>, Jacqueline Güttler<sup>1</sup>, Julia Fuchs<sup>1</sup>, Dagmar Brislinger<sup>1</sup>, Ingrid Lang<sup>1</sup>, Marc Mueller<sup>2</sup>, Birgit Glasmacher<sup>2</sup>, Stefan Wernitznig<sup>1</sup>, Dagmar Kolb-Lenz<sup>1,3</sup>, Birgit Hirschmugl<sup>4</sup>, Berthold Huppertz<sup>1</sup>

<sup>1</sup>Department of Cell Biology, Histology and Embryology, Gottfried Schatz Research Center for Cell Signaling, Metabolism and Aging, Medical University of Graz, Graz, Austria. <sup>2</sup>Institute for Multiphase Processes, Leibniz University Hannover, Hannover, Germany. <sup>3</sup>Core Facility Ultrastructure Analysis, Medical University of Graz, Graz, Austria. <sup>4</sup>Department of Obstetrics and Gynecology, Medical University of Graz, Graz, Austria

**P1.125**

**PHYSIOLOGICAL ARTERIAL REMODELING: WHEN IS IT ABNORMAL?**

Mercedes Olaya-C<sup>1,2</sup>, Marta Garrido<sup>3</sup>, Jorge A Franco<sup>1</sup>, Jorge Luis Rodriguez<sup>1,2</sup>, Magda J Vargas<sup>1,2</sup>, Ana Aula-Oliver<sup>3</sup>, Santiago Ramón y Cajal<sup>3,4</sup>

<sup>1</sup>Pontificia Universidad Javeriana, Bogota DC, Colombia. <sup>2</sup>Hospital Universitario San Ignacio, Bogota, Colombia. <sup>3</sup>Hospital Vall d'Hebron, Barcelona, Spain. <sup>4</sup>Universidad Autónoma de Barcelona, Barcelona, Spain

**P1.126**

**TROPHOBLAST-SPECIFIC GENE EXPRESSION DRIVEN BY ENDOGENOUS RETROVIRUS LTRS IN NORMAL VS PRE-ECLAMPTIC (PE) PREGNANCY.**

Rabia Anwar<sup>1</sup>, Manvendra Singh<sup>1</sup>, Florian Herse<sup>2</sup>, Zsuzsanna Izsvak<sup>1</sup>, Ralf Dechend<sup>2</sup>

<sup>1</sup>MDC, Berlin, Germany. <sup>2</sup>ECRC, Berlin, Germany

**P1.127**

**DIAGNOSTIC ACCURACY OF URINARY SPOT PROTEIN:CREATININE RATIO AND ANOTHER METHODS FOR PROTEINURIA IN HYPERTENSIVE PREGNANT WOMEN.**

Katarzyna Stefanska<sup>1</sup>, Natalia Marek-Trzonkowska<sup>2</sup>, Maciej Zielinski<sup>2</sup>, Dorota Zamkowska<sup>1</sup>, Przemyslaw Adamski<sup>1</sup>, Joanna Jassem<sup>3</sup>, Katarzyna Leszczynska<sup>1</sup>, Martyna Jankowiak<sup>2</sup>, Krzysztof Preis<sup>1</sup>

<sup>1</sup>Department of Obstetrics of Medical University of Gdansk, Gdansk, Poland. <sup>2</sup>Department of Medical Immunology of Medical University of Gdansk, Gdansk, Poland. <sup>3</sup>Department of Neonatology of Medical University of Gdansk, Gdansk, Poland

**P1.128**

**STERILE INFLAMMATORY MOLECULES ARE SIGNIFICANTLY DOWN REGULATED BY MAGNESIUM SULFATE TREATMENT IN PREECLAMPSIA**

Abhirup Bandyopadhyay<sup>1</sup>, Saumaya Bhagat<sup>2</sup>, Iqbal Alam<sup>1</sup>, Gausal Khan<sup>3</sup>

<sup>1</sup>Jamia Hamdard, New Delhi, India. <sup>2</sup>DIPAS, New Delhi, India. <sup>3</sup>Fiji School of Medicine, CMNHS, FNU, Suva, Fiji

**P1.129**

**ULTRASOUND AND MICROBUBBLE GENE DELIVERY FOR TARGETING ALTERED PLACENTAL MICRORNAs IN PREECLAMPSIA**

Sonya Frazier<sup>1</sup>, Hannah Morgan<sup>2</sup>, Martin McBride<sup>1</sup>, Angela Bradshaw<sup>1</sup>, Helen Mulvana<sup>1</sup>, Delyth Graham<sup>1</sup>

<sup>1</sup>University of Glasgow, Glasgow, United Kingdom. <sup>2</sup>University of Nottingham, Nottingham, United Kingdom

**P1.130**

**CLINICAL AND HISTOPATHOLOGICAL FINDINGS IN PLACENTAS OF PATIENTS WITH EARLY- AND LATE-ONSET PREECLAMPSIA**

Paola Ayala-Ramírez<sup>1</sup>, Angie Garzón<sup>2</sup>, Rodríguez Jorge<sup>2</sup>, Natalia Serrano<sup>3</sup>, Luis Silva<sup>4</sup>, Rodolfo Martínez<sup>4</sup>, Mercedes Olaya-C<sup>2</sup>, Reggie García-Robles<sup>5</sup>

<sup>1</sup>Human Genetics Institute, Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia. <sup>2</sup>Department of Pathology, Faculty of Medicine, Pontificia Universidad Javeriana-Hospital Universitario San Ignacio, Bogotá, Colombia. <sup>3</sup>Research Seedbed in Perinatal Medicine Pontificia Universidad Javeriana: Medical School Pontificia Universidad Javeriana and Medical residents Pontificia Universidad Javeriana— Hospital Universitario San Ignacio, Bogotá, Colombia. <sup>4</sup>Department of Obstetrics and Gynecology, Faculty of Medicine- Pontificia Universidad Javeriana-Hospital Universitario San Ignacio, Bogotá, Colombia. <sup>5</sup>Department of physiological sciences, Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia

**P1.131**

**EFFECT OF INTERMITTENT HYPOXIA ON CAVEOLIN-1 EXPRESSION AND ITS ASSOCIATION WITH AQUAPORIN-3 IN VILLOUS TROPHOBLASTS**

Natalia Szpilbarg<sup>1</sup>, Yollyseth Medina<sup>1</sup>, Bernardo Maskin<sup>2</sup>, Abril Seyahian<sup>1</sup>, Mauricio Castro-Parodi<sup>3</sup>, Alicia E. Damiano<sup>1,3</sup>

<sup>1</sup>IFIBIO Houssay, Universidad de Buenos Aires - CONICET, Buenos Aires, Argentina. <sup>2</sup>Hospital Nacional Prof. Dr. Alejandro Posadas, Buenos Aires, Argentina. <sup>3</sup>Cátedra de Biología Celular Molecular, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Buenos Aires, Argentina

**P1.132**

**NITRATION OF PLACENTA AQUAPORINS AFFECTS THE SURVIVAL OF VILLOUS TROPHOBLAST CELLS**

YOLLYSETH MEDINA<sup>1</sup>, Mauricio Di Paola<sup>1,2</sup>, Carolina Anud<sup>2</sup>, Bernardo Maskin<sup>3</sup>, Alicia E. Damiano<sup>2,1</sup>

<sup>1</sup>Instituto de Fisiología y Biofísica Bernardo Houssay UBA-CONICET, BUENOS AIRES, Argentina. <sup>2</sup>Cátedra de Biología Celular y Molecular, Dpto. de Ciencias Biológicas, Facultad de Farmacia y Bioquímica. UBA, BUENOS AIRES, Argentina. <sup>3</sup>Hospital Nacional Dr. Prof. Alejandro Posadas, BUENOS AIRES, Argentina

**P1.133**

**SERUM OF PATIENTS WITH PREECLAMPSIA ACTIVATES UPR-PERK PATHWAY IN HUMAN TROPHOBLAST CELL LINE HTR8/SVNEO**

Karla Castro<sup>1</sup>, Karen Prado<sup>1</sup>, Aline Lorenzon-Ojea<sup>1</sup>, Rossana Francisco<sup>2</sup>, Marcelo Zugaib<sup>2</sup>, Mara Hoshida<sup>2</sup>, Eliane Alves<sup>2</sup>, Mariana Veras<sup>3</sup>, Estela Bevilacqua<sup>1</sup>

<sup>1</sup>Department of Cell and Developmental Biology, Institute of Biomedical Sciences, University of São Paulo., São Paulo, Brazil. <sup>2</sup>Department of Obstetrics and Gynecology, Medicine School, University of São Paulo, São Paulo, Brazil. <sup>3</sup>Department of Pathology, Medical School, University of São Paulo., São Paulo, Brazil

## STEM CELLS AND CELULARITY

### P1.134

#### AMNIOTIC EPITHELIAL STEM CELLS: SIGNALLING PATHWAYS ACTIVATED DURING THEIR HEPATIC DIFFERENTIATION AND PROLIFERATION.

Rodrigo Riede<sup>1,2</sup>, Antonio Perez Perez<sup>3</sup>, Mariana Jaime<sup>4</sup>, Ornella Parolini<sup>5</sup>, Roberto Casale<sup>4</sup>, José Dueñas<sup>3</sup>, Víctor Sánchez Margalet<sup>3</sup>, Cecilia Varone<sup>1,2</sup>, Julieta Maymó<sup>1,2</sup>

<sup>1</sup>IQUIBICEN-CONICET, Ciudad Autónoma de Buenos Aires, Argentina. <sup>2</sup>Department of Biological Chemistry, Ciudad Autónoma de Buenos Aires, Argentina. <sup>3</sup>Medical Biochemistry and Molecular Biology, Sevilla University, Sevilla, Spain. <sup>4</sup>Maternity, Posadas Hospital, Buenos Aires, Argentina. <sup>5</sup>Molecular Biology, Poliambulanza Foundation, Brescia, Italy

### P1.135

#### MEDIA MATTERS: EFFECT OF MEDIA FORMULATIONS ON MESENCHYMAL STEM/STROMAL CELL PURITY AND PHENOTYPE ACROSS GESTATION

Anna Boss, Anna Brooks, Larry Chamley, Jo James

The University of Auckland, Auckland, New Zealand

### P1.136

#### DERIVATION OF HUMAN TROPHOBLAST STEM CELLS FROM HUMAN PLURIPOTENT STEM CELLS

Adam Mischler, Victoria Karakis, Adriana San Miguel, Balaji Rao

North Carolina State University, Raleigh, USA

### P1.137

#### TROPHOBLAST STEM CELLS ISOLATED USING THE SIDE-POPULATION TECHNIQUE ARE DEPLETED IN PLACENTAE FROM GROWTH RESTRICTED PREGNANCIES

Teena Gamage, Jasper Perry, Vicky Fan, Katie Groom, Larry Chamley, Jo James

University of Auckland, Auckland, New Zealand

## TRANSPORT/ NUTRIENTS

### P1.138

#### PLACENTA-ON-A-CHIP MODEL FOR ASSESSING THE TRANSPORT AND TOXICITY OF XENOBIOTICS *IN VITRO*

Evgeny Knyazev<sup>1,2</sup>, Anna Khristichenko<sup>1,3</sup>, Diana Maltseva<sup>1,2</sup>, Tatyana Gerasimenko<sup>1</sup>, Olga Kindeeva<sup>1,4</sup>, Vladimir Petrov<sup>1,5</sup>, Dimitri Sakharov<sup>1,6</sup>

<sup>1</sup>Scientific Research Centre BioClinicum, Moscow, Russian Federation. <sup>2</sup>Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russian Federation. <sup>3</sup>D. Rogachev Federal Scientific and Clinical Center for Pediatric Hematology, Oncology, and Immunology, Moscow, Russian Federation. <sup>4</sup>Far Eastern Federal University, Vladivostok, Russian Federation. <sup>5</sup>Institute of Nanotechnologies of Microelectronics of the Russian Academy of Sciences, Moscow, Russian Federation. <sup>6</sup>D.Mendeleev University of Chemical Technology of Russia, Moscow, Russian Federation

### P1.139

#### CHOLESTEROL UPTAKE AND EFFLUX IS IMPAIRED IN HUMAN TROPHOBLAST CELLS FROM PREGNANCIES WITH MATERNAL SUPRAPHYSIOLOGICAL HYPERCHOLESTEROLEMIA

Barbara Fuenzalida<sup>1</sup>, Claudette Cantin<sup>1</sup>, Lorena Carvajal<sup>1</sup>, Valentina Pasten<sup>1</sup>, Jaime Gutierrez<sup>2</sup>, Susana Contreras-Duarte<sup>1</sup>, Andrea Leiva<sup>1</sup>

<sup>1</sup>Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Universidad San Sebastian, Santiago, Chile

### P1.140

#### MONOACYLGLYCEROL LIPASE MOBILISES INTRACELLULAR LIPID STORES IN THE HUMAN TERM PLACENTA

Birgit Hirschmugl<sup>1,2</sup>, Nermeen Fawzy<sup>3,2</sup>, Magdalena Grill<sup>4</sup>, Rudolf Schicho<sup>4</sup>, Uwe Lang<sup>1</sup>, Robert Zimmermann<sup>3,2</sup>, Christian Wadsack<sup>1,2</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Medical University of Graz, Graz, Austria. <sup>2</sup>BioTechMed-Graz, Graz, Austria. <sup>3</sup>Institute of Molecular Biosciences, University of Graz, Graz, Austria. <sup>4</sup>Otto Loewi Research Center, Department of Pharmacology, Medical University of Graz, Graz, Austria

**P1.141**

**VASOACTIVE INTESTINAL PEPTIDE INDUCES GLUCOSE AND NEUTRAL AMINO ACID UPTAKE THROUGH mTOR PATHWAYS IN HUMAN TROPHOBLAST CELLS**

Fatima Merech, Elizabeth Soczewski, Vanesa Hauk, Daniel Papparini, Rosanna Ramhorst, Claudia Pérez Leirós, Daiana Vota  
Laboratorio de Inmunofarmacología. Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), CONICET-Universidad de Buenos Aires., Buenos Aires, Argentina

**P1.142**

**DHA REGULATES PLACENTAL EXPRESSION OF FOLATE AND VITAMIN B12 RECEPTORS IN WOMEN WITH PREGESTATIONAL OBESITY**

Erika Castaño-Moreno<sup>1</sup>, Cherie Hernandez<sup>2</sup>, Maria Luisa Garmendia<sup>1</sup>, Ana María Ronco<sup>3</sup>, Paola Casanello<sup>4</sup>  
<sup>1</sup>University of Chile, Santiago, Chile. <sup>2</sup>Laboratory of Programming and Perinatal Epigenetics, School of Medicine, Pontifical Catholic University of Chile, Santiago, Chile. <sup>3</sup>University of Chile, Santiago, Chile. <sup>4</sup>Pontifical Catholic University of Chile, Santiago, Chile

**P1.143**

**REVISITING THE ROLE OF TERM PLACENTA IN SEROTONIN HANDLING; IN SITU AND EX VIVO STUDIES IN HUMAN AND RAT PLACENTA SHOW ITS PROTECTIVE FUNCTION AGAINST EXCESSIVE FETAL SEROTONIN**

Rona Karahoda, Hana Horackova, Petr Kastner, Lukas Cerveny, Radim Kucera, Cilia Abad, Frantisek Staud  
Department of Pharmacology and Toxicology, Faculty of Pharmacy in Hradec Kralove, Charles University, Hradec Kralove, Czech Republic

**P1.144**

**MATERNAL MALNUTRITION IMPACTS PLACENTAL MORPHOLOGY AND TRANSPORT. AN ORIGIN FOR POOR OFFSPRING GROWTH AND VULNERABILITY TO DISEASE.**

Enrrico Bloise<sup>1</sup>, Mark Kibschul<sup>2</sup>, Stephen G Matthews<sup>3</sup>, Stephen J Iye<sup>2</sup>, Kristin L Connor<sup>4</sup>  
<sup>1</sup>Department of Morphology, Federal University of Minas Gerais, Belo Horizonte, Brazil. <sup>2</sup>Lunenfeld Tanenbaum Research Institute, Sinai Health System, Toronto, Canada. <sup>3</sup>Department of Physiology, University of Toronto, Toronto, Canada. <sup>4</sup>Health Sciences, Carleton University, Ottawa, Canada

**1.145**

**RHO FAMILY OF GTP PROTEINS CELL DIVISION CYCLE 42 (CDC42) AND RAC FAMILY SMALL GTPASE 1 (RAC1) REGULATES F-ACTIN DEPENDENT AMINO ACID TRANSPORTER TRAFFICKING IN PRIMARY HUMAN TROPHOBLAST CELLS (PHT)**

Fredrick J Rosario<sup>1</sup>, Marisol Castillo-Castrejon<sup>1</sup>, Theresa L Powell<sup>1,2</sup>, Thomas Jansson<sup>1</sup>  
<sup>1</sup>Department of Obstetrics and Gynecology, Anschutz Medical Campus, University of Colorado, Aurora, USA. <sup>2</sup>Department of Pediatrics, Anschutz Medical Campus, University of Colorado, Aurora, USA

## TROPHOBLAST BIOLOGY

**P1.146**

**EFFECT OF MACROPHAGES ON THE INVASION OF TROPHOBLAST AT THE MATERNAL-FETAL INTERFACE**

Xiaoyan Sha<sup>1</sup>, Huishu Liu<sup>1</sup>, Xin Li<sup>1</sup>, Lash Gendie<sup>2</sup>  
<sup>1</sup>Department of Obstetrics and Gynecology, Guangzhou Women and Children's Medical Center, Guangzhou, China. <sup>2</sup>Guangzhou Women and Children's Medical Center, Guangzhou, New Zealand

**P1.147**

**ENRICHMENT AND CHARACTERIZATION OF TROPHOBLAST-DERIVED EXTRACELLULAR VESICLES ISOLATED FROM EX VIVO ONE-SIDED PLACENTA PERFUSION**

Rachel R Zabel<sup>1</sup>, Diana M. Morales-Prieto<sup>1</sup>, Rowena Schultz<sup>2</sup>, Martin Hammer<sup>2</sup>, Ekkehard Schleußner<sup>1</sup>, Udo R. Markert<sup>1</sup>, Rodolfo R. Favaro<sup>1</sup>  
<sup>1</sup>Placenta-Lab, Department of Obstetrics, University Hospital Jena, Jena, Germany. <sup>2</sup>University Hospital Jena, Department of Ophthalmology, Jena, Germany

**P1.148**

**AUTOPHAGY ACTIVATION ACCOMPANIED BY INCREASED EMT LEVEL IN TOPHOBLAST OF PLACENTA ACCRETA**

Yunshan Chen, [Huishu Liu](#), Lele Wang, Junjie Bao, Long Cui, Xin Li

Department of Obstetrics, Guangzhou Women and Children's Medical Center,, Guangzhou, China

**P1.149**

**THE ROLE OF LINC-HELLP BOUND PROTEINS PCBP1, PCBP2 AND YBX1 IN EXTRAVILLOUS TROPHOBLAST DIFFERENTIATION**

Danai Georgiadou, Souad Boussata, Gijs Afink, [Marie van Dijk](#)

Amsterdam University Medical Centers, Amsterdam, Netherlands

**P1.150**

**TRANSCRIPTIONAL CO-ACTIVATOR YAP REGULATES STEMNESS OF THE PLACENTAL TROPHOBLAST EPITHELIUM**

[Gudrun Meinhardt](#)<sup>1</sup>, Sandra Haider<sup>1</sup>, Victoria Kubihs<sup>1</sup>, Juergen Pollheimer<sup>1</sup>, Szabolcs Hetey<sup>2,2</sup>, Andras Szilagyi<sup>2</sup>, Nandor Gabor Than<sup>2</sup>, Martin Knoefler<sup>1</sup>

<sup>1</sup>Medical University of Vienna, Vienna, Austria. <sup>2</sup>Hungarian Academy of Sciences, Budapest, Hungary

**P1.151**

**OLEIC ACID STIMULATION OF AMINO ACID UPTAKE IN HUMAN TROPHOBLAST CELLS IS MEDIATED BY PHOSPHATIDIC ACID ACTIVATION OF mTOR SIGNALING**

[Elena Silva](#)<sup>1</sup>, Thomas Jansson<sup>1</sup>, Theresa Powell<sup>2</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, University of Colorado, Aurora, USA. <sup>2</sup>Department of Pediatrics, University of Colorado, Aurora, USA

**P1.152**

**ANNEXIN A1 AS AN IMPORTANT REGULATOR OF PLACENTAL CELLS RESPONSE TO DNA DAMAGE IN MICE**

[Jusciele Brogin Moreli](#)<sup>1,2</sup>, Mayk Ricardo Santos<sup>3</sup>, Rafaela Batista Molás<sup>3</sup>, Cristina B Hebeda<sup>4</sup>, Sandra H P Farsky<sup>4</sup>, Sonia Maria Oliani<sup>1,3</sup>

<sup>1</sup>Post-Graduation in Structural and Functional Biology, Federal University of São Paulo, UNIFESP, São Paulo, Brazil. <sup>2</sup>Faceres School of Medicine, São José do Rio Preto, Brazil. <sup>3</sup>Department of Biology, Instituto de Biociências, Letras e Ciências Exatas, São Paulo State University, UNESP, São José do Rio Preto, Brazil. <sup>4</sup>Department of Clinical and Toxicological Analyses, School of Pharmaceutical Sciences, University of Sao Paulo, USP, São Paulo, Brazil

**P1.153**

**MITOCHONDRIAL METABOLISM IN HUMAN FRESH VILLOUS TROPHOBLAST**

[Yollyseth Medina](#)<sup>1</sup>, Mauricio Castro Parodi<sup>2</sup>, Lucas Acosta<sup>3</sup>, Sílvia Arnaiz<sup>3</sup>, Alicia E. Damiano<sup>2,1</sup>, Juanita Bustamante<sup>3,4</sup>

<sup>1</sup>Instituto de Fisiología y Biofísica Bernardo Houssay UBA-CONICET, BUENOS AIRES, Argentina. <sup>2</sup>Cátedra de Biología Celular y Molecular, Dpto. de Ciencias Biológicas, Facultad de Farmacia y Bioquímica, BUENOS AIRES, Argentina. <sup>3</sup>Instituto de Química y Fisicoquímica Biológica, Facultad de Farmacia y Bioquímica., BUENOS AIRES, Argentina. <sup>4</sup>Centro de Altos Estudios en Ciencias humanas y de la salud, Universidad Abierta Interamericana, UAI., BUENOS AIRES, Argentina

