



**HAL**  
open science

## Tachykinin NK1 receptors are involved in proteinase-activated receptor (PAR)-2-mediated colonic inflammation in mice

Nicolas Cenac, Bruno Guiard, Rafael Garcia Villar, Jean Fioramonti, Lionel Bueno

### ► To cite this version:

Nicolas Cenac, Bruno Guiard, Rafael Garcia Villar, Jean Fioramonti, Lionel Bueno. Tachykinin NK1 receptors are involved in proteinase-activated receptor (PAR)-2-mediated colonic inflammation in mice. 9th United European Gastroenterology Week (UEGW 2001), Oct 2001, Amsterdam, Netherlands. 2001, Gut 49 (5 Suppl.3). hal-01600602

**HAL Id: hal-01600602**

**<https://hal.science/hal-01600602>**

Submitted on 4 Jun 2020

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - ShareAlike 4.0 International License

Gut  
Vol 49 No 5 Pages 601-742  
CUT  
November 2001

NOVEMBER 2001 VOL 49 NO 5

GASTROENTEROLOGY  
**Gut**  
ANATOMY AND HEPATOLOGY

An International Journal of  
Gastroenterology and Hepatology



BMJ  
Publishing  
Group

See inside back cover for the UEGW abstract CD-ROM

Abstracts. →

9th. United European Gastroenterology Week

UEGW 2001

240 pp.

in: Gut 49 (5 Suppl. 3)

Gut <sup>NOV.</sup> 2001, 49, 5, suppl. 3

POSTER → UEGW  
AMSTERDAM 2001

## Submitted Abstract Data

Please note that after submitting you abstract data, by clicking the "submit" button below, you will not be able to make any changes.

abstract nr.: 2834

### TACHYKININ NK1 RECEPTORS ARE INVOLVED IN PROTEINASE-ACTIVATED RECEPTOR (PAR)-2-MEDIATED COLONIC INFLAMMATION IN MICE

**Author:** CENAC, N , INRA, TOULOUSE, France

**Co-author(s):** GUIARD, B  
GARCIA-VILLAR, R  
FIORAMONTI, J  
BUENO, L

**Keyword:** (S69, S64) IBD pathogenesis / diagnosis

We showed that intracolonic infusion to mice of PAR-2 activating peptide SLIGRL provoked colonic inflammation probably by a neurogenic mechanism. This study characterizes PAR-2-induced inflammation by investigating: (i) response kinetics; (ii) mucosal permeability changes; (iii) involvement of NK1-receptors.

Groups of 6-8 male Swiss mice (26-31g) were infused (50µl) intracolonicly with SLIGRL (100µg/mouse) or saline (controls): (i) Five groups received SLIGRL: colons collected at 0, 2, 4, 10, 24h, for histology and myeloperoxidase assay (U/g-protein); (ii) Four received SLIGRL (or saline) followed by <sup>51</sup>Cr-EDTA (2x10<sup>6</sup>cpm-75µL/h) between 0-2h or 2-4h: blood collected at 2 or 4h for radioactivity counting; (iii) Four received SLIGRL (or saline), and NK1-antagonist SR140333 (60µg/mouse, IP) or vehicle; colons collected at 4h for myeloperoxidase assay.

At 4h after SLIGRL infusion, there is a significant increase in microscopic damage and myeloperoxidase activity compared with controls (334.4±70.3 vs 42.4±10.1), for other time (2, 10, 24h after SLIGRL infusion) no significant difference.

Permeability was enhanced from 2 to 4h by 94.6% after SLIGRL

the NK1 antagonist SR140333 prevented SLIGRL-induced myeloperoxidase increase (236.3±21.9 vs 1030.0±147.5; p<0.01)

We conclude that activation of colonic PAR-2 induces NK1-receptor-mediated inflammation after 2h which resolved at 10h, with subsequent alteration of mucosal permeability.

**Presentation Preference:** Oral Presentation

Submit

Cancel