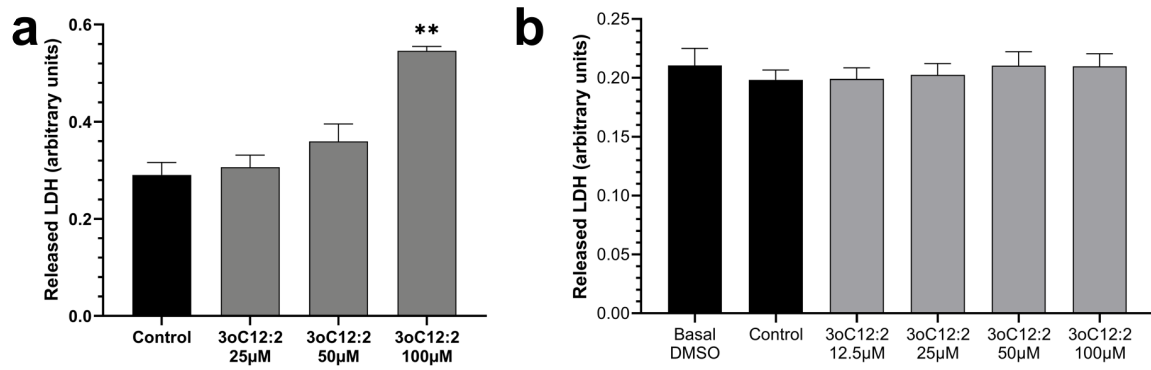


**3-oxo-C12:2-HSL, Quorum Sensing molecule from human intestinal microbiota, inhibits pro-inflammatory pathways in immune cells *via* bitter taste receptors**

Garance Coquant<sup>1,2</sup>, Doriane Aguanno<sup>1,2,3</sup>, Loïc Brot<sup>1,2</sup>, Christine Belloir<sup>4</sup>, Julie Delugeard<sup>1,2</sup>, Nathalie Roger<sup>1,2</sup>, Hang-Phuong Pham<sup>5</sup>, Loïc Briand<sup>4</sup>, Marielle Moreau<sup>6</sup>, Luisa De Sordi<sup>1,2</sup>, Véronique Carrière<sup>1,2</sup>, Jean-Pierre Grill<sup>1,2</sup>, Sophie Thenet<sup>1,2,3</sup>, Philippe Seksik<sup>1,2,7\*</sup>