**P1.154**

**TISSUE TRANSGLUTAMINASE IN SWAN-71 TROPHOBLAST CELLS: HYPOXIA MODULATES ENZYME EXPRESSION, CELL MIGRATION AND PROLIFERATION.**

Paula Arbildi<sup>1</sup>, Claudio Rodríguez-Camejo<sup>1</sup>, Federico Calvo<sup>1</sup>, [Cecilia Sónora](#)<sup>1,2</sup>, Ana Hernández<sup>1</sup>

<sup>1</sup>Laboratorio de Inmunología, Facultad de Ciencias/Facultad de Química UDELAR, Montevideo, Uruguay. <sup>2</sup>EUTM-Facultad de Medicina, UDELAR, Montevideo, Uruguay

**P1.155**

**KRÜPPEL-LIKE TRANSCRIPTION FACTOR 6 (KLF6) OVEREXPRESSION INDUCES CELL CYCLE ARREST AND FUSION OF BEWO CELLS**

[Andrea Lis Miranda](#)<sup>1,2</sup>, Lucille Kourdova<sup>1,2</sup>, Ana Cristina Racca<sup>1,2</sup>, María Laura Rojas<sup>1,2</sup>, Mariano Matías Cruz del Puerto<sup>1,2</sup>, Susana Genti-Raimondi<sup>1,2</sup>, Graciela Panzetta-Dutari<sup>1,2</sup>

<sup>1</sup>Facultad de Ciencias Químicas, UNC, Córdoba, Argentina. <sup>2</sup>CIBICI-CONICET, Córdoba, Argentina



**ANATOMY AND PATHOLOGY**

**P2.1**

**GLOBAL POPULATION VARIATION IN PLACENTAL SIZE AND STRUCTURE: EVIDENCE FROM CEBU, PHILIPPINES**

Haley Ragsdale<sup>1</sup>, Christopher Kuzawa<sup>1,2</sup>, Victoria deMartelly<sup>3</sup>, Josephine Avila<sup>4</sup>, Nanette Lee<sup>4</sup>, Julienne Rutherford<sup>5,6</sup>

<sup>1</sup>Department of Anthropology, Northwestern University, Evanston, USA. <sup>2</sup>Institute for Policy Research, Northwestern University, Evanston, USA. <sup>3</sup>University of Chicago, Chicago, USA. <sup>4</sup>Office of Population Studies Foundation, University of San Carlos, Cebu, Philippines. <sup>5</sup>Department of Women, Children, and Family Health, University of Illinois at Chicago, Chicago, USA. <sup>6</sup>Department of Anthropology, University of Illinois at Chicago, Chicago, USA

**P2.2**

**COULD UTERINE ARTERY PULSATILITY INDICES PREDICT RISK OF POSTPARTUM HEMORRHAGE?**

Anna Kaidy<sup>1</sup>, Dorota Sys<sup>1</sup>, Artur Pokropek<sup>2</sup>

<sup>1</sup>Centre of Postgraduate Medical Education, Warsaw, Poland. <sup>2</sup>National Academy of Science, Warsaw, Poland

**P2.3**

**COMMON UMBILICAL CORD INSERTION IN A MONOCHORIONIC, MONOAMNIOTIC TWIN PREGNANCY - A CASE REPORT.**

Filip Szkodziak, Piotr Szkodziak, Piotr Czuczwar, Sławomir Woźniak, Tomasz Paszkowski

3rd Department of Gynaecology, Medical University of Lublin, Lublin, Poland

**P2.4**

**PHYSIOLOGICAL AND PATHOLOGICAL DISTRIBUTION OF IRON NANOPARTICLES SUGGEST A BOTANICAL VIEW OF THE PLACENTA.**

Silvia Chiarelli, Ludovica Sandei, Irene Vitulo, Alessandra Andrisani, Vincenzo Zanardo

University, Padova, Italy

**P2.5**

**MORPHOLOGICAL LESIONS CAUSED BY ZIKV INFECTION IN THE PLACENTA OF UNDERNOURISHED MOUSE DAMS**

Claudio Barbeito<sup>1,2</sup>, Jimena Barbeito Andrés<sup>3</sup>, Jessica Ferreira<sup>4</sup>, Andrea Cristofolini<sup>5,6</sup>, Mariana Fiorimanti<sup>5,6</sup>, Luiza Higa<sup>7</sup>, Maria Bellio<sup>8</sup>, Amilcar Tanuri<sup>7</sup>, Cecilia Merkis<sup>5</sup>, Elisa Cebal<sup>9,2</sup>, Patricia Garcez<sup>4</sup>

<sup>1</sup>Faculty of Veterinary Sciences, National University of La Plata, Buenos Aires, Argentina. <sup>2</sup>CONICET, Buenos Aires, Argentina. <sup>3</sup>Institute for Studies in Neuroscience and Complex Systems Studies, ENyS, CONICET, Buenos Aires, Argentina. <sup>4</sup>Institute of Biomedical Sciences, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil. <sup>5</sup>Electron Microscopy Laboratory, Faculty of Agronomy and Veterinary Sciences, National University of Río Cuarto, Río Cuarto, Argentina. <sup>6</sup>CONICET, Córdoba, Argentina. <sup>7</sup>Department of Genetics, Institute of Biology, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil. <sup>8</sup>Microbiology Institute Paulo de Góes, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil. <sup>9</sup>Institute of Biodiversity and Experimental Biology and Applied (IBBEA-CONICET), Department of Biodiversity and Experimental Biology, Faculty of Exact and Natural Sciences (FCEN), University of Buenos Aires, Buenos Aires, Argentina

**P2.6**

**EFFECTS OF MATERNAL OBESITY ON PLACENTAL MORPHOMETRICAL CHARACTERISTICS AND NEWBORN WEIGHT**

Yhoiss Smit Muñoz<sup>1</sup>, Mara Sairles Gómez<sup>2</sup>, David Moreno<sup>1</sup>, Liliana Salazar<sup>1</sup>, Antonio José Tascón<sup>3</sup>, María Carolina Pustovrh<sup>1</sup>

<sup>1</sup>Universidad del Valle, Cali, Colombia. <sup>2</sup>Universidad Libre- Seccional Cali, Cali, Colombia. <sup>3</sup>Clínica Versalles, Cali, Colombia

**P2.7**

**NEGATIVE EFFECTS OF SMOKING MARIJUANA DURING PREGNANCY ON THE PLACENTA: EXPERIMENTAL EVIDENCE**

Mariana Veras<sup>1</sup>, Sarah Benevenuto<sup>1</sup>, Janaina Torres<sup>1</sup>, Victor Yariwake<sup>1</sup>, Thamires Moraes<sup>2,1</sup>, Iran Silva<sup>1</sup>

<sup>1</sup>School of Medicine University of Sao Paulo, Sao Paulo, Brazil. <sup>2</sup>UNINOVE, Sao Paulo, Brazil

**P2.8**

**ENDOMETRIAL NK AND PLASMA CELLS IN INFERTILE WOMEN**

Udo R. Markert, Bettina Toth, Jana Pastuschek, Maja Weber, Christin Bär, Julia Heger, Priska Streicher, Nora Schultz, Ruben Kuon, Lianghai Diao, Boris Donskoi, Maia Chiokadze, Ksenia Khazhlyenko, Isabel Santillán, Rodolfo F Favaro, Ekkehard Schleußner.  
Placenta Lab, Department of Obstetrics, Jena University Hospital, Jena, Germany

**ANGIOGENESIS/ VASCULATURE**

**P2.9**

**DOES PAIN IN THE LOWER ABDOMEN OF A PREGNANT WOMAN ALWAYS MEAN PREMATURE BIRTH?**

Slawomir Wozniak, Piotr Czuczwar, Piotr Szkodziak, Aleksander Wozniak, Tomasz Paszkowski  
Medical University of Lublin, Lublin, Poland

**P2.10**

**SYNCYTIOTROPHBLAST BASAL MEMBRANE-DERIVED EXOSOMES INCREASE NO GENERATION IN HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS**

Delia Chiarello<sup>1</sup>, Paula Coronado<sup>1</sup>, Gonzalo Fuentes<sup>1,2</sup>, Fernando Toledo<sup>3</sup>, Fabian Pardo<sup>4</sup>, Luis Sobrevia<sup>1,5,6,7</sup>

<sup>1</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Biomedical Department, Faculty of Health Sciences, Universidad de Antofagasta., Antofagasta, Chile. <sup>3</sup>Department of Basic Sciences, Faculty of Sciences, UDepartment of Basic Sciences, Faculty of Sciences, Universidad del Bío-Bío. , Chillán, Chile. <sup>4</sup>Metabolic Diseases Research Laboratory, Interdisciplinary Center of Territorial Health Research (CISTe), San Felipe Campus, School of Medicine, Faculty of Medicine, Universidad de Valparaíso, San Felipe, Chile. <sup>5</sup>Graduate Program in Gynecology, Obstetric, and Mastology, Botucatu Medical School (FMB), São Paulo State University (UNESP), Sao Paulo, Brazil. <sup>6</sup>Department of Physiology, Faculty of Pharmacy, Universidad de Sevilla, Sevilla, Spain. <sup>7</sup>University of Queensland Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland, Queensland, Australia

**P2.11**

**LATE-GESTATION FETAL DEMISE IN ENDOTHELIAL-SPECIFIC HAND1 DOMINANT-NEGATIVE MICE**

Jennifer Courtney, Helen Jones  
Cincinnati Children's Hospital Medical Center, Cincinnati, USA

**P2.12**

**RECELLULARIZATION OF BOVINE ALLANTOCHORIONIC BLOOD VESSELS**

Igor Smirnow, Amanda Saragó, Antonio Alexandre Speri Alves, Gustavo Sá Schiavo Matias, Paula Fratini, Maria Angelica Miglino, Rodrigo Silva Nunes Barreto  
School of Veterinary Medicine and Animal Sciences, University of São Paulo, São Paulo, Brazil

**P2.13**

**HYRT'S ANASTOMOSIS IN GESTATIONAL OBESITY**

Liliana Salazar<sup>1</sup>, Yhoiss Smiht Muñoz<sup>1</sup>, María Carolina Pustovrh<sup>1</sup>, Felipe Ruiz<sup>2</sup>, Antonio Tascón<sup>3</sup>

<sup>1</sup>Universidad del Valle, Cali, Colombia. <sup>2</sup>Universidad Santiago de Cali, Cali, Colombia. <sup>3</sup>Clínica Versalles, Cali, Colombia

**P2.14**

**CORTISOL EFFECTS ON THE EXPRESSION OF GENES RELATED TO ANGIOGENESIS AND PLACENTAL DEVELOPMENT. DO KININ RECEPTORS PARTICIPATE IN THESE PROCESSES?**

Talita Húngaro<sup>1</sup>, Marcos Gregnani<sup>1</sup>, Thaís Alves-Silva<sup>1</sup>, Michael Bader<sup>2</sup>, Ronaldo Araújo<sup>1</sup>

<sup>1</sup>Universidade Federal de São Paulo - UNIFESP, São Paulo, Brazil. <sup>2</sup>Max Delbrück Center for Molecular Medicine, Berlin, Germany

## P2.15

### IL-36 ( $\alpha$ , $\beta$ , AND $\gamma$ ) MODIFY TROPHOBLAST-ENDOTHELIAL CELL INTERACTION

José Martín Murrieta-Coxca<sup>1,2</sup>, Rodolfo R. Favaro<sup>2</sup>, Sandra Rodríguez-Martínez<sup>1</sup>, Mario Eugenio Cancino-Díaz<sup>1</sup>, Ruby N. Gutiérrez-Samudio<sup>2</sup>, Udo R. Markert<sup>2</sup>, Diana M. Morales-Prieto<sup>2</sup>

<sup>1</sup>Departamento de Inmunología, Instituto Politécnico Nacional, Escuela Nacional de Ciencias Biológicas, Mexico City, Mexico. <sup>2</sup>Placenta Lab. Department of Obstetrics. University Hospital Jena, Jena, Germany

## COMPARATIVE/ ANIMAL MODELS

## P2.16

### APOPTOSIS AND PROLIFERATION IN CANINE PLACENTA

Gimena Gomez Castro<sup>1,2</sup>, Carolina Zanuzzi<sup>3,2,4</sup>, Cecilia Ines Merkis<sup>5</sup>, Claudio Barbeito<sup>1,2</sup>, Mónica Diessler<sup>1</sup>

<sup>1</sup>Cátedra de Histología y Embriología, Laboratorio de Histología y Embriología Descriptiva, Experimental y Comparada (LHYEDEC). Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata., La Plata, Argentina. <sup>2</sup>Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), La Plata, Argentina. <sup>3</sup>Cátedra de Histología y Embriología, Laboratorio de Histología. Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata., La Plata, Argentina. <sup>4</sup>Laboratorio de Análisis de Imágenes. Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata., La Plata, Argentina. <sup>5</sup>Área de Microscopía Electrónica. Facultad de Agronomía y Veterinaria, Universidad Nacional de Río Cuarto, Río Cuarto, Argentina

## P2.17

### IMMUNOHISTOCHEMICAL DETECTION OF PROLACTIN AND PROLACTIN RECEPTOR IN CANINE AND FELINE PLACENTAE

Rocío Hernández<sup>1,2</sup>, Claudio G. Barbeito<sup>1,2</sup>, Mónica Diessler<sup>1</sup>

<sup>1</sup>Cátedra de Histología y Embriología, Laboratorio de Histología y Embriología Descriptiva, Experimental y Comparada (LHYEDEC), Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata., La Plata, Argentina. <sup>2</sup>Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)., La Plata, Argentina

## P2.18

### MATERNAL-FETAL COMMUNICATION OF STRESSFUL SIGNALS VIA EXTRACELLULAR VESICLES

Melisa Monteleone, Silvia Billi, Eliana Fernandez, Marcela Brocco.

Instituto de Investigaciones Biotecnológicas, Buenos Aires, Argentina

## P2.19

### THE DEVELOPMENT OF AN ARGININE VASOPRESSIN RODENT MODEL FOR THE STUDY OF PREECLAMPSIA

Nalini Govender<sup>1</sup>, Sapna Ramdin<sup>1</sup>, Virushka Pillay<sup>1</sup>, Blessing N Mkhwanazi<sup>2</sup>, Sanil Singh<sup>3</sup>, Sooraj Baijnath<sup>4</sup>.

<sup>1</sup>Dept of Basic Medical Sciences, Faculty of Health Sciences, Durban University of Technology, Durban, South Africa. <sup>2</sup>Dept of Dietetics and Nutrition, College of Agriculture, University of KwaZulu-Natal, Durban, South Africa. <sup>3</sup>Biomedical Resource Unit, University of KwaZulu-Natal, Durban, South Africa. <sup>4</sup>Discipline of Pharmaceutical Sciences, Catalysis and Peptide Research Unit, College of Health Sciences, University of KwaZulu-Natal, Durban, South Africa

## P2.20

### CAFFEINE CONSUMPTION DURING GESTATION ALTERS PLACENTAL VASCULARIZATION AND FETAL DEVELOPMENT IN MICE.

Thaís Paula, Lucas Cardoso, Luís Belotto, Felipe Prado, Guilherme Gonçalves, Fernando Felicioni, André Caldeira-Brant, Enrrico Bloise, Hélio Chiarini-Garcia, Fernanda Almeida, Gustavo Menezes, Hortencia Oliveira

UFMG, Belo Horizonte, Brazil

## P2.21

### MORPHOLOGICAL PLACENTA ADAPTATIONS TO MATERNAL UNDERNUTRITION IN A BOVINE MODEL

Andrea Oxiley, Soledad Orcasberro.

Universidad de la Republica, Montevideo, Uruguay

## P2.22

### EARLY COMPENSATORY PLACENTOMAL DIFFERENTIATION IN NUTRITIONAL RESTRICTED EWES AT 70 DAYS OF GESTATION

Andrea Oxiley, Soledad Orcasberro

Universidad de la Republica, Montevideo, Uruguay

**P2.23**  
**ADAPTATIONS INDUCED BY LACKING MATERNAL KININ B1 RECEPTOR AND MATERNAL SWIMMING DURING PREGNANCY IN THE PLACENTA AND IN FETAL GROWTH**

Thais Alves-Silva<sup>1,2</sup>, Leandro Freitas-Lima<sup>1,2</sup>, Adriano Arruda<sup>1</sup>, Talita Hungaro<sup>1</sup>, Aline Arakaki<sup>1</sup>, Rogerio Batista<sup>1</sup>, MarluCIA Aires<sup>3</sup>, Michael Bader<sup>2</sup>, Ronaldo Araujo<sup>1</sup>

<sup>1</sup>Federal University of São Paulo, São Paulo, Brazil. <sup>2</sup>Max-Delbrück-Zentrum für Molekulare Medizin, Berlin, Germany. <sup>3</sup>Federal University of Sergipe, Sergipe, Brazil

**DEVELOPMENTAL PROGRAMMING**

**P2.24**  
**PERCEIVED MATERNAL STRESS DURING PREGNANCY AFFECTS NEWBORN DEVELOPMENT IN A LOW-INCOME COHORT OF PREGNANT WOMEN**

Marcela A. Brocco<sup>1</sup>, María Aurelia González<sup>2</sup>, Martin G. Frasc<sup>3</sup>, Mercedes Rumi<sup>4</sup>, Patricia Rey<sup>2</sup>, Liliana Pupelis<sup>2</sup>, Ernestina Petzil<sup>2</sup>, María Victoria Binda<sup>2</sup>, Gabriela Berg<sup>5</sup>, Bibiana Fabre<sup>5</sup>, Sandra Susacasa<sup>2</sup>, Marta C. Antonelli<sup>4</sup>

<sup>1</sup>Instituto de Investigaciones Biotecnológicas (IIB-UNSAM-CONICET), Buenos Aires, Argentina. <sup>2</sup>Hospital Materno Infantil Ramón Sarda (HMIRS), Buenos Aires, Argentina. <sup>3</sup>Department of Obstetrics and Gynecology. University of Washington, Seattle, USA. <sup>4</sup>Instituto de Biología Celular y Neurociencia Prof. Dr. E. De Robertis. Facultad de Medicina. UBA, Buenos Aires, Argentina. <sup>5</sup>Facultad de de Farmacia y Bioquímica-UBA, Buenos Aires, Argentina

**P2.25**  
**GESTATIONAL WEIGHT GAIN IMPACTS ON DNA METHYLATION AND PROTEIN EXPRESSION OF LEPTIN RECEPTOR IN THE NEWBORN**

Erika Chavira-Suárez<sup>1,2</sup>, Angélica Ramírez-Mendieta<sup>2</sup>, Sofia Martínez-Gutiérrez<sup>2</sup>, Paola Zárate-Segura<sup>3</sup>, Jorge Beltrán-Montoya<sup>4</sup>, Nidia Espinosa-Maldona<sup>2</sup>, Juan Carlos de la Cerda-Ángeles<sup>5</sup>, Felipe Vadillo-Ortega<sup>1,2</sup>

<sup>1</sup>Universidad Nacional Autónoma de México, Mexico, Mexico. <sup>2</sup>Instituto Nacional de Medicina Genómica, Mexico, Mexico. <sup>3</sup>Instituto Politécnico Nacional, Mexico, Mexico. <sup>4</sup>Instituto Nacional de Perinatología, Mexico, Mexico. <sup>5</sup>Secretaría de Salud de la CDMX, Mexico, Mexico

**P2.26**  
**DHA SUPPLEMENTATION IN WOMEN WITH PREGESTATIONAL OBESITY DOES NOT AFFECT THE OFFSPRING'S ADIPOSITY NEITHER AT BIRTH NOR AT 4 MONTHS OF AGE.**

Karina Carrasco<sup>1</sup>, Angela Jaramillo<sup>2</sup>, María Luisa Garmendia<sup>2</sup>, Paola Casanello<sup>3,1</sup>

<sup>1</sup>Department of Obstetrics. Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Institute of Nutrition and Food Technology, Universidad de Chile, Santiago, Chile. <sup>3</sup>Department of Neonatology. Pontificia Universidad Católica de Chile, Santiago, Chile

**P2.27**  
**EXPOSURE TO A GLYPHOSATE-BASED HERBICIDE AFFECTS THE REPRODUCTIVE DEVELOPMENTAL PROGRAMMING WITH LONG-TERM CONSEQUENCES IN A RAT MODEL**

Virginia Lorenz, María Mercedes Milesi, Marlise Guerrero Schimpf, María Paula Gastiazoro, Guillermina Pacini, Dalma Belén Cadaviz Fernández, Enrique Hugo Luque, Jorgelina Varayoud

Institute of Health and Environment of Litoral (ISAL), Faculty of Biochemistry and Biological Sciences, Universidad Nacional del Litoral - Consejo Nacional de Investigaciones Científicas y Técnicas (UNL-CONICET), Santa Fe, Argentina

**P2.28**  
**THE IMPACT OF INTRAUTERINE GROWTH RESTRICTION ON ADIPOSITY AND SMALL INTESTINE MORPHOLOGY DURING POSTNATAL DEVELOPMENT IN PIGS**

Thais Garcia Santos<sup>1</sup>, Stefany Araújo<sup>2</sup>, Saffir Fernandes<sup>1</sup>, Fernando Felicioni<sup>1</sup>, Thais Domingues e Paula<sup>1</sup>, André Caldeira-Brant<sup>1</sup>, Hélio Chiarini-Garcia<sup>1</sup>, Fernanda Almeida<sup>1</sup>

<sup>1</sup>Universidade Federal de Minas Gerais, Belo Horizonte, Brazil. <sup>2</sup>Centro Universitário de Belo Horizonte, Belo Horizonte, Brazil

**P2.29**  
**ABERRANT INFLAMMATION IN RAT PREGNANCY CONTRIBUTES TO RISK FACTORS ASSOCIATED WITH CARDIOVASCULAR DISEASE AND PREGNANCY COMPLICATIONS IN SUBSEQUENT GENERATIONS**

Nicole Protopapas<sup>1</sup>, Takafumi Ushida<sup>2</sup>, Shannyn K. Macdonald-Goodfellow<sup>1</sup>, Charles H. Graham<sup>1</sup>

<sup>1</sup>Queen's University, Kingston, Canada. <sup>2</sup>Nagoya University, Nagoya, Japan

**EARLY PREGNANCY, IMPLANTATION AND INVASION**

**P2.30**  
**ROLE OF DECORIN IN DECIDUAL CELL DEVELOPMENT DURING HUMAN PREGNANCY**

Chidambra Halari, Pinki Nandi, Peeyush Lala

University of Western Ontario, London, Canada

**P2.31**  
**OSMOLAR STRESS ALTERS THE DIFFERENTIATION OF EXTRAVILLOUS TROPHOBLAST PATHWAY**

Matías N. Sierra<sup>1</sup>, Julieta Reppetti<sup>2</sup>, Carolina Anud<sup>1</sup>, Mariana Farina<sup>3</sup>, Alicia E. Damiano<sup>1,2</sup>, Nora Martínez<sup>2</sup>

<sup>1</sup> Cátedra de Biología Celular y Molecular. Departamento de Ciencias Biológicas, Facultad de Farmacia y Bioquímica, Buenos Aires, Argentina.