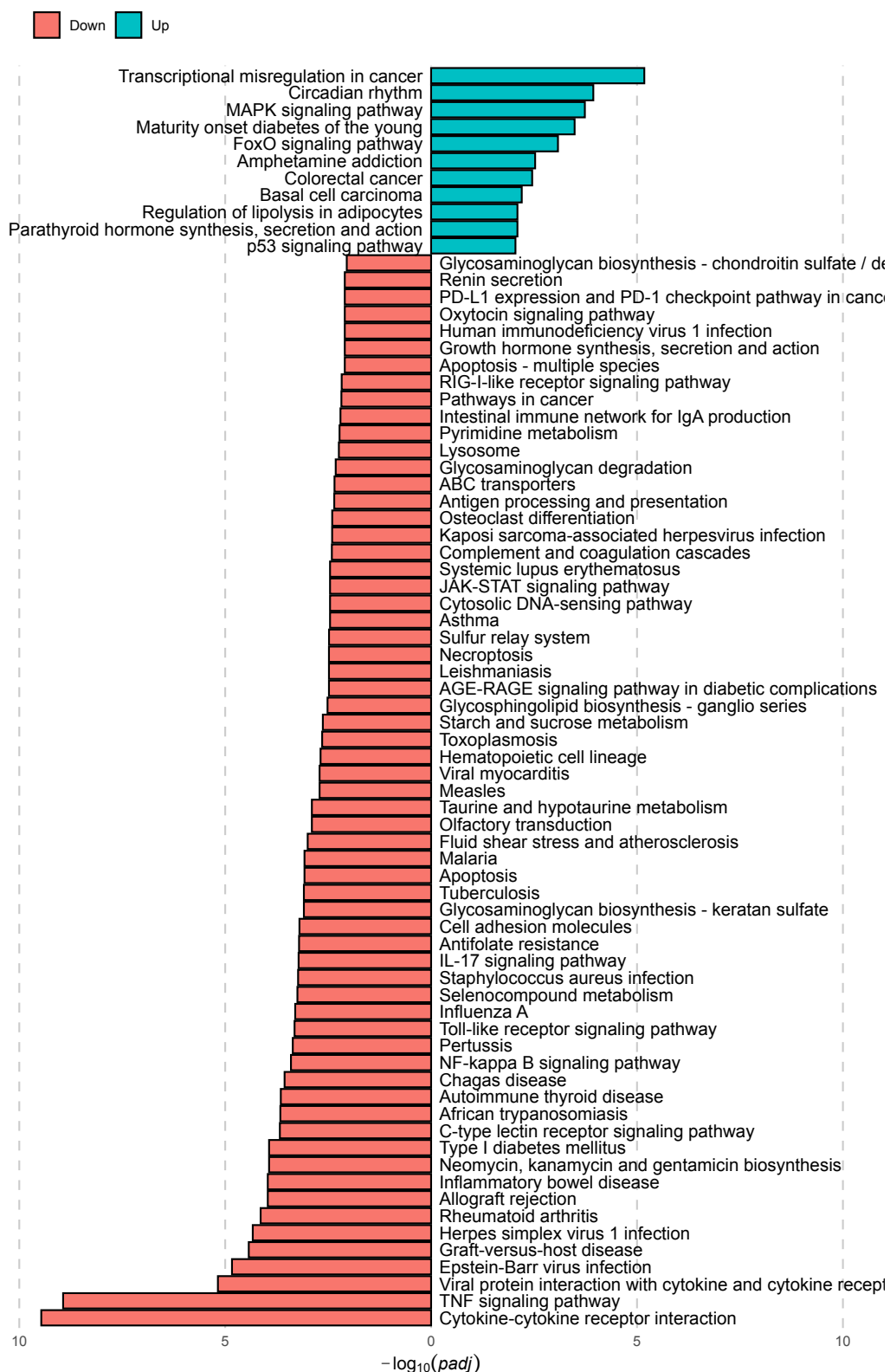
<sup>1</sup>Sorbonne Université, INSERM, Centre de Recherche Saint-Antoine, CRSA, F-75012 Paris, France <sup>2</sup> Paris Center for Microbiome Medicine (PaCeMM) FHU, APHP, Paris, Ile-de-France, France <sup>3</sup>EPHE, PSL University, Paris, France, <sup>4</sup>Centre des Sciences du Goût et de l'Alimentation, UMR 1324 INRAE, UMR 6265 CNRS, University of Bourgogne Franche-Comté, F-21000 Dijon, France, <sup>5</sup>Parean Biotechnologies, Saint Malo, France, <sup>6</sup>LVMH Recherche. Life Science Department, 185 Avenue de Verdun, 45800. Saint Jean de Braye. France <sup>7</sup>Sorbonne Université, Département de Gastroentérologie et Nutrition, APHP Hôpital Saint-Antoine, F-75012 Paris, France