<sup>2</sup>Instituto de Fisiología y Biofísica Bernardo Houssay (IFIBIO Houssay) UBA-CONICET, Buenos Aires, Argentina. <sup>3</sup>Centro de Estudios Farmacológicos y Botánicos (CEFyBO) UBA-CONICET, Buenos Aires, Argentina

**P2.32**  
**IMMUNOLOGICAL OUTCOMES OF VERSICAN SILENCING IN HTR-8SV/NEO CELLS**

Eloiza Tanabe, Keyla Pires, Camilla Gonçalves, Rayane Botelho, Ana Lúcia da Silva, Jaqueline Santos, Karen Borbely, Alexandre Borbely

Cell Biology Laboratory, Institute of Health and Biological Sciences, Federal University of Alagoas, Maceió, Brazil

**P2.33**  
**IMMUNE SUPPRESSION IN ABNORMALLY INVASIVE PLACENTA (AIP)**

Sonia C. DaSilva-Arnold, Stacy Zamudio, Abdulla Al-Khan, Nicholas P. Illsley

Center for Abnormal Placentation, Department of Obstetrics and Gynecology, Hackensack University Medical Center, Hackensack, NJ, USA

**P2.34**  
**IMPLANTATION FAILURES AND EXPOSURE TO GLYPHOSATE OR A COMMERCIAL FORMULATION: HORMONAL AND UTERINE DYSFUNCTION DURING THE PRE-IMPLANTATION PERIOD AS POSSIBLE MECHANISMS**

Guillermina Pacini, Virginia Lorenz, Dalma Belén Cadaviz Fernández, María Paula Gastiazoro, Enrique Hugo Luque, Jorgelina Varayoud, María Mercedes Milesi

Institute of Health and Environment of Litoral (ISAL), Faculty of Biochemistry and Biological Sciences, Universidad Nacional del Litoral - Consejo Nacional de Investigaciones Científicas y Técnicas (UNL-CONICET), Santa Fe, Argentina

**P2.35**  
**GHRELIN DEFICIENCY MODIFIES THE UTERINE INFLAMMATORY RESPONSE AFFECTING MICE EMBRYO IMPLANTATION AND DEVELOPMENT.**

Eugenia Mercedes Luque<sup>1</sup>, Daniela Paira<sup>2</sup>, Pedro Javier Torres<sup>1,3</sup>, Nicolás David Ramírez<sup>1</sup>, Cintia Díaz<sup>4</sup>, Ricardo Fretes<sup>4,3</sup>, Rubén Motrich<sup>2</sup>, Ana Carolina Martini<sup>1,3</sup>

<sup>1</sup>Instituto de Fisiología, Facultad de Ciencias Médicas, Universidad Nacional de Córdoba, Córdoba, Argentina. <sup>2</sup>CIBICI-CONICET, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Córdoba, Argentina. <sup>3</sup>Instituto de Investigaciones en Ciencias de la Salud (INICSA), CONICET-Facultad de Ciencias Médicas, Córdoba, Argentina. <sup>4</sup>Instituto de Biología Celular, Facultad de Ciencias Médicas, Universidad Nacional de Córdoba, Córdoba, Argentina

**P2.36**  
**UTERINE CONTRACTILE ACTIVITY AND INTRAUTERINE EMBRYO SPACING ARE ALTERED BY OBESITY**  
Maria Bazzano<sup>1</sup>, Gisela Sarrille<sup>1,2</sup>, Martín Berón de Astrada<sup>1,3</sup>, Evelin Elia<sup>1,2</sup>  
<sup>1</sup>Universidad de Buenos Aires (UBA), Facultad de Ciencias Exactas y Naturales (FCEN). Consejo Nacional de Investigaciones Científicas y Técnicas, Instituto de Fisiología, Biología Molecular y Neurociencias. , CABA, Argentina. <sup>2</sup>UBA, FCEN, Departamento de Biodiversidad y Biología Experimental. , CABA, Argentina. <sup>3</sup>UBA, FCEN, Departamento de Fisiología, Biología Molecular y Celular. Buenos Aires, CABA, Argentina

**P2.37**  
**CHARACTERIZATION OF PLATELET-TROPHOBLAST INTERACTIONS IN HUMAN FIRST TRIMESTER PLACENTA**  
J. Guettler<sup>1</sup>, D. Forstner<sup>1</sup>, O. Nonn<sup>1</sup>, S. Maninger<sup>1</sup>, N. Kupper<sup>1</sup>, S. Wernitznig<sup>1</sup>, M. Goeritzer<sup>2</sup>, G. Marsche<sup>3</sup>, B. Huppertz<sup>1</sup>, M. Gauster<sup>1</sup>  
<sup>1</sup>Department of Cell Biology, Histology and Embryology, Gottfried Schatz Research Center, Medical University of Graz, Graz, Austria. <sup>2</sup>Department of Molecular Biology and Biochemistry, Gottfried Schatz Research Center, Medical University of Graz, Graz, Austria. <sup>3</sup>Department of Pharmacology, Otto Loewi Research Center, Medical University of Graz, Graz, Austria

## FETAL GROWTH RESTRICTION

**P2.38**  
**ENDOTHELIAL NITRIC OXIDE SYNTHASE IS VITAL FOR NANOPARTICLE-MEDIATED INSULIN-LIKE GROWTH FACTOR-1 IMPROVEMENT OF FETAL GROWTH AND PROTECTION OF TROPHOBLAST FROM OXIDATIVE STRESS.**  
Rebecca Wilson, Weston Troja, Emily Sumser, Kristen Lampe, Helen Jones  
Center for Fetal and Placenta Research, Cincinnati Childrens Hospital and Medical Center, Cincinnati, USA

**P2.39**  
**TARGETED LIPOSOMAL DELIVERY OF EPIDERMAL GROWTH FACTOR INCREASES SYSTEM A AMINO ACID TRANSPORTER ACTIVITY IN HUMAN PLACENTAL EXPLANTS**  
Lewis J Renshall, Frances Beards, Susan L Greenwood, Paul Brownbill, Edward Johnstone, Colin P Sibley, John D Aplin, Lynda K Harris  
Maternal and Fetal Health Research Centre, University of Manchester, Manchester, United Kingdom

**P2.40**  
**PLACENTAL ANGIOGENIC FACTORS EXPRESSION IN A MURINE MODEL OF DEXAMETHASONE-INDUCED INTRAUTERINE GROWTH RESTRICTION (IUGR). DOES MELATONIN PREVENT IUGR?**  
Julietta Aisemberg, Julieta Schander, Carolina Marvaldi, Manuel Wolfson, Ana María Franchi  
CEFYO, CABA, Argentina

**P2.41**  
**PETN INDUCED HO-1 EXPRESSION IN ENDOTHELIAL CELLS AS A TARGET FOR SECONDARY PREVENTION OF ENDOTHELIAL DYSFUNCTION**  
Veronika Teichert, Ruby Gutierrez-Samudio, Jana Pastuschek, Udo Markert, Tanja Groten  
University Hospital Jena, Department of Obstetrics, Placentalabor, Jena, Germany

**P2.42**  
**PENTAERITHRITYL TETRANITRATE (PETN) FOR SECONDARY PREVENTION OF INTRAUTERINE GROWTH RESTRICTION (PETN-TRIAL)**  
Tanja Groten, Ekkehard Schleißner  
University Hospital Jena, Department of Obstetrics, Placentalabor, Jena, Germany

**P2.43**  
**HISTOLOGICAL PLACENTA FEATURES INFLUENCING FETAL GROWTH AND INFANT ANTHROPOMETRY**  
Tetsuo Nakayama<sup>1</sup>, Masanao Ohashi<sup>1</sup>, Seishi Furukawa<sup>2</sup>, Yuichiro Sato<sup>2</sup>, Hiroshi Sameshima<sup>2</sup>  
<sup>1</sup>Miyazaki Medical Association Hospital, Miyazaki, Japan. <sup>2</sup>University of Miyazaki, Miyazaki, Japan

**P2.44**  
**PLACENTAL MORPHOFUNCTIONAL ASSOCIATIONS BETWEEN FETAL WEIGHT AND GESTATIONAL AGE IN PIGS**  
Tailine R. L. Reis<sup>1</sup>, Vitoria R.C.Silva<sup>1</sup>, Fernando Felicione<sup>1</sup>, Mariana M.A. Nascimento<sup>1</sup>, Larissa R.Peixoto<sup>1</sup>, Cheryl J. Ashworth<sup>2</sup>, Enrrico Bloise<sup>1</sup>, Helio C.Garcia<sup>1</sup>, Fernanda R.L.C. Almeida<sup>1</sup>  
<sup>1</sup>Department of Morphology, Federal University of Minas Gerais, Belo Horizonte, Brazil. <sup>2</sup>Developmental Biology Division, The Roslin Institute and Royal (Dick) School of Veterinary Studies, University of Edinburgh, Midlothian, UK, Edinburgh, United Kingdom

**GENOMICS, EPIGENOMICS AND TRANSCRIPTIONAL REGULATION**

**P2.45**  
**HISTONE DEACETYLASES 1 AND 2 CONTROL CYTOTROPHOBLAST DIFFERENTIATION AND SYNCYTIOTROPHOBLAST DEVELOPMENT**  
Gargi Jaju<sup>1</sup>, Mariyan Jeyarajah<sup>1</sup>, Megan McGill<sup>2</sup>, Stephen Renaud<sup>1,3,4</sup>  
<sup>1</sup>University of Western Ontario, London, Canada. <sup>2</sup>McGill University, Montreal, Canada. <sup>3</sup>Children's Health Research Institute, London, Canada. <sup>4</sup>Lawson Health Research Institute, London, Canada

**P2.46**  
**ELUCIDATING THE ROLE OF OVOL2 IN PLACENTAL DEVELOPMENT**  
Mariyan Jeyarajah<sup>1</sup>, Stephen Renaud<sup>1,2,3</sup>  
<sup>1</sup>University of Western Ontario, London, Canada. <sup>2</sup>Children's Health Research Institute, London, Canada. <sup>3</sup>Lawson Health Research Institute, London, Canada

**P2.47**  
***T. CRUZI* AND *T. GONDII* EX VIVO INFECTION OF HUMAN, CANINE AND OVINE PLACENTAL EXPLANT INDUCES SPECIFIC miRNA PROFILES**  
Lisvaneth Medina<sup>1,2</sup>, Christian Castillo<sup>1</sup>, Ana Liempi<sup>1,2</sup>, Catalina Espinoza<sup>1</sup>, Emilia Corradi<sup>1</sup>, Humberto Prieto<sup>3</sup>, Ulrike Kemmerling<sup>1</sup>  
<sup>1</sup>Programa de Anatomía y Biología del desarrollo, ICBM, Facultad de Medicina, Santiago, Chile. <sup>2</sup>Programa de Doctorado en Ciencias Silvoagropecuarias y Veterinarias, Campus Sur, Universidad de Chile, Santiago, Chile. <sup>3</sup>Instituto de Investigaciones Agropecuarias (INIA), Laboratorio de Biotecnología, Estación La Platina, Ministerio de Agricultura, Santiago, Chile

**P2.48**  
***T. CRUZI* INDUCTION OF TROPHOBLAST DIFFERENTIATION MIGHT BE MEDIATED BY miRNAS**  
Lisvaneth Medina<sup>1,2</sup>, Christian Castillo<sup>1</sup>, Ana Liempi<sup>1,2</sup>, Catalina Espinoza<sup>1</sup>, Emilia Corradi<sup>1</sup>, Humberto Prieto<sup>3</sup>, Ulrike Kemmerling<sup>1</sup>  
<sup>1</sup>Programa de Anatomía y Biología del desarrollo, ICBM, Facultad de Medicina, Universidad de Chile, Santiago, Chile. <sup>2</sup>Programa de Doctorado en Ciencias Silvoagropecuarias y Veterinarias, Campus Sur, Universidad de Chile, Santiago, Chile. <sup>3</sup>Instituto de Investigaciones Agropecuarias (INIA), Laboratorio de Biotecnología, Estación La Platina, Ministerio de Agricultura., Santiago, Chile

**P2.49**  
**LONGITUDINAL CHARACTERIZATION OF CIRCULATING SMALL RNAS DURING NORMAL HUMAN PREGNANCIES**  
Karen Rubi Celaya Cruz<sup>1</sup>, Mariana Flores Torres<sup>2</sup>, Nidia Carolina Espinosa Maldonado<sup>3</sup>, Juan Carlos De la Cerda Ángeles<sup>3</sup>, Carlos Fabián Flores Jasso<sup>2</sup>, Filiberto Bautista Moreno<sup>2</sup>, Felipe Vadillo Ortega<sup>1</sup>, Erika Chavira Suárez<sup>1</sup>  
<sup>1</sup>Unidad de Vinculación Científica de la Facultad de Medicina UNAM en el INMEGEN, Mexico city, Mexico. <sup>2</sup>Instituto Nacional de Medicina Genómica, Mexico City, Mexico. <sup>3</sup>Hospital General Dr. Enrique Cabrera, SEDESA, Mexico City, Mexico

**P2.50**  
**EPIGENETIC MODIFICATIONS LINKED TO THE DOWNREGULATION OF OCLUDIN EXPRESSION IN THE PLACENTAL VASCULATURE**  
Stephany D Villota, María Toledo-Rodríguez, Lopa Leach  
The University of Nottingham, Nottingham, United Kingdom

**P2.51**

**DNA METHYLATION PROFILE IN PLACENTAS OF SICKLE CELL ANEMIA WOMEN**

Gislene Gil<sup>1</sup>, Galina Ananina<sup>1</sup>, Mariana Maschietto<sup>2</sup>, Leticia Baptista<sup>1</sup>, Sueli Costa<sup>1</sup>, Fernando Costa<sup>3</sup>, Maria Costa<sup>4</sup>, Mônica Melo<sup>1</sup>

<sup>1</sup>Center for Molecular Biology and Genetic Engineering (CBMEG), University of Campinas-UNICAMP, Campinas, Brazil. <sup>2</sup>Boldrini Children's Center, Campinas, Brazil. <sup>3</sup>Hematology and Hemotherapy Center, University of Campinas, Campinas, Brazil. <sup>4</sup>Center for Integral Attention to Women's Health (CAISM), University of Campinas, Campinas, Brazil

**P2.52**

**CONTRIBUTION OF miRNAs miR-21 & miR-126 TO THE EARLY ENDOTHELIAL PROGRAMMING IN RESPONSE TO FETAL GROWTH RESTRICTION.**

Estefanía Peñaloza, Bernardo Krause

Pontificia Universidad Católica de Chile, Santiago, Chile

**IMAGING / NEW TECHNOLOGIES**

**P2.53**

**INSPECTION OF THREE-DIMENSIONAL MORPHOLOGY OF THE MURINE PLACENTA BY HIGH RESOLUTION CONTRAST-ENHANCED MICROCT**

Katrien De Clercq<sup>1</sup>, Eleonora Persoons<sup>1</sup>, Tina Napso<sup>2</sup>, Amanda Sferruzzi-Perri<sup>2</sup>, Greet Kerckhofs<sup>3,1</sup>, Joris Vriens<sup>1</sup>

<sup>1</sup>KULeuven, Leuven, Belgium. <sup>2</sup>University of Cambridge, Cambridge, United Kingdom. <sup>3</sup>UCLouvain, Louvain-la-Neuve, Belgium

**P2.54**

**GROUP B STREPTOCOCCUS PROVOKES BIOMECHANICAL AND BIOCHEMICAL ALTERATIONS IN TROPHOBLAST CELLS: A RAMAN SPECTROSCOPY AND ATOMIC FORCE MICROSCOPY-BASED STUDY**

Aldilane Lays X. Marques<sup>1</sup>, Liliã Patricia G. Tenorio<sup>1</sup>, Marie-Julie Allard<sup>2</sup>, Julie D. Bergeron<sup>3</sup>, Guillaume Sebire<sup>2,3</sup>, Elaine Cristina O. Silva<sup>4</sup>, Samuel T. Souza<sup>4</sup>, Eduardo Jorge S. Fonseca<sup>4</sup>, Karen S.C. Borbely<sup>4,5</sup>, Alexandre U. Borbely<sup>1</sup>

<sup>1</sup>Cell Biology Laboratory, Institute of Health and Biological Sciences, Federal University of Alagoas, Maceió, Brazil. <sup>2</sup>Department of Pediatrics, McGill University, Montreal, Canada. <sup>3</sup>Department of Pediatrics, Université de Sherbrooke, Sherbrooke, Canada. <sup>4</sup>Optics and Nanoscopy Group, Physics Institute, Federal University of Alagoas, Maceió, Brazil. <sup>5</sup>Faculty of Nutrition, Federal University of Alagoas, Maceió, Brazil

**P2.55**

**STRUCTURE-FUNCTION RELATIONSHIPS IN THE FETO-PLACENTAL CIRCULATION FROM IN SILICO INTERPRETATION OF MICRO-CT VASCULAR STRUCTURES**

Monika Byrne<sup>1</sup>, Rosalind Aughwane<sup>2</sup>, Joanna James<sup>1</sup>, Ciaran Hutchinson<sup>3</sup>, Owen Arthurs<sup>3</sup>, Neil Sebire<sup>3</sup>, Sebastien Ourselin<sup>4</sup>, Anna David<sup>2</sup>, Andrew Melbourne<sup>4,5</sup>, Alys Clark<sup>1</sup>

<sup>1</sup>Auckland Bioengineering Institute, University of Auckland, Auckland, New Zealand. <sup>2</sup>EGA Institute for Women's Health, University College London, London, United Kingdom. <sup>3</sup>Great Ormond Street Hospital, London, United Kingdom. <sup>4</sup>Kings College London, London, United Kingdom. <sup>5</sup>University College London, London, United Kingdom

**P2.56**

**MAGNETIC RESONANCE ASSESSMENT OF THE EFFECT OF MATERNAL POSITION ON FETOPLACENTAL BLOOD FLOW AND OXYGENATION**

Sophie Couper<sup>1</sup>, Alys Clark<sup>2</sup>, Ali Mirjalili<sup>1</sup>, Dimitra Flouri<sup>3,4</sup>, Rosalind Aughwane<sup>5</sup>, Anna David<sup>5</sup>, Andrew Melbourne<sup>3,4</sup>, Peter Stone<sup>1,6</sup>

<sup>1</sup>Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand. <sup>2</sup>Auckland Bioengineering Institute, University of Auckland, Auckland, New Zealand. <sup>3</sup>Kings College London, London, United Kingdom. <sup>4</sup>University College London, London, United Kingdom. <sup>5</sup>EGA Institute for Women's Health, University College London, London, United Kingdom. <sup>6</sup>Auckland City Hospital, Auckland, New Zealand

**P2.57**

**AI-BASED RAPID PLACENTAL ASSESSMENT TOOL**

Alison D. Gernand<sup>1</sup>, Jeffery A. Goldstein<sup>2,3</sup>, W. Tony Parks<sup>4,5</sup>, Yukun Chen<sup>1</sup>, Zhuomin Zhang<sup>1</sup>, Dolzodmaa Davaasuren<sup>1</sup>, Chenyan Wu<sup>1</sup>, Celeste Beck<sup>1</sup>, Leigh Taylor<sup>1</sup>, James Z. Wang<sup>1</sup>

<sup>1</sup>The Pennsylvania State University, University Park, USA. <sup>2</sup>Northwestern University, Chicago, USA. <sup>3</sup>Northwestern Memorial Hospital, Chicago, USA. <sup>4</sup>Sinai Health System, Toronto, Canada. <sup>5</sup>University of Toronto, Toronto, Canada



**P2.58**

**SPATIAL T2\* MRI MEASURES AS A MARKER OF OXYGENATION – ASSESSMENT IN HEALTHY PREGNANCIES OVER GESTATION**

Jana Hutter<sup>1</sup>, Alison Ho<sup>2</sup>, Laurence Jackson<sup>1</sup>, Lucy Chappell<sup>2</sup>, Joseph V Hajnal<sup>1</sup>, Mary Rutherford<sup>1</sup>

<sup>1</sup>Centre for Medical Engineering, King's College London, London, United Kingdom. <sup>2</sup>Women's Health department, King's College London, London, United Kingdom

**IMMUNOLOGY**

**P2.59**

**CHARACTERIZATION AND DISTRIBUTION PROFILE OF HEMATOPOIETIC CELLS IN MOUSE PLACENTA**

Nathália Azevedo Portilho<sup>1</sup>, Thyago Leal Calvo<sup>2</sup>, Thiago Gomes de Toledo Pinto<sup>2</sup>, Milton Ozório Moraes<sup>2</sup>, B. Anne Croy<sup>3</sup>, Marcelo Pelajo-Machado<sup>1</sup>

<sup>1</sup>Laboratory of Pathology, Oswaldo Cruz Institute/Fiocruz, Rio de Janeiro, Brazil. <sup>2</sup>Leprosy Laboratory, Oswaldo Cruz Institute/Fiocruz, Rio de Janeiro, Brazil. <sup>3</sup>Department of Biomedical and Molecular Sciences, Queen's University, Kingston, Canada

**P2.60**

**MORE THAN JUST A CIRCULATORY INTERFACE? HIGH-DIMENSIONAL SINGLE-CELL ANALYSES UNCOVER TISSUE-RESIDENT PROGRAMS IN PLACENTAL LYMPHOCYTES**