## Supplementary figure 1



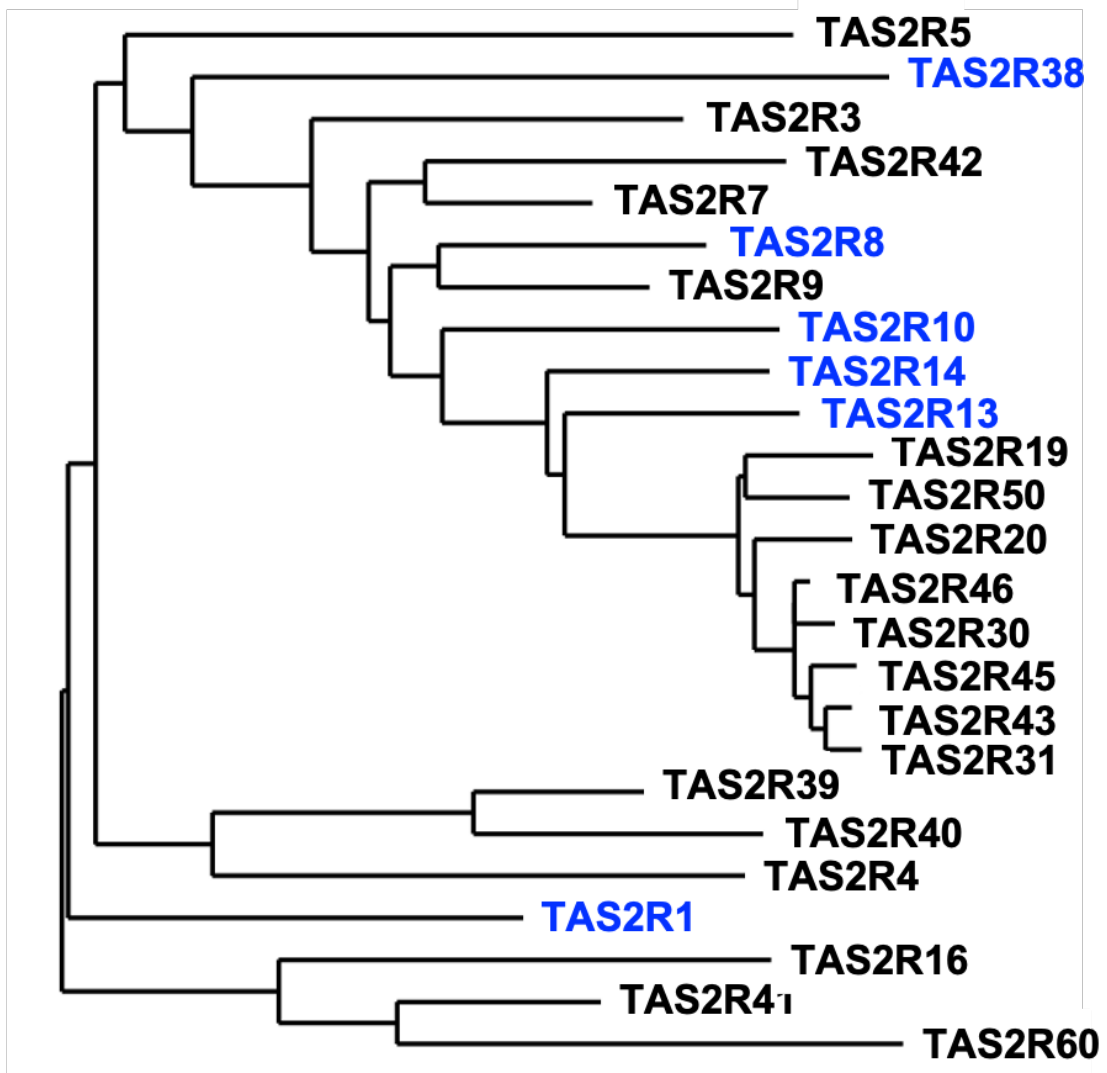
Supplementary Figure 1: LDH release by (a) RAW264.7 murine macrophages and (b) human peripheral blood mononuclear cell exposed to a range of concentration of 3-oxo-C12:2-HSL

# Supplementary figure 2



Supplementary Figure 2: Significant KEGG pathways involved in the inflammation process and differentially modulated by 3-oxo-C12:2-HSL were identified by EGSA method ( $p$  value < 0.01). Red and green bars represent down-regulated and up-regulated pathways respectively.

**Supplementary Figure 3:**



Supplementary Figure 3: Phylogenetic tree based on alignment of amino acid sequences of TAS2Rs. The neighbor-joining tree was constructed after a multiple sequence alignment of the TAS2Rs. The 6 TAS2R receptors responding to 3-oxo-C12:2-HSL are indicated in blue.