Nicholas Maurice<sup>1,2</sup>, Jami Erickson<sup>1</sup>, Florian Mair<sup>1</sup>, Stephen McCartney<sup>2</sup>, Raj Shree<sup>2</sup>, Hilary Gammill<sup>2</sup>, Martin Prlic<sup>1,2</sup>

<sup>1</sup>Fred Hutchinson Cancer Research Center, Seattle, USA. <sup>2</sup>University of Washington, Seattle, USA

**P2.61**

**TROPHOBLAST CELLS PREVENT NEUTROPHIL EXTRACELLULAR TRAP-INDUCED DAMAGE AND PROMOTE VASCULAR TRANSFORMATION SIGNALS IN NEUTROPHILS**

Guillermina Calo<sup>1</sup>, Florencia Sabbione<sup>2</sup>, Natalia Pascuali<sup>3</sup>, Irene Keitelman<sup>2</sup>, Daiana Vota<sup>1</sup>, Daniel Papparini<sup>1</sup>, Rosanna Ramhorst<sup>1</sup>, Fernanda Parborell<sup>3</sup>, Analia Trevani<sup>2</sup>, Claudia Perez Leiros<sup>1</sup>

<sup>1</sup>Laboratorio de Inmunofarmacología. Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), CONICET-Universidad de Buenos Aires, Buenos Aires, Argentina. <sup>2</sup>Laboratorio de inmunidad innata, IMEX-CONICET, Academia Nacional de Medicina, Buenos Aires, Argentina. <sup>3</sup>Laboratorio de Estudios de la Fisiopatología del Ovario, IBYME-CONICET, Buenos Aires, Argentina

**P2.62**

**HOMEOSTASIS LOSS IN VIP DEFICIENT MICE IS ASSOCIATED WITH ALTERED REGULATORY T CELLS RECRUITMENT**

Lucila Gallino<sup>1</sup>, Vanesa Hauk<sup>1</sup>, Esteban Grasso<sup>1</sup>, Marcos Palligas<sup>2</sup>, Nora Saraco<sup>2</sup>, Esperanza Berensztein<sup>3</sup>, Natalia Pascuali<sup>4</sup>, Fernanda Parborell<sup>4</sup>, James Waschek<sup>5</sup>, Claudia Perez Leirós<sup>1</sup>, Rosanna Ramhorst<sup>1</sup>

<sup>1</sup>Laboratorio de Inmunofarmacología, CONICET, Universidad de Buenos Aires, Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), CIUDAD DE BUENOS AIRES, Argentina. <sup>2</sup>Servicio de Endocrinología, Hospital Garrahan, CONICET, UBA, CIUDAD DE BUENOS AIRES, Argentina. <sup>3</sup>Servicio de Endocrinología, Hospital Garrahan, UBA, CIUDAD DE BUENOS AIRES, Argentina. <sup>4</sup>Estudios de la Fisiopatología del ovario, IBYME, CONICET, CIUDAD DE BUENOS AIRES, Argentina. <sup>5</sup>The David Geffen School of Medicine, University of California, Los Angeles, USA

**P2.63**

**POSSIBLE ROLE OF POLYCLONAL IMMUNOGLOBULIN G (IGG) OF PATIENTS WITH DIFFERENT CLINICAL MANIFESTATIONS OF THE ANTIPHOSPHOLIPID SYNDROME ON ACTIVATION OF INFLAMMATION BIOMARKERS**

Carlos Mario Rodríguez Colorado<sup>1,2</sup>, Manuela Velasquez Berrío<sup>3,4</sup>, Diana Carolina Rúa Molina<sup>3,5</sup>, Angela María Álvarez Gomez<sup>3</sup>, Angela Patricia Cadavid Jaramillo<sup>6,5,7</sup>

<sup>1</sup>Universidad de Antioquia, Grupo Reproducción, Medellín, Colombia. <sup>2</sup>Financial support CODI-U.de A. (2015-7448), Medellín, Colombia. <sup>3</sup>Universidad de Antioquia, Facultad de medicina, Grupo Reproducción, Medellín, Colombia. <sup>4</sup>MV is a recipient of a doctoral scholarship from Colciencias (757-2016), Medellín, Colombia. <sup>5</sup>Grupo de Investigación en Trombosis, Facultad de Medicina, Universidad de Antioquia, Medellín, Colombia. <sup>6</sup>Universidad de Antioquia, Facultad de medicina Grupo Reproducción, Medellín, Colombia. <sup>7</sup>RIVATREM- Red Iberoamericana de Alteraciones Vasculares Asociadas a Transtornos del Embarazo, Chillán, Chile

**P2.64**  
**ASPIRIN-TRIGGERED LIPOXINS MODULATE PHOSPHORYLATION OF ENDOTHELIAL NITRIC OXIDE SYNTHASE AND PROTEIN NITRATION OF ENDOTHELIAL CELLS STIMULATED WITH POLYCLONAL IGG FROM PATIENTS WITH ANTIPHOSPHOLIPID SYNDROME**

Manuel Granada-Gómez<sup>1</sup>, Manuela Velasquez Berrio<sup>2</sup>, Diana Carolina Rúa Molina<sup>3</sup>, Angela Alvarez<sup>1</sup>, Angela P. Cadavid J.<sup>4,5,3</sup>

<sup>1</sup>Reproduction Group, University of Antioquia, Medellín, Colombia. <sup>2</sup>Reproduction Group, University of Antioquia, MV is a recipient of a doctoral scholarship from Colciencias (757-2016), Medellín, Colombia. <sup>3</sup>Thrombosis Research Group, University of Antioquia, Medellín, Colombia. <sup>4</sup>Reproduction Group, grant 111571249846 University of Antioquia, Financial support Colciencias: grant Medellín, Colombia. <sup>5</sup>RIVATREM- Red Iberoamericana de Alteraciones Vasculares Asociadas a Transtornos, Chillan, Chile

**P2.65**  
**PREGESTATIONAL OBESITY ASSOCIATES WITH INCREASED T LYMPHOCYTE SUBTYPES IN THE OFFSPRING**

Viviana Arroyo-Jousse<sup>1</sup>, María Rosa Bono<sup>2</sup>, Paola Casanello<sup>3</sup>

<sup>1</sup>PhD Nutrition Program, INTA, University of Chile, Santiago, Chile. <sup>2</sup>Faculty of Sciences, University of Chile, Santiago, Chile. <sup>3</sup>School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

**P2.66**  
**IN-DEPTH CHARACTERIZATION OF GESTATIONAL IMMUNE DYNAMICS USING MASS CYTOMETRY**

Amber Moore, Nora Vivanco-Gonzalez, Katie Plummer, Olivia Mitchel, Harleen Kaur, Moises Rivera, Sean Bendall, Theo Palmer  
Stanford University, Stanford, USA

**P2.67**  
**CHEMOKINE AND PROLACTIN SECRETION IS MODIFIED BY ANG II AND ANG-(1-7) IN DECIDUALIZED COMPARED TO NON-DECIDUALIZED HUMAN ENDOMETRIAL STROMAL CELLS (T-HESC).**

Agustina Sotelo, Franco Mangone, Rosario Macchi, Cecilia Parrado, Luciana Salaverry, Brenda Almozni, Marisa Castro, Estela Rey-Roldán, Andrea Canellada

Universidad de Buenos Aires, Facultad de Farmacia y Bioquímica, Cátedra de Inmunología. Instituto de Estudios de la Inmunidad Humoral Dr. Ricardo Margni (IDEHU), UBA-CONICET. , Buenos Aires, Argentina

**INFECTION AND INFLAMMATION**

**P2.68**  
**A PRO-INFLAMMATORY PROFILE IN THE PLACENTA AND MATERNAL SERUM OF INFANTS WITH REDUCED FETAL GROWTH.**

Megan Sharps, Bernadette Baker, Helen Bischof, Tatiana Guevara, Susan Greenwood, Rebecca Jones, Alexander Heazell  
University of Manchester, Manchester, United Kingdom

**P2.69**  
**LPS FROM *PORPHYROMONAS GINGIVALIS* IMPAIRS TROPHOBLAST CELL FUNCTION AND IMMUNE-TROPHOBLAST INTERACTION**

Vanesa Hauk, Guillermina Calo, María Román Muñoz, Daiana Vota, Fátima Merech, Daniel Papparini, Rosanna Ramhorst, Claudia Pérez Leirós  
Laboratorio de Inmunofarmacología. Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), CONICET-Universidad de Buenos Aires, Buenos Aires, Argentina

**P2.70**  
**IMPAIRMENT OF FIRST-TRIMESTER TROPHOBLAST CELL FUNCTION BY ZIKV INFECTION. ROLE OF VIP IN THE TROPHOBLAST RESPONSE TO THE VIRUS.**

Daiana Vota<sup>1</sup>, Daniel Papparini<sup>1</sup>, Florencia Torti<sup>2</sup>, Fátima Merech<sup>1</sup>, Vanesa Hauk<sup>1</sup>, Federico Giovannoni<sup>2</sup>, Guillermina Calo<sup>1</sup>, Rosanna Ramhorst<sup>1</sup>, Cybele García<sup>2</sup>, Claudia Pérez Leirós<sup>1</sup>

<sup>1</sup>Laboratorio de Inmunofarmacología. Instituto de Química Biológica de la Facultad de Exactas y Naturales (IQUIBICEN), CONICET-Universidad de Buenos Aires, Buenos Aires, Argentina. <sup>2</sup>Laboratorio de Estrategias Antivirales. Instituto de Química Biológica de la Facultad de Exactas y Naturales (IQUIBICEN), CONICET-Universidad de Buenos Aires, Buenos Aires, Argentina

**P2.71**  
**EFFECTS OF *PLASMODIUM VIVAX* INFECTION DURING PREGNANCY: PLACENTAL CHANGES AND DECREASED ANTHROPOMETRIC PROFILE OF THE NEWBORN**

Jamille Dombrowski<sup>1</sup>, André Barateiro<sup>1</sup>, Erika Peixoto<sup>1</sup>, Rodrigo Souza<sup>2</sup>, Sabrina Epiphano<sup>3</sup>, Lígia Gonçalves<sup>1</sup>, Cláudio Marinho<sup>1</sup>

<sup>1</sup>Instituto de Biomedical Sciences - University of São Paulo, São Paulo, Brazil. <sup>2</sup>Multidisciplinary Center - Federal University of Acre, Cruzeiro do Sul, Brazil. <sup>3</sup>School of Pharmaceutical Sciences - University of São Paulo, São Paulo, Brazil

**P2.72**  
**METABOLITES OF THE KYN PATHWAY PARTICIPATE IN THE CONTROL OF THE *T. CRUZI* INFECTION IN HUMAN PLACENTAL EXPLANTS**

María José Moreira-Espinoza<sup>1</sup>, Luciana Mezzano<sup>1</sup>, Martín Gustavo Theumer<sup>2</sup>, Evangelina Benizio<sup>1,3</sup>, Luz Cuello<sup>1</sup>, Mariana Piegari<sup>1</sup>, María Fernanda Triquell<sup>1,3</sup>, Cintia María Díaz-Luján<sup>1,3</sup>, Ricardo E. Fretes<sup>1,3</sup>

<sup>1</sup>Instituto y Cátedra de Biología Celular, Histología y Embriología – INICSA (CONICET). Laboratorio de Placenta y Chagas. Fac. Cs. Médicas, Universidad Nacional Córdoba (UNC), Córdoba, Argentina. <sup>2</sup>Centro de Investigaciones en Bioquímica Clínica e Inmunología (CIBICI-CONICET), Departamento de Bioquímica Clínica, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba (UNC), Córdoba, Argentina. <sup>3</sup>Medicina, IAPCH, UNVM, Villa María, Argentina

**P2.73**  
**EFFECTS OF THE *E. COLI* EXOTOXIN ALPHA-HEMOLYSIN ON HUMAN CHORIOAMNIOTIC MEMBRANES.**

Melisa Pucci Molineris<sup>1</sup>, Paula Accialini<sup>2</sup>, Pablo Pelinski<sup>3</sup>, Hugo Barbero<sup>3</sup>, Mariana Farina<sup>2</sup>, Vanesa Herlax<sup>1</sup>

<sup>1</sup>Instituto de Investigaciones Bioquímicas La Plata (INIBIOLP), Facultad de Cs. Médicas, UNLP, La Plata, Argentina. <sup>2</sup>Laboratorio de Fisiopatología Placentaria (CEFyBO-CONICET), Facultad de Cs. Médicas, UBA, Ciudad Autónoma de Buenos Aires, Argentina. <sup>3</sup>Servicio de Ginecología y Obstetricia, Hospital Español de La Plata, La Plata, Argentina

**P2.74**  
**PLACENTAL INJURY OF A PREGNANT WOMAN INFECTED WITH CHIKUNGUNYA IN THE THIRD TRIMESTER OF GESTATION.**

Natália Salomão<sup>1</sup>, Luiz José Souza<sup>2</sup>, Kíssila Rabelo<sup>3</sup>, Monique Lima<sup>1</sup>, Priscila Nunes<sup>1</sup>, Anna Paula Sales<sup>2</sup>, Elyzabeth Portari<sup>4</sup>, Flávia dos Santos<sup>1</sup>, Marciano Paes<sup>1</sup>

<sup>1</sup>Instituto Oswaldo Cruz/FIOCRUZ, Rio de Janeiro, Brazil. <sup>2</sup>Hospital Plantadores de Cana (CRDI), Campos dos Goytacazes, Brazil. <sup>3</sup>Universidade Estadual do Rio de Janeiro, Rio de Janeiro, Brazil. <sup>4</sup>Instituto Fernandes Figueira/FIOCRUZ, Rio de Janeiro, Brazil

**P2.75**  
**THE IMMUNOSUPPRESSANT DRUG AZATHIOPRINE INDUCES EXPRESSION OF IL-18 IN PLACENTAL CELLS**

Franciele Araujo<sup>1</sup>, Leandro Oliveira<sup>2</sup>, Mara Hoshida<sup>3</sup>, Rossana PV Francisco<sup>4</sup>, Claudio Marinho<sup>1</sup>, Estela Bevilacqua<sup>1</sup>

<sup>1</sup>University of São Paulo, SÃO PAULO, Brazil. <sup>2</sup>Botucatu Medical School, Sao Paulo State University, SÃO PAULO, Brazil. <sup>3</sup>University of São Paulo Medical School, São Paulo, Brazil. <sup>4</sup>University of São Paulo Medical School, SÃO PAULO, Brazil

**P2.76**  
**CERVICO-VAGINAL CARRIAGE RATE OF *ESCHERICHIA COLI* IN PREGNANT WOMEN RECEIVING ANTENATAL CONTROL IN A PUBLIC HOSPITAL OF BUENOS AIRES**

M.Lujan Scalise<sup>1</sup>, Patricia Leonino<sup>2</sup>, Adriana Pereyra<sup>2</sup>, Roberto Casale<sup>2</sup>, Jose Alberto Ferreiros<sup>2</sup>, Flavia Sacerdoti<sup>1</sup>, Cristina Ibarra<sup>1</sup>

<sup>1</sup>IFIBIO-Houssay (UBA-CONICET), School of Medicine, University of Buenos Aires Argentina, Buenos Aires, Argentina. <sup>2</sup>Department of Obstetrics, Hospital Nacional A. Posadas, Buenos Aires, Argentina, Buenos Aires, Argentina

**P2.77**  
**ANALYSIS OF NITROSATIVE STRESS AND MIF (INHIBITORY FACTOR OF MACROPHAGE MIGRATION) IN FETAL DEVELOPMENT IN AN ACUTE CONGENITAL CHAGAS MODEL IN MICE**

Cintia M Díaz Luján<sup>1,2</sup>, Evangelina Benizio<sup>1,2</sup>, Mariana Piegari<sup>1</sup>, Triquell María Fernanda<sup>3,2</sup>, Luciana Mezzano<sup>1</sup>, María José Moreira Espinoza<sup>1</sup>, Ricardo Corral<sup>4</sup>, Ricardo E Fretes<sup>1</sup>

<sup>1</sup>Instituto de Biología Celular. INICSA-CONICET. Biología Celular, Histología y Embriología. Universidad Nacional de Córdoba, Córdoba, Argentina. <sup>2</sup>Medicina, IAPCH, Universidad Nacional de Villa María, Villa María, Argentina. <sup>3</sup>Instituto de Biología Celular. INICSA-CONICET. Biología Celular, Histología y Embriología. Universidad Nacional de Córdoba, Córdoba, Argentina. <sup>4</sup>Hospital de niños Gutierrez, Buenos Aires, Argentina

- P2.78**  
**THE ROLE OF TOLL-LIKE RECEPTOR 3 ON THE PATHOGENESIS OF MURINE MALARIA DURING PREGNANCY**  
Erika Peixoto<sup>1</sup>, André Barateiro<sup>1</sup>, Jamille Dombrowski<sup>1</sup>, Oscar Murillo<sup>1</sup>, Sabrina Epiphany<sup>2</sup>, Lígia Gonçalves<sup>1</sup>, Claudio Marinho<sup>1</sup>  
<sup>1</sup>Institute of Biomedical Sciences-University of São Paulo, São Paulo, Brazil. <sup>2</sup>School of Pharmaceutical Sciences - University of São Paulo, São Paulo, Brazil
- P2.79**  
**PHARMACOLOGICAL AGONIST COMPOUND 43 ATTENUATE PLACENTAL INFLAMMATION-INDUCED DECREASE IN FORMYL PEPTIDE RECEPTOR-2 AND ENHANCES TROPHOBLAST AND ENDOTHELIAL FUNCTION IN VITRO: POTENTIAL THERAPEUTIC TARGET FOR INFLAMMATION INDUCED FETAL GROWTH RESTRICTION.**  
Padma Murthi<sup>1</sup>, Anthony Borg<sup>2</sup>  
<sup>1</sup>Department of Pharmacology, Monash University, Clayton, Australia. <sup>2</sup>Department of Maternal-Fetal Medicine, Pregnancy Research Centre, The Royal Women's Hospital, Melbourne, Australia
- P2.80**  
**EVALUATION OF HUMAN PLACENTAL VILLI INFLAMMATION VIA TLR4 ACTIVATION DURING ZIKA VIRUS INFECTION**  
Anna Cláudia Castelo Branco<sup>1</sup>, Luanda Mara da Silva Oliveira<sup>1</sup>, Fábio Seiti Yamada Yoshikawa<sup>1</sup>, Anna Julia Pietrobon<sup>1</sup>, Amaro Nunes Duarte Neto<sup>2</sup>, Maria Notomi Sato<sup>1</sup>  
<sup>1</sup>University of São Paulo, São Paulo, Brazil. <sup>2</sup>Clinical Hospital of University of São Paulo, São Paulo, Brazil
- P2.81**  
**IMPACT OF PLASMODIUM BERGHEI INFECTION ON AUTOPHAGIC PROFILE AND STRUCTURE OF MICE PLACENTA**  
Carla Letícia Bandeira<sup>1</sup>, Douglas de Sousa Costa<sup>1</sup>, Oscar Javier Murillo Gomes<sup>1</sup>, Erika Machado<sup>1</sup>, Franciele Rodrigues Araújo<sup>2</sup>, Giuseppe Palmisano<sup>1</sup>, Sabrina Epiphany<sup>3</sup>, Lígia Antunes Gonçalves<sup>1</sup>, Estela Bevilacqua<sup>2</sup>, Claudio Romero Farias Marinho<sup>1</sup>  
<sup>1</sup>Department of Parasitology, Biomedical Sciences Institute, University of São Paulo, São Paulo, Brazil. <sup>2</sup>Department of Cell and Developmental Biology, Biomedical Sciences Institute, University of São Paulo, São Paulo, Brazil. <sup>3</sup>Department of Clinical and Toxicological Analysis, Faculty of Pharmaceutical Sciences, University of São Paulo, São Paulo, Brazil

## METABOLISM AND METABOLIC DISEASES

- P2.82**  
**MITOCHONDRIAL METABOLIC AND BIOENERGETIC ADAPTATIONS ASSOCIATED WITH THE MORPHOLOGICAL AND FUNCTIONAL TRANSFORMATION FROM CYTOTROPHOBLAST TO SYNCYTIOTROPHOBLAST**  
Joshua Fisher<sup>1</sup>, James Cuffe<sup>2</sup>, Olivia Holland<sup>1</sup>, Anthony Perkins<sup>1</sup>  
<sup>1</sup>Griffith University, Gold Coast, Australia. <sup>2</sup>University of Queensland, Brisbane, Australia
- P2.83**  
**EFFECT OF ADIPOSE TISSUE DERIVED EXOSOMES ON GLUCOSE AND FATTY ACID UPTAKE IN HUMAN PRIMARY TROPHOBLAST CELLS**  
Nanthini Jayabalan<sup>1,2</sup>, Martha Lappas<sup>2,3</sup>, Carlos Salomon<sup>1,4</sup>  
<sup>1</sup>Exosomes Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, The University of Queensland, Brisbane, Australia. <sup>2</sup>Obstetrics, Nutrition and Endocrinology Group, Department of Obstetrics and Gynaecology, University of Melbourne, Melbourne, Australia. <sup>3</sup>Mercy Perinatal Research Centre, Mercy Hospital for Women, Heidelberg, Melbourne, Australia. <sup>4</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Concepción, Chile
- P2.84**  
**ANTIOXIDANT TREATMENT RESCUES THE HYPERGLYCEMIC AND HYPERLIPIDEMIC EFFECTS ON PLACENTAL IRON HOMEOSTASIS**  
Jonas Zaugg<sup>1,2</sup>, Line Zurkinden<sup>1,2</sup>, Hassan Melhem<sup>1,2</sup>, Thuvaraga Kalakaran<sup>1,2</sup>, Christiane Albrecht<sup>1,2</sup>  
<sup>1</sup>Institute of Biochemistry and Molecular Medicine, University of Bern, Switzerland. <sup>2</sup>Swiss National Centre of Competence in Research (NCCR) TransCure, University of Bern, Switzerland

**P2.85**  
**MELATONIN INHIBITS THE CHANGE OF HMG-COA REDUCTASE AND SREBP INDUCED BY FRUCTOSE IN THE LIVER OF NEWBORN. PRELIMINARY RESULTS.**

Gustavo Delgado-Sandoval, Fabiola Carmona-Pasten, Claudia Caro-Diaz, Francisco J. Valenzuela-Melgarejo  
Department of Basic Sciences, Universidad del Bío-Bío, Chillan, Chile

**P2.86**  
**ARTESUNATE TREATMENT IMPROVES HYPERGLYCEMIA IN A RODENT MODEL OF GESTATIONAL GLUCOSE INTOLERANCE WITHOUT INCREASING BETA CELL MASS: A POTENTIAL ROLE FOR PLACENTAL APELIN**

Sandra Szlapinski<sup>1,2</sup>, David Hill<sup>2,1</sup>  
<sup>1</sup>Western University, London, Canada. <sup>2</sup>Lawson Health Research Institute, London, Canada

**P2.87**  
**PREGESTATIONAL OVERWEIGHT/OBESITY ARE ASSOCIATED WITH C-SECTION AND WITH LGA NEWBORN IN WOMEN ATTENDED IN THE PUBLIC HEALTH SYSTEM IN CHILE BETWEEN 2015-2017\***

María Jesús Varela<sup>1,2</sup>, Antje Holz<sup>1,2</sup>, Patricia González<sup>1,2</sup>, Luis Sobrevia<sup>3,4,5</sup>, Fabián Pardo<sup>1,2,6</sup>  
<sup>1</sup>Metabolic Diseases Research Laboratory, Centro Interdisciplinario de Investigación en Salud Territorial del Valle de Aconcagua (CIISTe Aconcagua), Centro de Investigaciones Biomédicas, Universidad de Valparaíso, Valparaíso, Chile. <sup>2</sup>Escuela de Medicina, Campus San Felipe, Facultad de Medicina, Universidad de Valparaíso, Valparaíso, Chile. <sup>3</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile, Santiago, Chile. <sup>4</sup>Department of Physiology, Faculty of Pharmacy, Universidad de Sevilla, Seville, Spain, Seville, Spain. <sup>5</sup>University of Queensland Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland, Herston, Queensland, Australia. , Queensland, Australia. <sup>6</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile, Santiago, Chile

**P2.88**  
**HUMAN MATERNAL SUPRAPHYSIOLOGICAL HYPERCHOLESTEROLEMIA IMPAIRS PLACENTAL ENDOTHELIAL FUNCTION, CHOLESTEROL TRAFFIC AND FUNCTIONALITY OF NEONATAL HDL.**

Andrea Leiva<sup>1</sup>, Barbara Fuenzalida<sup>1</sup>, Claudette Cantin<sup>1</sup>, Lorena Carvajal<sup>1</sup>, Valentina Pasten<sup>1</sup>, Maria Garchitorenna<sup>1</sup>, Nicolas Hormazabal<sup>1</sup>, Susana Contreras-Duarte<sup>1</sup>, Jorge Carvajal<sup>1</sup>, Jaime Gutierrez<sup>2</sup>  
<sup>1</sup>Pontificia Universidad Católica de Chile, SANTIAGO, Chile. <sup>2</sup>Universidad San Sebastian, SANTIAGO, Chile

**P2.89**  
**EXOGENOUS INSULIN REQUIRES MAPK ACTIVATION TO REVERSE THE UMBILICAL VEIN ENDOTHELIAL DYSFUNCTION OBSERVED IN PREGNANT WOMEN WITH GESTATIONAL DIABETES MELLITUS TREATED WITH INSULIN**

Mario Subiabre<sup>1</sup>, Roberto Villalobos-Labra<sup>1</sup>, Luis Silva<sup>1,2</sup>, Gonzalo Fuentes<sup>1</sup>, Fernando Toledo<sup>1,3</sup>, Mauricio Boric<sup>4</sup>, Luis Sobrevia<sup>1,5,6,7</sup>  
<sup>1</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago Chile, Santiago, Chile. <sup>2</sup>Immunoendocrinology, Division of Medical Biology, Department of Pathology and Medical Biology, University of Groningen, University Medical Center Groningen (UMCG), Groningen, The Netherlands, Groningen, Netherlands. <sup>3</sup>Department of Basic Sciences, Faculty of Sciences, Universidad del Bío-Bío, Chillán, Chile, Chillan, Chile. <sup>4</sup>Department of Physiology, Faculty of Biological Sciences, Pontificia Universidad Católica de Chile, Santiago Chile, Santiago, Chile. <sup>5</sup>Graduate Program in Gynecology, Obstetric, and Mastology, Botucatu Medical School (FMB), São Paulo State University (UNESP), Sao Paulo, Brazil, Sao Paulo, Brazil. <sup>6</sup>Department of Physiology, Faculty of Pharmacy, Universidad de Sevilla, Seville, Spain. , Seville, Spain. <sup>7</sup>University of Queensland Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland, Herston, Queensland, Australia., Queensland, Australia

**P2.90**  
**SYNCYTIOTROPHBLAST EXTRACELLULAR VESICLES EXPRESS FUNCTIONAL INSULIN RECEPTOR CAPABLE OF BINDING INSULIN; CIRCULATING LEVELS ARE INCREASED IN GESTATIONAL DIABETES MELLITUS**

Neva Kandzija<sup>1</sup>, Sylvia Shahjahan<sup>2</sup>, Wei Zhang<sup>1</sup>, Sofia Cerdeira<sup>1</sup>, Carolina Motta Mejia<sup>1</sup>, Veronica Sanchez<sup>3</sup>, George Daaboul<sup>3</sup>, Christopher W Redman<sup>1</sup>, Manu Vatish<sup>1</sup>  
<sup>1</sup>University of Oxford, OXFORD, United Kingdom. <sup>2</sup>Imperial College London, London, United Kingdom. <sup>3</sup>NanoView Biosciences, Boston, USA

- P2.91**  
**EFFECT OF ISOMALTULOSE CONSUMPTION DURING THE PREGNANCY IN NEW BORN RATS. (PRELIMINARY RESULTS)**  
Anyelo Riquelme<sup>1</sup>, Cristina Cruces<sup>1</sup>, Amanda Segovia<sup>1</sup>, Eduard Maury<sup>2</sup>, Francisco J. Valenzuela-Melgarejo<sup>1</sup>  
<sup>1</sup>Laboratorio de Biología Celular y Molecular, Departamento de Ciencias Básicas, Facultad de Ciencias, Universidad del Bio-Bio, Chillan, Chile.  
<sup>2</sup>Departamento de Nutrición y Salud Publica, Facultad de Ciencias de la Salud y Alimentos, Universidad del Bio-Bio., Chillan, Chile
- P2.92**  
**HYPERTENSIVE DISORDERS DURING PREGNANCY ASSOCIATES WITH MATERNAL PRE-GESTATIONAL OBESITY IN WOMEN ATTENDED IN THE PUBLIC HEALTH SYSTEM IN CHILE BETWEEN 2015-2017**  
Antje Holz<sup>1,2</sup>, María Jesús Varela<sup>1,2</sup>, Patricia González<sup>1,2</sup>, Luis Sobrevia<sup>3,4,5</sup>, Fabián Pardo<sup>1,2,3</sup>  
<sup>1</sup>Metabolic Diseases Research Laboratory, Centro Interdisciplinario de Investigación en Salud Territorial del Valle de Aconcagua (CIISTe Aconcagua), Centro de Investigaciones Biomédicas, Universidad de Valparaíso, San Felipe, Chile. <sup>2</sup>Escuela de Medicina, Campus San Felipe, Facultad de Medicina, Universidad de Valparaíso, San Felipe, Chile. <sup>3</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>4</sup>Department of Physiology, Faculty of Pharmacy, Universidad de Sevilla, Sevilla, Spain. <sup>5</sup>University of Queensland Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland, Herston, Queensland, Australia
- P2.93**  
**LIPID PROFILE OF CIRCULATING PLACENTAL EXOSOMES IN GESTATIONAL DIABETES WITH AND WITHOUT PREECLAMPSIA**  
Miira M. Klemetti<sup>1</sup>, Leonardo Ermini<sup>1</sup>, Tyler R. Porter<sup>1</sup>, Martin Post<sup>2,3</sup>, Isabella Caniggia<sup>1,2,3</sup>  
<sup>1</sup>Lunenfeld-Tanenbaum Research Institute, Sinai Health System, Toronto, Canada. <sup>2</sup>Institute of Medical Science. Depts. of Obstetrics and Gynecology and Physiology, University of Toronto, Toronto, Canada. <sup>3</sup>Program in Translational Medicine, Peter Gilgan Centre for Research and Learning, Hospital for Sick Children, Toronto, Canada
- P2.94**  
**LEVELS OF EXTRACELLULAR VESICLES AND THEIR ASSOCIATED MIRNAS IN MATERNAL AND FETAL CIRCULATION DURING NORMAL AND DIABETIC PREGNANCIES**  
Valeska Ormazabal<sup>1,2</sup>, Stefanie Adam<sup>2</sup>, Soumyalekshmi Nair<sup>2</sup>, Katherin Scholz-Romero<sup>2,3</sup>, Emilio Diaz<sup>4</sup>, Felipe Zuñiga<sup>3</sup>, David McIntyre<sup>5</sup>, Martha Lappas<sup>6</sup>, Carlos Salomon<sup>2,3</sup>  
<sup>1</sup>Department of Pharmacology, Faculty of Biological Sciences, University of Concepcion, Concepcion, Chile. <sup>2</sup>Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, The University of Queensland, Brisbane, Australia. <sup>3</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Concepción, Chile. <sup>4</sup>Faculty of Medicine, University of Concepcion, Concepción, Chile. <sup>5</sup>Mater Research Institute-University of Queensland, Translational Research Institute, Brisbane, Australia. <sup>6</sup>Obstetrics, Nutrition and Endocrinology Group, Department of Obstetrics and Gynaecology, University of Melbourne, Melbourne, Australia
- P2.95**  
**PROTEIN ANALYSIS IN SKELETAL MUSCLE FROM GESTATIONAL DIABETES MELLITUS AND THEIR ASSOCIATION WITH INSULIN SIGNALLING DURING PREGNANCY.**  
Soumyalekshmi Nair<sup>1</sup>, Valeska Ormazabal<sup>2,1</sup>, Macarena Ramirez<sup>3</sup>, Andrew Lai<sup>4</sup>, Katherin Scholz Romero<sup>4,3</sup>, David McIntyre<sup>5</sup>, Emilio Diaz<sup>6</sup>, Felipe Zuñiga<sup>3</sup>, Martha Lappas<sup>7</sup>, Carlos Salomon<sup>4,3</sup>  
<sup>1</sup>Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, The University of Queensland. , Brisbane, Australia. <sup>2</sup>Department of Pharmacology, Faculty of Biological Sciences, University of Concepcion, Concepcion, Chile. <sup>3</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Concepción, Chile. <sup>4</sup>Exosome Biology Laboratory, Centre for Clinical Diagnostics, University of Queensland Centre for Clinical Research, Royal Brisbane and Women's Hospital, The University of Queensland, Brisbane, Australia. <sup>5</sup>Mater Research Institute-University of Queensland, Translational Research Institute, Brisbane, Australia. <sup>6</sup>Faculty of Medicine, University of Concepcion, Concepcion, Chile. <sup>7</sup>Obstetrics, Nutrition and Endocrinology Group, Department of Obstetrics and Gynaecology, University of Melbourne, Melbourne, Australia

**METABOLOMICS - PROTEOMICS**

**P2.96**  
**ELEMENTAL METABOLOMICS TO IDENTIFY PREGNANCY RISK FACTORS AND PREDICT GESTATIONAL OUTCOMES**  
Daniel McKeating<sup>1</sup>, William Bennett<sup>1,2</sup>, Vicki Clifton<sup>3,4</sup>, Ping Zhang<sup>1</sup>, Anthony Perkins<sup>1</sup>  
<sup>1</sup>Griffith University, Gold Coast, Australia. <sup>2</sup>University of Southern Denmark, Odense, Denmark. <sup>3</sup>Mater Research, Brisbane, Australia. <sup>4</sup>Translational Research Institute, Brisbane, Australia

**P2.97**  
**PLACENTAL SECRETION OF PROTEINS INTO THE MATERNAL AND FETAL CIRCULATIONS IN NORMAL HUMAN PREGNANCIES IS SEX DEPENDENT**  
Trond Michelsen<sup>1,2</sup>, Ane Moe Holme<sup>1</sup>, Marie Cecilie Roland<sup>1</sup>, Manuela Zucknick<sup>3</sup>, Tuula Nyman<sup>1</sup>, Tore Henriksen<sup>3</sup>, Theresa L Powell<sup>2</sup>, Thomas Jansson<sup>2</sup>  
<sup>1</sup>Oslo University Hospital, Oslo, Norway. <sup>2</sup>University of Colorado Anschutz Medical Campus, Aurora, USA. <sup>3</sup>University of Oslo, Oslo, Norway

**P2.98**  
**PROTEOMIC IDENTIFICATION OF POTENTIAL TARGETS IN THE SYNCYTIOTROPHOBLAST MICROVILLOUS MEMBRANE FOR PLACENTAL-SPECIFIC THERAPEUTIC DELIVERY.**  
Amanda Bowman, Allyson King, Helen Jones  
Cincinnati Children's Hospital, Cincinnati, USA

**PERICONCEPTIONAL HEALTH, EMBRYO DEVELOPMENT AND NUTRITION**

**P2.99**  
**miMIR-155 REGULATES PLACENTAL DEVELOPMENT AND FETAL GROWTH, PROBABLY BY INHIBITING THE EXPRESSION OF ANGIOTENSIN II TYPE 1 RECEPTOR (AT<sub>1</sub>R).**  
Anya Arthurs<sup>1,2</sup>, Eugenie Lumbers<sup>2</sup>, Celine Corbisier de Meaultsart<sup>2</sup>, Sarah Robertson<sup>3</sup>, John Schjenken<sup>3</sup>, Kirsty Pringle<sup>2</sup>  
<sup>1</sup>Flinders Centre for Innovation in Cancer, College of Medicine & Public Health, Flinders University, Adelaide, Australia. <sup>2</sup>Hunter Medical Research Institute and School of Biomedical Sciences and Pharmacy, University of Newcastle, Newcastle, Australia. <sup>3</sup>Robinson Research Institute and Adelaide Medical School, Faculty of Health and Medical Sciences, University of Adelaide, Adelaide, Australia

**P2.100**  
**IS PLACENTAL AGING THE KEY TO GESTATIONAL DISORDERS?**  
Lucy Bartho<sup>1</sup>, Joshua Fisher<sup>1</sup>, Olivia Holland<sup>1</sup>, James Cuffe<sup>2</sup>, Anthony Perkins<sup>1</sup>  
<sup>1</sup>Griffith University, Gold Coast, Australia. <sup>2</sup>University of Queensland, St Lucia, Australia

**P2.101**  
**INCREASED EXPRESSION OF PLACENTAL OXIDATIVE STRESS AND REDUCED ANTIOXIDANT MARKERS IN POST-TERM DELIVERIES**  
Amy Simpson, Louise Briggs, Lesia Kurlak, Hiten Mistry  
University of Nottingham, Nottingham, United Kingdom

**P2.102**  
**PROGRESSIVE UTERINE ARTERY OCCLUSION IN GUINEA PIGS INCREASES OXIDATIVE STRESS LEVELS AND DISRUPTS GLYCOGEN METABOLISM IN THE MATERNAL DECIDUA**  
Alejandro A. Candia<sup>1</sup>, Jorge López-Tello<sup>2</sup>, Emilio A. Herrera<sup>1</sup>, Bernardo J. Krause<sup>3</sup>, Amanda N. Sferruzzi-Perri<sup>2,4</sup>  
<sup>1</sup>Laboratory of Vascular Function & Reactivity, Pathophysiology Program, ICBM, Faculty of Medicine, Universidad de Chile, Santiago, Chile. <sup>2</sup>Centre for Trophoblast Research, Department of Physiology, Development and Neuroscience, Downing Street, University of Cambridge, UK, Cambridge, United Kingdom. <sup>3</sup>Department of Neonatology, Division of Pediatrics, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>4</sup>Institute for Women's Health, University of College London, UK, Cambridge, United Kingdom

**P2.103**

**DECREASED BIRTH WEIGHT DUE TO LIFE-LONG MATERNAL CAFETERIA DIET: ¿IS FETO-PLACENTAL DEVELOPMENT AFFECTED?**

María Paula Gastiazoro, Virginia Lorenz, María Florencia Rossetti, Rocío Schumacher, Cora Stocker, Milena Durando, Enrique Hugo Luque, Jorge Guillermo Ramos, Jorgelina Varayoud  
Instituto de Salud y Ambiente del Litoral (ISAL) - CONICET, Santa Fe, Argentina

**P2.104**

**EXCESSIVE GESTATIONAL WEIGHT GAIN RESULTS IN HIGHER CONTRACTILE MICROVASCULAR STATE IN WOMEN WITH NORMAL PRE-GESTATIONAL WEIGHT**

Fabian Pardo<sup>1,2</sup>, Valentina Orellana<sup>1,2,3</sup>, Judith Gómez<sup>1,2,3</sup>, Axcel Aedo<sup>2</sup>, Luis Sobrevia<sup>2,4,5</sup>

<sup>1</sup>Metabolic Diseases Research Laboratory, Centro Interdisciplinario de Investigación en Salud Territorial del Valle de Aconcagua (CIISTe Aconcagua), Centro de Investigaciones Biomédicas, Universidad de Valparaíso, San Felipe, Chile. <sup>2</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>3</sup>Escuela de Tecnología Médica, Campus San Felipe, Facultad de Medicina, Universidad de Valparaíso, San Felipe, Chile. <sup>4</sup>Department of Physiology, Faculty of Pharmacy, Universidad de Sevilla, Sevilla, Chile. <sup>5</sup>University of Queensland Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland, Queensland, Chile

**P2.105**

**SUCCESSFUL USE OF LOW MOLECULAR WEIGHT HEPARIN IN ACUTE OLIGOHYDRAMNIOS - A CASE REPORT.**

Piotr Szkodziak, Maciej Paszkowski, Filip Szkodziak, Piotr Czuczwar, Sławomir Woźniak, Tomasz Paszkowski  
3rd Department of Gynaecology, Medical University of Lublin, Lublin, Poland

**P2.106**

**RESTRICTION OF EARLY FETAL GROWTH AND PLACENTAL CHORIOANGIOMATOSIS**

Rogério Caixeta Moraes De Freitas, Annie Caroline Magalhães Santos  
University Hospital Julio Muller, Cuiabá, Brazil

**P2.107**

**EXTRACELLULAR MATRIX STRUCTURE IN SCNT AND NATURAL BOVINE PLACENTA CONDITIONS**

Rodrigo da Silva Nunes Barreto, Patricia Romagnolli, Maria Angelica Miglino  
School of Veterinary Medicine and Animal Sciences, University of São Paulo, São Paulo, Brazil

**P2.108**

**THE INTRACELLULAR PH IN HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS FROM GESTATIONAL DIABESITY IS UNALTERED BY INSULIN.\***

Gonzalo Fuentes<sup>1,2</sup>, Paola Valero<sup>1,3</sup>, Macelo Cornejo<sup>1,2</sup>, Mario Paublo<sup>4</sup>, Marcia Andrea López<sup>4</sup>, Marco Antonio Ramírez<sup>1,2</sup>, Luis Sobrevia<sup>1,5,6</sup>

<sup>1</sup>Cellular and Molecular Physiology Laboratory (CMPL), Department of Obstetrics, Division of Obstetrics and Gynaecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Departamento Biomédico, Facultad de Ciencias de la Salud, Universidad de Antofagasta, Antofagasta, Chile. <sup>3</sup>Escuela de Medicina, Universidad de Valparaíso, Viña del Mar, Chile. <sup>4</sup>Gynaecology and Obstetrics Service, Hospital San Juan de Dios, Santiago, Chile. <sup>5</sup>Department of Physiology, Faculty of Pharmacy, Universidad de Sevilla, Sevilla, Spain. <sup>6</sup>University of Queensland Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland, Queensland, Australia

**P2.109**

**LIQUID CHROMATOGRAPHY-MULTIPLE REACTION MONITORING MASS SPECTROMETRY QUANTIFICATION OF EXTRACELLULAR VESICLES SIGNALING PROTEINS IN PLACENTAL CELLS UNDER DIFFERENT PHYSIOLOGICAL CONDITIONS**

Carlos Palma<sup>1</sup>, Carlos Salomon<sup>1,2</sup>

<sup>1</sup>Exosome Biology Laboratory, Centre for Clinical Diagnostics, UQ centre for Clinical Research, Royal Brisbane and Women's Hospital, Faculty of Medicine + Biomedical Sciences, The University of Queensland, Brisbane, Australia. <sup>2</sup>Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Concepcion, Chile



## P2.110

### ROLE OF LEPTIN ON THE APOPTOSIS OF TROPHOBLAST EXPLANTS TRIGGERED BY ACIDOSIS

Antonio Pérez-Pérez<sup>1</sup>, Teresa Vilarriño-García<sup>2,3</sup>, Rodrigo Riedel<sup>4</sup>, Julietta Maymó<sup>4</sup>, Malena Schanton<sup>4</sup>, Cecilia Varone<sup>4</sup>, Víctor Sánchez-Margalet<sup>1</sup>  
<sup>1</sup>Departamento de Bioquímica Médica y Biología Molecular, Universidad de Sevilla, Hospital Universitario Virgen Macarena, Sevilla, Spain.  
<sup>2</sup>Departamento de Bioquímica Médica y Biología Molecular, Universidad de Sevilla, Seville, Spain. <sup>3</sup>Hospital Juan Ramón Jiménez, Huelva, Spain.  
<sup>4</sup>Departamento de Química Biológica, FCEN-UBA. IQUBICEN, CONICET. Departamento de Química Biológica, FCEN-UBA. IQUBICEN, CONICET, Buenos Aires, Argentina.

## P2.111

### CESAREAN SCAR PREGNANCY WITH PROGRESSION TO ABNORMALLY INVASIVE PLACENTA; EXPECTANT MANAGEMENT ACCORDING TO WILL OF PATIENT: REPORT OF A CASE AND LITERARY REVIEW.

María Lòpez<sup>1</sup>, Albaro Nieto<sup>2</sup>, Jhoana Arango<sup>2</sup>, Juan Quintero<sup>3</sup>, María Zambrano<sup>2</sup>, Jaime Lòpez<sup>2</sup>  
<sup>1</sup>Universidad Icesi, Cali, Colombia. <sup>2</sup>Fundación Valle del Lili, Cali, Colombia. <sup>3</sup>Universidad del Valle, Cali, Colombia

## P2.112

### ESTIMATION OF FETAL RADIATION DOSE DURING THE PROPHYLACTIC USE OF THE AORTIC OCCLUSION BALLOON ON ABNORMALLY INVASIVE PLACENTA PREGNANCIES.

Luis Salas<sup>1</sup>, EJ Duran<sup>2</sup>, OS Benavides<sup>2</sup>, Albaro Nieto<sup>3</sup>, Fernando Rodriguez<sup>3</sup>  
<sup>1</sup>Departamento de Física Médica, Fundación Valle del Lili, Cali, Colombia. <sup>2</sup>Departamento de Posgrados Clínico, Cali, Colombia. <sup>3</sup>Fundación Valle del Lili, Cali, Colombia

## P2.113

### UROLOGICAL INJURIES DURING THE TREATMENT OF ABNORMALLY INVASIVE PLACENTA

Albaro Nieto<sup>1</sup>, María López<sup>2</sup>, María Ceballos<sup>1</sup>, Manuel Duque<sup>1</sup>, Juan De los Rios<sup>1</sup>, Luis Plazas<sup>1</sup>, Margarita Chancy<sup>1</sup>, Adriana Messa<sup>1</sup>  
<sup>1</sup>Fundación Valle del Lili, Cali, Colombia. <sup>2</sup>Universidad Icesi, Cali, Colombia

## PREECLAMPSIA

## P2.114

### THE EFFECTS OF A HIGH CHOLESTEROL DIET ON AT1 SIGNALING DURING PREGNANCY

Tamara Sáez<sup>1,2</sup>, Tianna Clarke<sup>1</sup>, Raven Kirschenman<sup>1,2</sup>, Floor Spaans<sup>1,2</sup>, Sandra T. Davidge<sup>1,2</sup>  
<sup>1</sup>University of Alberta, Edmonton, Canada. <sup>2</sup>Women & Children's Health Research Institute, Edmonton, Canada

## P2.115

### URIC ACID LEVELS IN GESTATIONAL HYPERTENSIVE DISORDERS AND FETAL GROWTH RESTRICTION

Ana I Corominas<sup>1</sup>, Silvia Balconi<sup>2</sup>, María Ortiz<sup>2</sup>, Bernardo Maskin<sup>2</sup>, Alicia E. Damiano<sup>3,4</sup>  
<sup>1</sup>Hospital Nacional Dr. Prof. Alejandro Posadas. , Ciudad Autonoma de Buenos Aires, Argentina. <sup>2</sup>Hospital Nacional Dr. Prof. Alejandro Posadas. , Buenos Aires, Argentina. <sup>3</sup>IFIBIO Houssay, UBA-CONICET, Buenos Aires, Argentina. <sup>4</sup>Cátedra de Biología Celular y Molecular, Dpto. de Ciencias Biológicas, Facultad de Farmacia y Bioquímica. UBA. , Buenos Aires, Argentina

## P2.116

### MULTIPLE PREGNANCIES AND GESTATIONAL HYPERTENSIVE DISEASES

Ana I. Corominas<sup>1</sup>, Silvia Balconi<sup>1</sup>, María Ortiz<sup>1</sup>, Mauricio Castro Parodi<sup>2</sup>, Alicia E. Damiano<sup>2,3</sup>  
<sup>1</sup>Hospital Nacional Dr. Prof. Alejandro Posadas. , Buenos Aires, Argentina. <sup>2</sup>Cátedra de Biología Celular y Molecular, Dpto. de Ciencias Biológicas, Facultad de Farmacia y Bioquímica. UBA. , Buenos Aires, Argentina. <sup>3</sup>IFIBIO Houssay, UBA-CONICET, Buenos Aires, Argentina

## P2.117

### COMPARISON OF *IN VITRO* PRE-ECLAMPSIA (PE) CELL MODELS WITH PE PLACENTAL TISSUE

Sampada Kallol<sup>1,2</sup>, Louise V. Briggs<sup>3</sup>, Hiten D Mistry<sup>3</sup>, Ruedi Moser<sup>4</sup>, Henning Schneider<sup>5</sup>, Christiane Albrecht<sup>1,2</sup>  
<sup>1</sup>Institute of Biochemistry and Molecular Medicine, University of Bern, Bern, Switzerland. <sup>2</sup>Swiss National Centre of Competence in Research (NCCR) TransCure, University of Bern, Bern, Switzerland. <sup>3</sup>Division of Child Health, Obstetrics & Gynaecology, University of Nottingham, Nottingham, United Kingdom. <sup>4</sup>Lindenhofspitalgruppe, Bern, Switzerland. <sup>5</sup>Department of Obstetrics and Gynecology, University Hospital, University of Bern, Bern, Switzerland

**P2.118**

**TISSUE FACTOR AND THROMBOMODULIN: DETERMINATION OF MRNA LEVELS IN EXOSOMES DERIVED FROM HUMAN PLACENTAL EXPLANT CULTURES.**

Tatiana Gámez<sup>1,2</sup>, Paola Ayala Ramirez<sup>1,2</sup>, Mercedes Olaya Contreras<sup>3</sup>, Reggie Garcia Robles<sup>4</sup>

<sup>1</sup>Human Genetics Institute. Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia. <sup>2</sup>Research Seedbed in Perinatal Medicine. Faculty of Medicine - Pontificia Universidad Javeriana, Bogotá, Colombia. <sup>3</sup>Department of Pathology. Faculty of Medicine, Pontificia Universidad Javeriana-Hospital Universitario San Ignacio, Bogotá, Colombia. <sup>4</sup>Department of Physiological Sciences. Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia

**P2.119**

**PREECLAMPSIA AND OX-LDL MODIFY THE EXPRESSION OF AUTOPHAGY MARKERS IN PLACENTA AND FIRST TRIMESTER TROPHOBLAST CELL LINE IMPAIRING TROPHOBLAST INVASION AND MIGRATION.**

Lorena Carvajal<sup>1,2</sup>, Claudette Cantin<sup>1</sup>, Bárbara Fuenzalida<sup>1</sup>, Susana Contreras-Duarte<sup>1</sup>, Jaime Gutierrez<sup>3</sup>, Rodrigo Escalona<sup>3</sup>, Eugenia Morselli<sup>2</sup>, Andrea Leiva<sup>1</sup>

<sup>1</sup>Division of Obstetrics and Gynecology, School of Medicine, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>2</sup>Department of Physiology, Faculty of Biological Sciences. Pontificia Universidad Católica de Chile, Santiago, Chile. <sup>3</sup>Cellular Differentiation and Signaling Laboratory (CSDL), Faculty of Medical Technology, Faculty of Health Sciences, Universidad San Sebastian, , Santiago, Chile

**P2.120**

**MATERNAL AND PLACENTAL SELECTINS IN WOMEN WITH PRE-ECLAMPSIA; ASSOCIATION WITH THE RENIN-ANGIOTENSIN-SYSTEM**

Lesia Kurlak<sup>1</sup>, Melissa V. Hott-Ogalde<sup>1</sup>, Paula J. Scaife<sup>1</sup>, Geneviève Escher<sup>2</sup>, Hiten D Mistry<sup>1</sup>

<sup>1</sup>Division of Child Health, Obstetrics and Gynaecology, University of Nottingham, City Hospital Nottingham, Nottingham, United Kingdom. <sup>2</sup>Department of Nephrology and Hypertension, and Department of Biomedical Research, University of Bern, Bern, Switzerland

**P2.121**

**SYNCYTIOTROPHOBLAST EXTRACELLULAR VESICLES FROM LATE-ONSET PREECLAMPSIA PLACENTAE DO NOT INDUCE A PRO-INFLAMMATORY IMMUNE RESPONSE IN THP-1 MACROPHAGES**

Carolina Motta-Mejia<sup>1,2</sup>, Wei Zhang<sup>1</sup>, Lubna Kouser<sup>3</sup>, Kirsten White<sup>1</sup>, Neva Kandzija<sup>1</sup>, Fatimah S. Alhamlan<sup>4</sup>, Dionne Tannetta<sup>5</sup>, Claire Bastie<sup>6</sup>, Christopher Redman<sup>1</sup>, Manu Vatish<sup>1</sup>

<sup>1</sup>University of Oxford, Oxford, United Kingdom. <sup>2</sup>Brunel University London, London, United Kingdom. <sup>3</sup>Imperial College London, London, United Kingdom. <sup>4</sup>King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia. <sup>5</sup>University of Reading, Reading, United Kingdom. <sup>6</sup>University of Warwick, Warwick, United Kingdom

**P2.122**

**THE EXPRESSION OF RECK A KEY REGULATOR OF TROPHOBLAST INVASION AND ENDOTHELIAL-LIKE DIFFERENTIATION IS DIFFERENTIALLY REGULATED BY TGF-BETA, ANGIOTENSIN II, ADENOSINE AND OXYGEN TENSION: ROLE IN PREECLAMPSIA.**

Felipe Gallardo<sup>1</sup>, Denisse Moreno<sup>1</sup>, Karla Vega<sup>1</sup>, Javiera Appel<sup>2</sup>, Enrique Guzmán-Gutiérrez<sup>2</sup>, Luis Sobrevia<sup>3</sup>, Jaime Gutiérrez<sup>1,3</sup>

<sup>1</sup>Universidad San Sebastian, Santiago, Chile. <sup>2</sup>Universidad de Concepción, Concepción, Chile. <sup>3</sup>Pontificia Universidad Católica de Chile, Santiago, Chile

**P2.123**

**EVALUATION OF FASL AND TRAIL IN EXOSOMES DERIVED FROM PLACENTAL EXPLANT CULTURES OF WOMEN WITH EARLY- AND LATE-ONSET PREECLAMPSIA.**

Catalina Machuca-Acevedo<sup>1,2</sup>, Viviana Barrera Penagos<sup>2</sup>, Jaime Silva<sup>3</sup>, Mercedes Olaya Contreras<sup>4</sup>, Paola Ayala-Ramírez<sup>1</sup>, Reggie García Robles<sup>5</sup>

<sup>1</sup>Human Genetics Institute. Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia. <sup>2</sup>Research Seedbed in Perinatal Medicine. Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia. <sup>3</sup>Department of Obstetrics and Gynecology. Faculty of Medicine, Pontificia Universidad Javeriana-Hospital Universitario San Ignacio, Bogotá, Colombia. <sup>4</sup>Department of Pathology. Faculty of Medicine, Pontificia Universidad Javeriana - Hospital Universitario San Ignacio, Bogotá, Colombia. <sup>5</sup>Department of Physiological Sciences. Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia

**P2.124**

**FGL2-ASSOCIATED TRANSCRIPTIONAL AND HISTOPATHOLOGICAL FEATURES OF IMMUNOLOGICAL PREECLAMPSIA**

Pascale Robineau-Charette<sup>1,2</sup>, David Grynspan<sup>3</sup>, Barbara C. Vanderhyden<sup>1,2</sup>, Shannon A. Bainbridge<sup>1,4</sup>

<sup>1</sup>Department of Cellular and Molecular Medicine, University of Ottawa, Ottawa, Canada. <sup>2</sup>Center for Cancer Therapeutics, Ottawa Hospital Research Institute, Ottawa, Canada. <sup>3</sup>Department of Pathology, Children's Hospital of Eastern Ontario, Ottawa, Canada. <sup>4</sup>Interdisciplinary School of Health Sciences, University of Ottawa, Ottawa, Canada

**P2.125**

**ESTROGEN RECEPTOR ESR1 POLYMORPHISMS AS EARLY PREDICTORS OF PREECLAMPSIA -ECLAMPSIA IN HIGH-RISK PREGNANCIES**

Ricardo Plunkett<sup>1</sup>, Walter Espeche<sup>2</sup>, Martin Salazar<sup>2</sup>, Maria Valle<sup>3</sup>, Maria B Rauchenberger<sup>3</sup>, Virginia Massheimer<sup>3</sup>

<sup>1</sup>Servicio de Endocrinología Hospital Privado Dr. Raúl Mera., Bahia Blanca, Argentina. <sup>2</sup>Unidad de Enfermedades Cardiometabólicas. Hospital San Martín, La Plata, Argentina. <sup>3</sup>Cátedra de Bioquímica Clínica II, BByF, UNS. INBIOSUR (CONICET-UNS)., Bahia Blanca, Argentina

**P2.126**

**EVALUATION OF ANGIOGENIC GROWTH MEDIATORS AND OXIDATIVE DNA DAMAGE MARKER IN SERUM AND PLACENTAS OF WOMEN WITH PREECLAMPSIA: A CASE-CONTROL STUDY IN GHANA**

Enoch Anto<sup>1</sup>, Peter Roberts<sup>1</sup>, David Coall<sup>1</sup>, Cornelius Turpin<sup>2</sup>, Osei-Owusu Afriyie<sup>3,4</sup>, Wei Wang<sup>1</sup>

<sup>1</sup>Edith Cowan University, School Of Medical and Health Sciences, Perth, Australia. <sup>2</sup>Komfo Anokye Teaching Hospital, Obstetric and Gynecology Department, Kumasi, Ghana. <sup>3</sup>Ghana Police Hospital, Department of Pathology, Accra, Ghana. <sup>4</sup>Komfo Anokye Teaching Hospital, Pathology Department, Kumasi, Ghana

**P2.127**

**IMPAIRED IRON HOMEOSTASIS CONTRIBUTES TO CELL DEATH IN PREECLAMPSIA**

Chanho Park<sup>1,2</sup>, Isabella Caniggia<sup>1,2,3</sup>

<sup>1</sup>Lunenfeld and Tanenbaum Research Institute, Sinai Health System, Toronto, Canada. <sup>2</sup>Department of Physiology, University of Toronto, Toronto, Canada. <sup>3</sup>Department of Obstetrics and Gynecology, University of Toronto, Toronto, Canada

**P2.128**

**PLACENTAL PHENOTYPE AND LIFETIME CARDIOVASCULAR DISEASE RISK FOLLOWING PRE-ECLAMPSIA**

Samantha Benton<sup>1</sup>, David Grynspan<sup>2</sup>, Erika Mery<sup>1</sup>, Laura Gaudet<sup>1</sup>, Shannon Bainbridge<sup>1</sup>

<sup>1</sup>University of Ottawa, Ottawa, Canada. <sup>2</sup>Children's Hospital of Eastern Ontario, Ottawa, Canada

**STEM CELLS AND CELLULARITY**

**P2.129**

**TOWARD A 3D BIO-PRINTED MODEL OF PLACENTAL-VILLOUS TRANSPORT: GROWTH AND VIABILITY OF HUMAN PRIMARY PLACENTAL CELL-TYPES ON HYDROGEL SCAFFOLDS**

Chandana Tekkotte<sup>1</sup>, Claire Yu<sup>2</sup>, Xuanyi Ma<sup>3</sup>, Henry H. Hwang<sup>2</sup>, Omar Farah<sup>4</sup>, Ching-Wen Chang<sup>4</sup>, Mana M. Parast<sup>4</sup>, Shaochen Chen<sup>2,3,5,6</sup>, Louise C. Laurent<sup>1</sup>

<sup>1</sup>Department of Obstetrics, Gynecology, and Reproductive Sciences and Sanford Consortium for Regenerative Medicine, University of California, San Diego, La Jolla, CA, USA. <sup>2</sup>Department of NanoEngineering, University of California, San Diego, La Jolla, CA, USA. <sup>3</sup>Department of Bioengineering, University of California, San Diego, La Jolla, CA, USA. <sup>4</sup>Department of Pathology and the Sanford Consortium for Regenerative Medicine, University of California San Diego, La Jolla, CA, USA. <sup>5</sup>Materials Science and Engineering Program, University of California, San Diego, La Jolla, CA, USA. <sup>6</sup>Chemical Engineering Program, University of California, San Diego, La Jolla, CA, USA

**P2.130**

**FUNCTIONAL PROPERTIES OF HUMAN CHORIONIC VILLOUS MSCS IN RESPONSE TO CANCER ENVIRONMENT**

Mohamed Abumaree<sup>1</sup>, Abdullah Al Subayyil<sup>1</sup>, Fawaz Abomaray<sup>2</sup>, Tanvier Khatlani<sup>1</sup>

<sup>1</sup>King Abdullah International Medical Research Center, Riyadh, Saudi Arabia. <sup>2</sup>Karolinska Institutet, Stockholm, Sweden

## P2.131

### PROGRAMMING OF HUMAN DBMSCS BY GLUCOSE INCREASE THEIR ENGRAFTMENT AND PROPERTIES

Yasser Basmaeil<sup>1</sup>, Manar Alrashid<sup>1</sup>, Tanvier Khatlani<sup>1</sup>, Manal Alshabibi<sup>2</sup>, Fawaz Abomaray<sup>3</sup>, Bill Kalionis<sup>4</sup>, Eman Bahattab<sup>2</sup>, Mohamed Abumaree<sup>5</sup>  
<sup>1</sup>King Abdullah International Medical Research Center, Riyadh, Saudi Arabia. <sup>2</sup>King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia.  
<sup>3</sup>Karolinska Institutet, Stockholm, Sweden. <sup>4</sup>University of Melbourne, Melbourne, Australia. <sup>5</sup>King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

## P2.132

### PLACENTAL SCAFFOLDS SUPPORT OSTEOGENIC AND CHONDROGENIC DIFFERENTIATION OF BOVINE ADIPOSE-DERIVED CELLS

Amanda Baracho Trindade Hill<sup>1,2</sup>, Antonio Alexandre Speri Alves<sup>3</sup>, Rodrigo da Silva Nunes Barreto<sup>3</sup>, Fabiana Fernandes Bressan<sup>4</sup>, Maria Angelica Miglino<sup>3</sup>, Bruce D. Murphy<sup>2</sup>, Joaquim Mansano Garcia<sup>5</sup>  
<sup>1</sup>São Paulo State University, Jaboticabal, Brazil. <sup>2</sup>University of Montreal, Saint-Hyacinthe, Canada. <sup>3</sup>School of Veterinary Medicine and Animal Sciences, University of São Paulo, São Paulo, Brazil. <sup>4</sup>Faculty of Animal Science and Food Engineering, University of São Paulo, Pirassununga, Brazil. <sup>5</sup>São Paulo State University, Jaboticabal, Brazil.

## P2.133

### OPTIMIZING DIFFERENTIATION OF HUMAN PLURIPOTENT STEM CELL-DERIVED CYTOTROPHOBLAST INTO EXTRAVILLOUS- AND SYNCYTIOTROPHOBLAST.

Tony Bui, Mariko Horii, Ojeni Touma, Francesca Soncin, Omar Farah, Louise C. Laurent, Mana Parast  
 UC San Diego, School of Medicine, La Jolla, USA

## P2.134

### BOVINE PLACENTA AS BIOLOGICAL SCAFFOLD SOURCE

Antonio Alexandre Speri Alves, Igor Smirnow Cordeiro, Maria Angelica Miglino, Rodrigo da Silva Nunes Barreto  
 School of Veterinary Medicine and Animal Sciences, University of São Paulo, São Paulo, Brazil

## P2.135

### RECELLULARIZATION OF CANINE PLACENTAL EXTRACELLULAR MATRIX: MESENCHYMAL STEM CELLS APPLIED TO TISSUE BIOENGINEERING

Gustavo de Sá Schiavo Matias, Ana Claudia Oliveira Carreira, Maria Angelica Miglino, Paula Fratini, Rodrigo da Silva Nunes Barreto  
 University of Sao Paulo, São Paulo, Brazil

## TOXICOLOGY/ OXIDATIVE STRESS

## P2.136

### EXPOSURE TO PERFLUORALKYL SUBSTANCES AND THEIR POTENTIAL IMPACT ON FETAL GROWTH

Martin Forsthuber<sup>1,2</sup>, Sebastian Granitzer<sup>1,3</sup>, Raimund Widhalm<sup>1,3</sup>, Anna Gutsohn<sup>1,3</sup>, Isabella Ellinger<sup>4</sup>, Markus Hengstschläger<sup>1</sup>, Maria Uhl<sup>5</sup>, Philipp Fössleitner<sup>6</sup>, Harald Zeisler<sup>7</sup>, Hans Salzer<sup>8</sup>, Bettina Grasl-Kraupp<sup>9</sup>, Hanns Moshhammer<sup>2</sup>, Claudia Gundacker<sup>1</sup>  
<sup>1</sup>Center of Pathobiochemistry and Genetics, Medical University of Vienna, Vienna, Austria. <sup>2</sup>Center for Public Health, Medical University of Vienna, Vienna, Austria. <sup>3</sup>Karl Landsteiner University of Health Science, Krems an der Donau, Austria. <sup>4</sup>Institute for Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna, Vienna, Austria. <sup>5</sup>Environment Agency Austria, Vienna, Austria. <sup>6</sup>Universitätsklinikum St. Pölten, St. Pölten, Austria. <sup>7</sup>Vienna General Hospital, Vienna, Austria. <sup>8</sup>Universitätsklinikum Tulln, Tulln, Austria. <sup>9</sup>Institute of Cancer Research, Medical University of Vienna, Vienna, Austria

**P2.137**

**EFFECTS OF MATERNAL AU-NP EXPOSURE BY INHALATION ON FETO-PLACENTAL DEVELOPMENT AND PLACENTAL FUNCTION, IN A RABBIT MODEL**

Delphine Rousseau-Ralliard<sup>1,2</sup>, Valérie Fessard<sup>3</sup>, John Boere<sup>4</sup>, Paul Fokkens<sup>4</sup>, Michèle Dahirel<sup>1,2</sup>, Christophe Richard<sup>1,2</sup>, Luc Jouneau<sup>1</sup>, Catherine Archilla<sup>1</sup>, Laurent Gaté<sup>5</sup>, Sylvie Huet<sup>3</sup>, Lisa Meslier<sup>3</sup>, Natalie Fournier<sup>6</sup>, Marie-Christine Aubrière<sup>1,2</sup>, Valérie Gelin<sup>1,2</sup>, Marie-Sylvie Lallemand<sup>1,2</sup>, Josiane Aioun<sup>1,2</sup>, Véronique Duranthon<sup>1</sup>, Pascale Chavatte-Palmer<sup>1,2</sup>, Denis Laloë<sup>7</sup>, Florence Jaffrézic<sup>7</sup>, Flemming Cassee<sup>4</sup>, Anne Couturier-Tarrade<sup>1,2</sup>

<sup>1</sup>UMR BDR, INRA, ENVA, Université Paris Saclay, Jouy en Josas, France. <sup>2</sup>PremUp Foundation, Paris, France. <sup>3</sup>ANSES, Laboratoire de Fougères, BioAgroPolis, Fougères, France. <sup>4</sup>National Institute for Public Health and the Environment (RIVM), Bilthoven, Netherlands. <sup>5</sup>INRS, Département Toxicologie et Biométrie, Vandoeuvre, France. <sup>6</sup>Hôpital Européen Georges Pompidou (AP-HP), Laboratoire de Biochimie, UF Cardio-Vasculaire, Paris, France. <sup>7</sup>UMR GABI, INRA, Université Paris Saclay, Jouy en Josas, France

**P2.138**

**THE TRANSCRIPTIONAL ACTIVATOR KRÜPPEL-LIKE FACTOR 6 (KLF6) IS INVOLVED IN TROPHOBLAST REDOX HOMEOSTASIS**

LT Kourdova, AL Miranda, AC Racca, ML Rojas, MM Cruz Del Puerto, S Genti-Raimondi, GM Panzetta-Dutari

CIBICI, Cordoba, Argentina

**P2.139**

**INVESTIGATING CANNABIS MEDIATED FETAL GROWTH RESTRICTION: THE EFFECT OF Δ9-THC ON PLACENTA VASCULAR DEVELOPMENT**

David Natale<sup>1,2</sup>, Katarina Gustin<sup>1</sup>, Kendrick Lee<sup>3</sup>, Daniel Hardy<sup>3</sup>, Bryony Natale<sup>1,2</sup>

<sup>1</sup>University of California San Diego, La Jolla, USA. <sup>2</sup>Queen's University, Kingston, Canada. <sup>3</sup>Western University, London, Canada

**P2.140**

**EFFECTS OF *IN UTERO* AND LACTATIONAL EXPOSURE TO GLYPHOSATE OR ITS COMMERCIAL FORMULATION ON PREGNANCY OUTCOMES IN RATS**

Dalma Belén Cadaviz Fernández, Virginia Lorenz, Guillermina Pacini, María Paula Gastiazoro, Milena Durando, Enrique Hugo Luque, Jorgelina Varayoud, María Mercedes Milesi

Institute of Health and Environment of Litoral (ISAL), Faculty of Biochemistry and Biological Sciences, Universidad Nacional del Litoral - Consejo Nacional de Investigaciones Científicas y Técnicas (UNL-CONICET), Santa Fe, Argentina

**P2.141**

**PATERNAL SHORT ALCOHOL CONSUMPTION IMPAIRS THE OFFSPRING HEALTH IN MICE**

Lucila Gotfryd<sup>1</sup>, Marcelo Gabriel Stinson<sup>1</sup>, Mónica Vermeulen<sup>2</sup>, Julieta Alcain<sup>3</sup>, Silvia Vanzulli<sup>4</sup>, Maite Cambiasso<sup>5</sup>, Zaira Naguila<sup>6</sup>, Alejandra Giselle Erlejman<sup>1</sup>, Juan Carlos Calvo<sup>1,5</sup>, Gabriela Salamone<sup>3</sup>, Vanina Andrea Fontana<sup>1</sup>

<sup>1</sup>Departamento de Química Biológica, UBA/IQUIBICEN-CONICET, Ciudad Autónoma de Buenos Aires, Argentina. <sup>2</sup>IMEX-CONICET Academia de Medicina, Ciudad Autónoma de Buenos Aires, Argentina. <sup>3</sup>IMEX-CONICET Academia de Medicina, Ciudad Autónoma de Buenos Aires, Argentina. <sup>4</sup>Instituto de Estudios Oncológicos, Academia de Medicina, Ciudad Autónoma de Buenos Aires, Argentina. <sup>5</sup>BYME-CONICET, Ciudad Autónoma de Buenos Aires, Argentina. <sup>6</sup>Bioterio central, FCEYN-UBA, Ciudad Autónoma de Buenos Aires, Argentina

**P2.142**

**DOES REPEAT LOW-DOSE ORAL EXPOSURE TO ACETAMIPRID (NEONICOTINOID INSECTICIDE) DURING GESTATION ALTER THE PHYSIOLOGY OF THE TRIAD MOTHER- PLACENTA- FETUS IN THE RAT?**

Paula C. Kandel Gambarte<sup>1,2</sup>, Victoria Longoni<sup>1</sup>, Martín Viale<sup>3,4</sup>, Marcelo J. Wolansky<sup>1,2</sup>, María G. Rovedatti<sup>1,5</sup>

<sup>1</sup>Laboratorio de Toxicología de Mezclas Químicas, Departamento Química Biológica, Facultad de Ciencias Exactas y Naturales (FCEyN), Universidad de Buenos Aires (UBA), CABA, Argentina. <sup>2</sup>IQUIBICEN, CONICET, CABA, Argentina. <sup>3</sup>Instituto IQUIBICEN, CONICET, CABA, Argentina. <sup>4</sup>Bioterio Central, FCEyN, UBA, CABA, Argentina. <sup>5</sup>Departamento de Biodiversidad y Biología Experimental, FCEyN, UBA, CABA, Argentina

**P2.143**

**NEUROBEHAVIORAL STATUS AND ABSTINENCE SIGNS IN NEWBORNS EXPOSED TO HIGH DOSES OF CAFFEINE IN THE PRENATAL PERIOD**

Ithallo Tanabe, Renise Dias, Bárbara Alcântara, Eloiza Tanabe, Elaine Figueiredo

Universidade Federal de Alagoas, Alagoas, Brazil

**TRANSPORT/ NUTRIENTS**

**P2.144**

**THE KINETICS OF MERCURY IN THE HUMAN PLACENTA: RELATIONSHIP BETWEEN GENOTYPE AND PHENOTYPE IN HEALTHY AND DISEASED PLACENTAS**

Sebastian Granitzer<sup>1,2</sup>, Martin Forsthuber<sup>3,1</sup>, Raimund Widhalm<sup>4,5</sup>, Isabella Ellinger<sup>6</sup>, Harald Zeisler<sup>7</sup>, Hans Salzer<sup>8</sup>, Philipp Fössleitner<sup>9</sup>, Markus Hengstschläger<sup>4</sup>, Claudia Gundacker<sup>1</sup>

<sup>1</sup>Center for Pathobiochemistry and Genetics, Vienna, Austria. <sup>2</sup>Karl-Landsteiner University, Krems, Austria. <sup>3</sup>Center for Public Health, Vienna, Austria. <sup>4</sup>Center for Pathobiochemistry and Genetics, Vienna, Austria. <sup>5</sup>Karl-Landsteiner University, Vienna, Austria. <sup>6</sup>Center for Pathophysiology, Vienna, Austria. <sup>7</sup>Department of Obstetrics and Gynecology, Vienna, Austria. <sup>8</sup>University Hospital Tulln, Tulln, Austria. <sup>9</sup>University Hospital St. Pölten, St.Pölten, Austria

**P2.145**

**EFFECTS OF UTERO-PLACENTAL STRUCTURE ON OXYGEN EXCHANGE FUNCTION PREDICTED BY AN ORGAN-SCALE COMPUTATIONAL MODEL.**

Win Tun<sup>1</sup>, Rory McKay<sup>1</sup>, Joanna James<sup>2</sup>, Alys Clark<sup>1</sup>

<sup>1</sup>Auckland Bioengineering Institute, University of Auckland, Auckland, New Zealand. <sup>2</sup>Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand

**P2.146**

**EFFICIENT LEUCINE TRANSPORT ACROSS THE PLACENTAL BARRIER DEPENDS ON PHYSIOLOGICAL, OPPOSITELY DIRECTED LEUCINE GRADIENTS**

Jonas Zaugg<sup>1,2</sup>, Fabian Ziegler<sup>1,2</sup>, Jean-Marc Nuoffer<sup>3</sup>, Ruedi Moser-Hässig<sup>4</sup>, Christiane Albrecht<sup>1,2</sup>

<sup>1</sup>Institute of Biochemistry and Molecular Medicine, University of Bern, Switzerland. <sup>2</sup>Swiss National Centre of Competence in Research (NCCR) TransCure, University of Bern, Switzerland. <sup>3</sup>Center for Metabolic Analysis, University Hospital of Bern, Switzerland. <sup>4</sup>Lindenhofspitalgruppe, Bern, Switzerland

**P2.147**

**HUMAN PLACENTAL METABOLISM OF VITAMIN D AND TRANSFER TO MATERNAL AND FETAL CIRCULATIONS**

Brogan Ashley<sup>1</sup>, Emma Lofthouse<sup>1</sup>, Felicity Hey<sup>2</sup>, Kerry Jones<sup>2</sup>, Nicholas Harvey<sup>1</sup>, Rohan Lewis<sup>1</sup>, Jane Cleal<sup>1</sup>

<sup>1</sup>University of Southampton, Southampton, United Kingdom. <sup>2</sup>University of Cambridge, Cambridge, United Kingdom

**P2.148**

**AQUAPORIN-9 IS EXPRESSED IN VILLOUS TROPHOBLAST MITOCHONDRIA.**

Mauricio Castro-Parodi<sup>1</sup>, Yollyseth Medina<sup>2</sup>, Abril Seyahian<sup>2</sup>, Natalia Szpilbarg<sup>2</sup>, Alicia E. Damiano<sup>1,2</sup>

<sup>1</sup>Cátedra de Biología Celular y Molecular, Depto. de ciencias Biológicas, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina. <sup>2</sup>IFIBIO Houssay, UBA- CONICET, Ciudad Autónoma de Buenos Aires, Argentina

**P2.149**

**OSMOTIC STRESS AND HUMAN AMNION AQUAPORINS**

Mauricio Adriel Di Paola<sup>1,2</sup>, Matias Nicolas Sierra<sup>1</sup>, Brian Doroshenko<sup>1</sup>, Carolina Anud<sup>1</sup>, Bernardo Maskin<sup>3</sup>, Alicia Damiano<sup>1,2</sup>

<sup>1</sup>Cátedra de Biología Celular y Molecular, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Buenos Aires, Argentina. <sup>2</sup>Laboratorio de Biología de la Reproducción, Instituto de Fisiología y Biofísica Bernardo Houssay (IFIBIO)- CONICET- Facultad de Medicina, Universidad de Buenos Aires, Buenos Aires, Argentina. <sup>3</sup>Hospital Profesor Doctor Alejandro Posadas, Buenos Aires, Argentina

**P2.150**

**DIFFERENTIAL REGULATION OF TRANSPORTERS IN HUMAN PLACENTAL CELLS AND PRIMARY EXPLANTS IN RESPONSE TO HYPOXIA**

Lauren Aleksunes<sup>1</sup>, Ludwik Gorczyca<sup>1</sup>, Jianyao Du<sup>2</sup>, Kristin Bircsak<sup>1</sup>, Xia Wen<sup>1</sup>, Anna Vetrano<sup>1</sup>

<sup>1</sup>Rutgers University, Piscataway, USA. <sup>2</sup>China Pharmaceutical University, Nanjing, China

**P2.151**

**OMEGA ( $\omega$ ) 6 EXCEEDED DIETS MODIFY PLACENTAL VASCULARIZATION, REDUCING VITALITY AND FETAL GROWTH IN A MURINE MODEL**

MR Solis<sup>1</sup>, CM Díaz Luján<sup>2,3</sup>, LM Vincenti<sup>1</sup>, ME Santillán<sup>1</sup>

<sup>1</sup>Cátedra de Fisiología Humana, FCM-Universidad Nacional de Córdoba, Argentina, Córdoba, Argentina. <sup>2</sup>Cátedra e Instituto de Biología Celular, Histología y Embriología, FCM-Universidad Nacional de Córdoba- INICSA (CONICET), Córdoba, Argentina. <sup>3</sup>Medicina, Universidad Nacional Villa María, Villa María, Argentina

**TROPHOBLAST BIOLOGY**

**P2.152**

**THE MIGRATORY CAPACITY OF HTR8/SVNEO CELLS UNDER HYPOXIA IS REGULATED BY KLF6**

Ana Cristina Racca<sup>1,2</sup>, Andrea Lis Miranda<sup>1,2</sup>, Lucille Kourdova<sup>1,2</sup>, Gonzalo Rodriguez-Lombardi<sup>1</sup>, Susana Genti-Raimondi<sup>1,2</sup>, Graciela Panzetta-Dutari<sup>1,2</sup>

<sup>1</sup>Facultad de Ciencias Químicas, UNC, Córdoba, Argentina. <sup>2</sup>CIBICI-CONICET, Córdoba, Argentina

**P2.153**

**TROPHOBLAST SYNCYTIALIZATION AND EFFLUX OF CYCLIC NUCLEOTIDES BY MRP TRANSPORTERS**

Ludwik Gorczyca, Lauren Aleksunes

Rutgers, The State University of New Jersey, Piscataway, USA

**P2.154**

**DEIODINASES EXPRESSION IS ALTERED IN HUMAN TROPHOBLAST FROM GESTATIONAL DIABETES MELLITUS PREGNANCIES**

Sebastián Gutierrez<sup>1,2</sup>, M Gonzalez<sup>3</sup>, B Fuenzalida<sup>4</sup>, A Leiva<sup>4</sup>, E Castro<sup>5</sup>, E Guzman-Gutierrez<sup>1</sup>

<sup>1</sup>Pregnancy Diseases Laboratory, Department of Clinical Biochemistry & Immunology, Faculty of Pharmacy, Universidad de Concepción, Concepcion, Chile. <sup>2</sup>School of Medical Technology, Faculty of Health Sciences, Universidad San Sebastián, Concepción, Chile. <sup>3</sup>Department of Obstetrics and Gynaecology, Faculty of Medicine, Universidad de Concepción., Concepcion, Chile. <sup>4</sup>Department of Obstetrics and Gynaecology, Faculty of Medicine, Pontificia Universidad Católica de Chile. Santiago, Chile. <sup>5</sup>Faculty of Medicine, Universidad San Sebastian, Concepción, Chile., Concepcion, Chile

**P2.155**

**TROPHOBLAST PROLIFERATION IS INHIBITED BY FKBP51**

Vanina Andrea Fontana<sup>1</sup>, María Fernanda Camisay<sup>1</sup>, Gisela Mazaira<sup>1</sup>, Mario D Galigniana<sup>1,2</sup>, Alejandra Giselle Erlejman<sup>1</sup>

<sup>1</sup>Departamento de Química Biológica UBA, IQUBICEN-CONICET, Buenos Aires, Argentina. <sup>2</sup>BYME-CONICET, Buenos Aires, Argentina

**P2.156**

**RECK REGULATES THE ENDOTHELIAL-LIKE DIFFERENTIATION OF HUMAN TROPHOBLAST CELLS MODULATING THE NOTCH SIGNALING PATHWAY**

Rodrigo Escalona, Jorge Maldonado, Felipe Gallardo, Jaime Gutiérrez

Cellular Signaling and Differentiation Laboratory, Health Science Faculty. Universidad San Sebastian, Santiago, Chile

**P2.157**

**MORPHOFUNCTIONAL, MOLECULAR AND ULTRASTRUCTURAL CHARACTERIZATION OF AUTOPHAGY IN MICE PLACENTA**

Fernando Felicioni, Andre Caldeira-Brant, Camila Sales, Thais Paula, Lucas Cardoso, Thais Garcia, Elizete Rizzo, Enrrico Bloise, Helio Chiarini-Garcia, Fernanda Almeida

Federal University of Minas Gerais, Belo Horizonte, Brazil

**P2.158**

**ACTIVATION OF CHOLINERGIC ANTI-INFLAMMATORY PATHWAY IN DECIDUAL MACROPHAGE PROMOTE TROPHOBLAST INVASIVENESS**

Xin Li<sup>1</sup>, Huishu Liu<sup>2</sup>

<sup>1</sup>The First Affiliated Hospital of University of Science and Technology of China, Hefei, China. <sup>2</sup>Department of Obstetrics, Guangzhou Women and Children's Medical Center, Guangzhou, China

### P2.159

#### THE ROLE OF SDF2 (STROMAL CELL DERIVED FACTOR-2) IN GESTATIONAL DISEASES THROUGH PERK-BRANCH OF THE UNFOLDED PROTEIN RESPONSE/ER STRESS.

Aline R. Lorenzon-Ojeda<sup>1,2</sup>, Hong Wa Hung<sup>3</sup>, Graham J. Burton<sup>3</sup>, Estela Bevilacqua<sup>1</sup>

<sup>1</sup>Department of Cell and Developmental Biology, Institute of Biomedical Sciences, University of São Paulo, São Paulo, Brazil. <sup>2</sup>Huntington Medicina Reprodutiva, São Paulo, Brazil. <sup>3</sup>Department of Physiology, Neurosciences and Development, University of Cambridge, Cambridge, United Kingdom

### P2.160

#### EXOGENOUS CRIPTO-1 INCREASES PROLIFERATION OF THE TROPHOBLAST CELL LINEAGE HTR8/SV-NEO

Milena Mirandola, Jady Rabelo, Carla Bandeira, Marco Amadeu, Estela Bevilacqua

Department of Cell and Developmental Biology, Institute of Biomedical Sciences, University of São Paulo, São Paulo, Brazil

### P2.161

#### BUILDING AN INTEGRATED GESTATIONAL HIGH-RISK BIOBANK FOR EXTRACELLULAR MICROVESICLES INVESTIGATION

Rodrigo Barbano Weingrill<sup>1</sup>, Sandra Luft Paladino<sup>1</sup>, Melody Trombelli<sup>1</sup>, Andreza Iolanda Pinto<sup>1</sup>, Eduardo Manoel Pereira<sup>1</sup>, Alexandre Urban Borbely<sup>2</sup>, Estela Bevilacqua<sup>3</sup>, Jean Carl Silva<sup>1,4</sup>

<sup>1</sup>UNIVILLE UNIVERSITY, Joinville, Brazil. <sup>2</sup>Federal University of Alagoas, Maceió, Brazil. <sup>3</sup>São Paulo University, São Paulo, Brazil. <sup>4</sup>Darcy Vargas State Maternity, Joinville, Brazil.



**ROLE OF TROPHOBLAST INVASION DURING PLACENTATION**

Berthold Huppertz

Department of Cell Biology, Histology and Embryology, Gottfried Schatz Research Center, Medical University of Graz, Graz, Austria

So far, extravillous trophoblasts were believed to invade into the uterine connective tissues as well as the walls of spiral arteries. The recent identification of new pathways of trophoblast invasion into all luminal structures of the uterine wall shows that our understanding of placentation and support of the embryo and fetus needs to be taken to a next level. The first luminal structures eroded by trophoblasts are uterine glands. Invasion of endoglandular trophoblasts starts a few days after implantation to assure nutrition of the embryo as early as possible (uterine milk). During further placental development, invasion of glands at the margin of the growing placenta allows endoglandular trophoblasts to escape the uterine wall and to reach the uterine cavity and cervix. The next luminal structures eroded by extravillous trophoblasts are uterine veins. Invasion of endovenous trophoblasts is essential for the backflow of any maternal fluids from the placenta back into the maternal system. Shortly afterwards, endoarterial trophoblasts invade spiral arteries, connect them to the intervillous space of the placenta as well, but block blood flow to the placenta via arterial plugs. Hence, during the first trimester of pregnancy, the arteries are still plugged by endoarterial trophoblasts, while the veins are already open and linked to the placenta. This allows a flow of plasma (arteries) and glandular secretion products (glands) towards the placenta and the backflow into the maternal circulation (veins).

Since alterations of any of the newly identified pathways of trophoblast invasion (glandular, venous as well as lymphatic) have not been studied so far, the new invasion pathways (trophoblast invasion 2.0!) allow the development of new concepts to elucidate the impact of altered trophoblast invasion into any luminal structure of the uterus to further identify the causes of pregnancy pathologies.

**THE ROLE OF MATERNAL ADIPONECTIN AND PLACENTAL mTOR SIGNALING IN FETAL PROGRAMMING OF ADULT DISEASE**

Thomas Jansson

University of Colorado Anschutz Medical Campus, USA.

In women, maternal circulating adiponectin levels are inversely correlated to birth weight suggesting that maternal adiponectin limits fetal growth. Consistent with this concept, infusion of full-length adiponectin to pregnant mice in rates that increased circulating levels 2-3-fold caused intrauterine growth restriction. Studies in cultured primary human trophoblast cells and in mice in vivo have demonstrated that these effects are likely to be due to direct actions of adiponectin on the trophoblast. In contrast to its well-known insulin-sensitizing effects in skeletal muscle and liver, adiponectin inhibits placental insulin and mTOR signaling and amino acid transport. This effect is mediated by activation of trophoblast PPAR $\alpha$  signaling, which increases ceramide synthesis, resulting in inhibition of IRS-1. Overweight and obese women have low circulating adiponectin levels and have an increased risk to deliver large babies, associated with an activation of placental function, in particular nutrient transport. We have developed a mouse model of maternal obesity with extensive similarities to the human condition, including elevated levels of maternal leptin, glucose intolerance, activation of placental insulin and mTOR signaling, increased placental nutrient transport and fetal overgrowth. Restoration of normal circulating levels of adiponectin in obese pregnant mice the last four days of pregnancy completely prevented placental dysfunction, fetal hyperglycemia and overgrowth. In addition, normalization of maternal adiponectin levels in obese dams during late pregnancy, prevented the development of obesity, glucose tolerance, insulin resistance, liver steatosis and cardiac diastolic dysfunction in the offspring. Our findings demonstrate that low circulating adiponectin in maternal obesity is mechanistically linked to activation of mTOR signaling, increased placental nutrient transport and fetal growth and offspring metabolic and cardiovascular health. Thus, adiponectin constitutes an important endocrine link between maternal adipose tissue and the placenta, with powerful impact on placental signaling, fetal development and offspring long-term health.

## **MRI OF EMBRYO IMPLANTATION**

Michal Neeman

Department of Biological Regulation, The Weizmann Institute, Rehovot Israel

Focal maternal angiogenesis surrounding the adhered embryo is one of the hallmarks of implantation and decidualization. Characterized by highly regulated vessel expansion, sprouting and enhanced vascular leak, this angiogenic response enables detection of very early pregnancy using dynamic contrast enhanced (DCE; 1). By application of MRI on advanced genetic mouse models we were able to detect multiple regulatory checkpoints that impact the success of implantation. Using transgenic mice in which the dendritic cells (DCs) express diphtheria toxin, we could show that selective ablation of DCs was sufficient to obstruct the maternal angiogenesis and abort pregnancy (2). Similar failure of implantation was observed with mice carrying selective deletion of connexin 43 (3). Recently we reported that trophoblast expression of tissue transglutaminase 2 and factor XIII regulate maternal angiogenesis at implantation, and that selective over expression or deletion of either of these enzymes selectively in the blastocyst trophectoderm impacts implantation (4). Finally, the same approach of selective manipulation of the trophectoderm, was applied for demonstrating the role of hyaluronan deposition and degradation on spatial-temporal vascular morphogenesis during implantation (Hadas et al submitted).

1. Plaks V, et al. MRI analysis of angiogenesis during mouse embryo implantation. *Magn Reson Med*. 2006 May;55(5):1013-22.
2. Plaks V, et al. Uterine DCs are crucial for decidual formation during embryo implantation in mice. *J Clin Invest*. 2008 Dec;118(12):3954-65.
3. Plaks V, et al. Blastocyst implantation failure relates to impaired translational machinery gene expression. *Reproduction*. 2014 Jul;148(1):87-98.
4. Cohen G, et al. Magnetic Resonance Imaging Reveals Distinct Roles for Tissue Transglutaminase and Factor XIII in Maternal Angiogenesis During Early Mouse Pregnancy. *Arterioscler Thromb Vasc Biol*. 2019 Aug;39(8):1602-1613.

## LA.1

**PLACENTAL AND ENDOTHELIAL DYSFUNCTION CAUSE IUGR PHENOTYPE IN MURINE MATERNAL OBESITY AT E15.5**

Tobias Kretschmer<sup>1</sup>, Eva-Maria Turnwald<sup>1</sup>, Marion Handwerk<sup>1</sup>, Ruth Janoschek<sup>1</sup>, Inga Bae-Gartz<sup>1</sup>, Maria Wohlfarth<sup>1</sup>, Tim van Beers<sup>2</sup>, Mojgan Ghilav<sup>3</sup>, Wilhelm Bloch<sup>3</sup>, Eva Hucklenbruch-Rother<sup>1</sup>, Jörg Dötsch<sup>1</sup>, and Sarah Appel<sup>1</sup>. <sup>1</sup> Department of Pediatrics and Adolescent Medicine, University of Cologne, Medical Faculty and University Hospital Cologne, Cologne, Germany; <sup>2</sup> Department of Anatomy I, University of Cologne, Medical Faculty and University Hospital Cologne, Cologne, Germany; <sup>3</sup> Department of Molecular and Cellular Sport Medicine, Institute of Cardiovascular Research and Sports Medicine, German Sport University Cologne, Cologne, Germany

**Objectives and Methods:** The incidence of maternal obesity is on the rise in western societies throughout the last decade and various studies have attributed increased risks for maternal health and perinatal programming of offspring to overweight before and during pregnancy. In our mouse model of maternal obesity, which is induced by a high fat diet (HFD), we investigated molecular and physiological changes of the placenta at E15.5 regarding the proteomics profile of the transfer zone, endothelial cell homeostasis, the ultrastructure, and materno-fetal transfer.

**Results:** Not only did feeding a HFD cause weight gain in dams, it also led to an IUGR phenotype in the offspring which is reversed at the end of pregnancy (E18.5), where HFD fetuses display similar weights as controls. We sought to further characterize the vascular morphology of HFD placentas by stereological means to determine surface area, volumes, and length of the materno-fetal transfer zone, placental structures, and fetal capillaries, respectively. Interestingly, the capillary profile was significantly altered while volumes of the placental tissue zones remained nearly unaffected in terms of volume changes. Proteomics profiling revealed alterations of adherens junction markers in the transfer zone of HFD placentas which was further investigated by western blot of whole placental lysates. On the ultrastructural level, the basement membrane, cell-cell contacts, EC and trophoblast integrity seemed altered in the transfer zone of HFD placentas. Further, we found a significant change in materno-fetal transfer of radiolabeled tracer in HFD placental units.

**Conclusions:** Taken together, these results indicate placental and endothelial dysfunction, and suggest placental barrier alterations, changes in cell-cell adhesion, and a HFD-specific phenotype of placental units from HFD dams, which demands further investigation of the underlying mechanisms.

## LA.2

**CONSEQUENCES OF HUMAN PLACENTAL BARRIER EXPOSURE TO NANOCERIA AND TO BENZO(A)PYRENE**

Margaux Nedder<sup>1,2</sup>, Sonja Boland<sup>1,3</sup>, Stéphanie Devineau<sup>1,3</sup>, Amal Zerrad-Saad<sup>1,2</sup>, René Lai-Kuen<sup>1,4</sup>, Jean Guibourdenche<sup>1,3</sup>, Xavier Coumou<sup>1,5</sup>, Sophie Gil<sup>1,2</sup>, Thierry Fournier<sup>1,2\*</sup>, and Ioana Ferecatu<sup>1,2\*</sup> (\* equal contribution). <sup>1</sup>Université de Paris; <sup>2</sup>INSERM UMR-S 1139, 3PHM, F-75006 Paris, France; <sup>3</sup>CNRS UMR 8251, F-75013 Paris, France; <sup>4</sup>INSERM UMS 025 – CNRS UMS 3612, F-75006 Paris, France; <sup>5</sup>UMR-S 1124, F-75005 Paris, France

**Objectives:** Air pollution is a major concern and exposure of pregnant women can lead to harmful effects on both fetal growth and pregnancy outcome. The offending pollutants crossing other barriers could reach the placenta and impair its integrity and functions. We investigate here the impact of two distinct pollutants found in air pollution, Benzo(a)Pyrene (BaP) and Cerium dioxide nanoparticles (CeO<sub>2</sub> NP), on human placental barrier integrity and functions.

**Methods:** We used primary cultures of villous cytotrophoblasts purified from term placenta that differentiate into syncytiotrophoblasts in vitro. The concentrations range of pollutants used for the assessments were from very low, to mimic the concentrations found in the blood, up till the highest airborne level measured at Paris. We evaluated the internalization of CeO<sub>2</sub> NP by TEM and the dose and time-dependent cytotoxicity of NP and BaP by WST-1 assay. At subtoxic level, we determined the impact of these pollutants toward the formation of the syncytium (under confocal microscopy) and hormonal functions (by measuring steroid and peptidic hormones secretion).

**Results:** We demonstrate the ability of CeO<sub>2</sub> NP to be uptaken by the trophoblasts at any concentration tested. In regard to cell viability BaP make no difference either after 3 days of incubation with high doses, whereas CeO<sub>2</sub> NP are cytotoxic to primary trophoblast cells in a dose and time-dependent manner. Furthermore, BaP induces an increase of reactive oxygen species (ROS) production in trophoblasts from low doses while there is a decrease of ROS production with NP at high doses. Moreover, at non-cytotoxic doses, CeO<sub>2</sub> decrease the capacity of differentiation of cytotrophoblasts and disturbs both hCG and P4 secretion in culture media.

**Conclusion:** Both BaP and CeO<sub>2</sub> NP impacts placental functioning. To our knowledge, this is the first study that addresses the consequences of CeO<sub>2</sub> NP and of BaP on human primary trophoblasts from term placenta.

## LA.3

**SECRETION OF SFLT-1 BY FIRST TRIMESTER CHORIONIC VILLI: INVOLVEMENT OF THE NADPH OXIDASE / P38 MAPK PATHWAY**

I. Hernandez; A. Chissey; R Atasoy; J. Guidourdenche; T. Fournier; J-L Beaudoux; A. Zerrad-Saadi. Université de Paris; INSERM UMR-S 1139, 3 PHM, F-75006 Paris, France

**Objectives:** The aim was to study the implication of NADPH oxidase/p38 MAPK pathway on sFlt-1 secretion in first trimester chorionic villi.

**Methods:** First trimester chorionic villi explants (7-9 GW) were cultured for 72 h. After 24 h of culture, the villi were treated with TGF- $\beta$ 1 (10 ng / ml) for 48 h or pre-incubated with p38 MAPK pathway inhibitor (SB203580 - 10  $\mu$ M). Treatment with a NADPH oxidase inhibitor (DPI - 2.5  $\mu$ M) for 1 h was also performed. Expression levels of p38 and smad2 (total and phosphorylated) were studied by Western Blot. The secretion assay of sFlt-1 in supernatants after 72 h of culture was performed by ELISA (R&D Systems®). The localization of p38 in chorionic villi (7-9 GW) was studied by immunohistochemistry and observations were realized by confocal microscopy.

**Results:** We showed that the p38 protein is mainly expressed in the villous cytotrophoblast in first trimester chorionic villi. The activation of p38 using TGF- $\beta$ 1 significantly increases the secretion of sFlt-1 in culture supernatants at 72 h (n = 7, p < 0.05). This effect is reversed when chorionic villi are pre-incubated with the p38 inhibitor (n = 7, p < 0.05). A downward trend of sFlt-1 secretion is observed when the villi are treated with DPI (p = 0.1250, n = 4). Furthermore, the treatment in the presence of TGF- $\beta$ 1 showed smad2 activation regardless of the p38 MAPK pathway activation.

**Conclusion:** In first trimester chorionic villi, p38 is preferentially localized in the villous cytotrophoblast and is involved in the sFlt-1 secretion, independently of smad2 activation. NADPH oxidase also appears to be involved in the sFlt-1 secretion in this model.

## LA.4

**LIPODYSTROPHY-ASSOCIATED PPARG VARIANTS INDUCE A DECREASED CELL FUSION AND MIGRATION IN HUMAN VILLOUS CYTOTROPHOBLAST AND FIBROBLAST, RESPECTIVELY**

Hussein Shoaito<sup>1</sup>, Camille Gosseume<sup>2</sup>, Corinne Vigouroux<sup>2</sup>, Camille Vatié<sup>2</sup>, Catherine Pienkowski<sup>5</sup>, Thierry Fournier<sup>1,3\*</sup>, Séverine A. Degrelle<sup>1,3,4\*</sup>. <sup>1</sup>Université de Paris, INSERM, UMR-S1139 (3PHM), Paris F-75006, France; <sup>2</sup>National reference centre of rare diseases of insulin secretion and of insulin sensitivity (PRISIS), AP-HP, Endocrinology and Genetics, Inserm U938, Sorbonne Université, Paris F-75012, France; <sup>3</sup>PremUp Foundation, Paris F-75014, France; <sup>4</sup>Inovarian, Paris F-75005, France; <sup>5</sup>Centre de Référence Pathologies Gynécologiques Rares; Unité d'Endocrinologie, Toulouse F-31059, France. \* equally contributed

**Objectives:** PPAR $\gamma$  (Peroxisome proliferator-activated receptor gamma) belongs to the superfamily of nuclear receptor acting as a transcription factor on target genes. PPAR $\gamma$  is involved in adipogenesis and is essential for placental development, vasculogenesis and trophoblast differentiation. Alterations in its expression and/or activity are associated with preeclampsia and intrauterine growth retardation. To date, the molecular regulation of PPAR $\gamma$  in cytotrophoblast differentiation and in the underlying mesenchyme has been poorly studied and remains to be explored. Vascular placental abnormalities have been described in Familial Partial Lipodystrophy type 3 (FPLD3) due to *PPARG* pathogenic variants. The objective of the project is to study the impact of heterozygous mutations in the LBD of *PPARG* on trophoblastic differentiation (*PPARG*<sup>E352Q</sup>) and on fibroblast cell migration (*PPARG*<sup>R262G</sup>/*PPARG*<sup>L339X</sup>).

**Methods:** Villous cytotrophoblasts (VCT) (n=3) were isolated from human term placenta, plated on plastic culture dishes and cultured for 72h in DMEM/10% FCS. PPAR $\gamma$  reconstitution experiments were performed after 16h of culture by transfecting cells with 100 pmol/ml PPAR $\gamma$  siRNA and/or 2  $\mu$ g/ml siRNA-insensitive plasmids GFP-PPAR $\gamma$ <sup>WT</sup> or GFP-PPARG<sup>E352Q</sup>. Fusion index was assessed by nuclei counting of GATA3 immunostaining. Skin fibroblasts from 3 control subjects and 2 patients bearing the *PPARG* p.R262G or p.L339X heterozygous variants, were assayed for migration using the IncuCyte® Live-Cell Analysis Imaging System.

**Results:** In vitro, PPAR $\gamma$  silencing in VCT led to a significant decrease in syncytiotrophoblast formation and compared to the reconstitution with PPAR $\gamma$ <sup>WT</sup>, PPAR $\gamma$ <sup>AE352Q</sup> led to a significant lower restoration of the trophoblast fusion. Compared to controls, fibroblasts bearing the *PPARG* p.L319X mutation, or, to a lesser extent, the p.R262G variant, show a significantly decreased cell migration.

**Conclusion:** Missense variants in the LBD of PPAR $\gamma$  inhibit significantly the cell fusion and migration processes in villous cytotrophoblasts and fibroblasts, which could play a role in vascular placental abnormalities associated with FPLD3.

## LA.5

**TARGETED DELIVERY OF FLUORESCENT LIPOSOMES TO THE PLACENTAS OF NON-HUMAN PRIMATES**

Lynda K Harris<sup>1</sup>, Lewis Renshall<sup>1</sup>, Frances Beards<sup>1</sup>, Megan Murphy<sup>2</sup>, Greg Weipz<sup>2</sup>, Kathleen Antony<sup>3</sup>, Jenna Kropp Schmidt<sup>2</sup>, Thaddeus Golos<sup>2</sup>.

<sup>1</sup>University of Manchester, UK; <sup>2</sup>Wisconsin National Primate Research Center, USA; <sup>3</sup>University of Wisconsin-Madison, USA

**Objectives:** To reduce the risk of detrimental side effects associated with systemic drug administration in pregnancy, approaches that facilitate uteroplacental-specific drug delivery are being investigated. We have previously developed targeted liposomes which selectively deliver payloads to the placentas of pregnant mice. In this pilot study, we assessed whether systemic administration of targeted liposomes resulted in selective delivery to the non-human primate placenta.

**Methods:** Liposomes were produced using the thin-film method, decorated with the placental homing peptide CRGDKGPDC (iRGD) and loaded with carboxyfluorescein. Liposomes were infused intravenously into a marmoset (gestational day (GD) ~92; term = GD155) and a cynomolgous macaque (GD~81; term = GD165), or were administered via intra-placental injection into a rhesus macaque (GD~135; term = GD165). After 24h, animals were deeply anaesthetised, received cardiac saline perfusion and were euthanized. A variety of maternal, uteroplacental and fetal tissues were harvested; biopsies were immediately frozen in liquid nitrogen. Tissue sections were prepared, stained with DAPI and viewed using a fluorescence microscope.

**Results:** Targeted liposomes were well tolerated, with no adverse reactions reported. Microscopy revealed liposomal accumulation in both placental discs of each animal, which varied in intensity and tissue distribution. Liposomal fluorescence was also observed in the maternal liver of the marmoset, with a much weaker signal observed in the spleen and heart. Limited fluorescence was noted in the maternal livers of both macaque species, but no visible signal was observed in any of the other maternal organs, or in any fetal tissue examined.

**Conclusion:** These preliminary observations suggest that iRGD-decorated liposomes selectively accumulate in the placentas of three different non-human primate species in vivo, but are not transferred to the fetus. Their composition appears to be compatible with short term treatment, indicating this nanoparticle formulation may be suitable for targeted placental delivery of therapeutic payloads in human pregnancy.

## LA.6

**INVESTIGATION OF THE PLACENTAL STEROIDOGENESIS DISRUPTION CAUSED BY BISPHENOL AND THE ROLE OF SULFATE**

Jumpei Fujiki, Risa Yabusaki, Naoko Ohtani, Takahiro Ieko, Hiroki Inoue, Hidetomo Iwano. Laboratory of Veterinary Biochemistry, Department of Veterinary Medicine, Rakuno Gakuen University

**Objectives:** Bisphenols are contained in the manufacture of polycarbonate plastics and epoxy resins, leading to the various toxic effects such as reproductive disorders. Notably, it is suggested that bisphenols are transferred to the fetus through the placenta in the pregnant. In addition, placenta produces steroids which affect pregnancy and parturition; however, steroidogenesis disruption caused by bisphenols in the placenta is not well described. In this context, we investigated the effect of bisphenol A (BPA) and bisphenol F (BPF) on steroidogenesis in the human derived placental trophoblast (BeWo) cells in the present study.

**Methods:** To evaluate effects of BPA and BPF on steroidogenesis in BeWo cyto-trophoblasts, steroidogenic proteins were detected by immunoblotting after treatment of BPA and BPF (100 nM). mRNA expression of these molecules were also quantified. In addition, enzymatic activity of sulfotransferases and transporter activity of the organic anion transporter were investigated by measuring BPA and BPF by using LC-MS/MS.

**Results:** We initially confirmed whether BeWo cells express proteins regarding the steroidogenic pathway. As the result, we confirmed gestagen producing molecules such as TSPO, P450scc, 3 $\beta$ -HSD1 and P45017 $\alpha$  in BeWo cells. Notably, protein expression of TSPO and P450scc, which are related to progesterone (PGS) biosynthesis, were significantly decreased in 48 hrs by treatment of BPA and BPF in the cells. In addition, protein expression of P450scc and TSPO were decreased by treatment of the BPF-sulfate (100  $\mu$ M) conjugate.

**Conclusion:** Cholesterol, the initial substrate in the steroidogenic pathway, is trafficked to inner-mitochondrial membrane by TSPO, subsequently converted to pregnenolone mediated by P450scc, indicating that exposure of BPA and BPF might disrupt PGS biosynthesis in BeWo cells. We will investigate the mechanisms underlying suppression of TSPO and P450scc caused by BPA and BPF in BeWo cells and placental transfer of bisphenols through the metabolites (glucuronide and sulfate of bisphenols).

## LA.7

**THE TARGETED PESTICIDES AS ACETYLCHOLINESTERASE INHIBITORS AND PESTICIDES EXPOSURE RELATED PLACENTAL PATHOLOGY AND BIRTH OUTCOME AMONG TEA GARDEN WORKERS**

Shashi Nandar Kumar<sup>1,2</sup>, Sheikh Raisuddin<sup>2</sup>, Vishwajeet Singh<sup>3</sup>, Noor Saba Khan<sup>1</sup>, Arnab Nayek<sup>1</sup>, Usha Agrawal<sup>4</sup>, Banajit Bastia<sup>1</sup>, Meenakshi Ahluwalia<sup>5</sup>, Kumar Vaibhav<sup>6</sup>, Deepa Borgohain<sup>7</sup>, Arun Kumar Jain<sup>1,✉</sup>. <sup>1</sup>Environmental Toxicology Lab, ICMR-National Institute of Pathology, New Delhi-110029. <sup>2</sup>Department of Medical Elementology and Toxicology, Jamia Hamdard, New Delhi-110062. <sup>3</sup>Department of Biostatistics, All India Institute of Medical Sciences, Ansari Nagar, New Delhi-110029 India. <sup>4</sup>Biomedical Informatics Centre, ICMR-National Institute of Pathology, New Delhi, 110029, India. Department of Biotechnology, Invertis University, Bareilly, Uttar Pradesh, India- 243 123. <sup>5</sup>Cancer Research, Imaging and Bio-banking (CRIB) lab, ICMR- National Institute of Pathology, New Delhi-110029, India. <sup>6</sup>Department of human genetics, Guru Nanak Dev University, Amritsar India. <sup>7</sup>Department of Neurosurgery, Medical College of Georgia, Augusta University, Augusta, GA- 30912, USA. <sup>✉</sup>Department of *Obstetrics and Gynecology, Assam Medical College, Dibrugarh, Assam- 786002 India*

**Objectives:** We investigated the impact of *in-utero* pesticides exposure during pregnancy on birth weight and placenta of mothers working in tea gardens.

**Methods:** In the cross-sectional study, 102 pregnant tea garden (TGW) and 73 housewives (HW) were included with normal birth weight (NBW) and low birth weight (LBW) babies. Acetyl Choline Esterase (AChE) levels in maternal blood, placenta and umbilical cord blood were measured. Pathological changes in placental tissues by the analysis of Hypoxia-Induced Factor -1 $\alpha$  (HIF-1 $\alpha$ ) expression were also evaluated. Molecular docking and dynamic simulation studies were also performed to investigate the binding interaction of AChE with its standard substrates acetylcholine and pesticides.

**Results:** Low levels of AChE were observed in maternal blood and cord blood in TGW as compared to HW in the LBW group. However, in the NBW group, AChE in maternal blood and placenta was comparatively higher than the LBW group. *In silico* approach, Docking and MDS results also revealed that pesticides have a comparatively higher binding affinity with AChE than its standard substrate acetylcholine. In adjusted regression analysis according to occupations, birth outcome (birth weight-BW, head circumference-HC, infant's length-IL, and ponderal index- PI) showed a significant and positive association with AChE levels of maternal blood, placenta and cord blood in TGW ( $p < 0.05$ ). The placental weight was found to be positively correlated with maternal blood and placental levels of AChE in TGW when compared with housewives. In HW, birth weight expects HC, IL, and PI, was also significantly and positively associated with AChE level. However, compared with TGW, the relative weight of placenta (RWP) showed a significant and inverse association with AChE in maternal blood and placenta in housewives ( $< 0.05$ ). Histologically, placental syncytial knots, fibrinoid necrosis, and stromal fibrosis were significantly higher among TGW with LBW babies. Scanning Electron Microscopy, revealed micro-infarction, increased deposition of fibrinoid material in the placental tissue of TGW and HW exposed to pesticides along with other atypical characteristics of villi, such as the balloon-like formation of microvilli. IHC exhibited increased HIF-1 $\alpha$  expressions in placental tissues of TGW and HW exposed to pesticides.

**Conclusion:** The study revealed that *In-utero* exposure to pesticides might be associated with pathologic changes and increased HIF-1 $\alpha$  expression, decreased AChE levels in the placenta of TGW and HW might present implications such as adverse pregnancy complications. *In silico* analysis also established that pesticides act as competitive acetylcholine inhibitors. The findings strengthened the evidence that pesticides exposures during pregnancy may restrict fetal growth and placental development.



**@ KIT Royal Tropical Institute  
Amsterdam, the Netherlands**

[www.IFPA2020.org](http://www.IFPA2020.org)

