



# Dr Georges MOUTON MD

Functional Medicine

## QUOTE GM #21

11/02/2018

Titre

Créé le

### INTRODUCTION D'UN NOUVEAU CONCEPT : LA NEUROMICROBIOLOGIE

ACS Chem Neurosci. 2017 Dec 28. doi: 10.1021/acchemneuro.7b00373. [Epub ahead of print]

#### Neuromicrobiology: How Microbes Influence the Brain.

de la Fuente-Nunez C<sup>1,2,3,4,5</sup>, Menequetti BT<sup>6</sup>, Franco OL<sup>6,7</sup>, Lu TK<sup>1,2,3,4,5</sup>.

#### Author information

- 1 Synthetic Biology Group, MIT Synthetic Biology Center, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, United States.
- 2 Department of Biological Engineering, and Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, United States.
- 3 Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, United States.
- 4 Broad Institute of MIT and Harvard, Cambridge, Massachusetts 02142, United States.
- 5 The Center for Microbiome Informatics and Therapeutics, Cambridge, Massachusetts 02139, United States.
- 6 S-Inova Biotech, Programa de Pós-Graduação stricto sensu em Biotecnologia, Universidade Católica Dom Bosco, Campo Grande - MS, 79117-900, Brazil.
- 7 Centro de Análises Proteômicas e Bioquímicas, Pós-Graduação em Ciências Genômicas e Biotecnologia, Universidade Católica de Brasília, Brasília - DF, 71966-700, Brazil.

#### Abstract

We review here recent discoveries in the exciting new field of neuromicrobiology. This field encompasses the interactions between the microbiome and the central nervous system. The microbiome has a tremendous impact on human health. In particular, the gut microbiota may play a key role in many essential processes in health and disease via the activity of the gut-brain axis, possibly contributing to autism spectrum disorders, Alzheimer's disease, Parkinson's disease, depression, and anxiety disorder. Gut microbes may also be involved in nociception, complex host behaviors, and brain development. Future efforts will be needed to determine whether the observed associations correspond to causative mechanisms, as well as to engineer effective interventions to modulate the effects of the microbiome on the central nervous system.

**KEYWORDS:** Neuromicrobiology; gut microbiota; neurological disorders

PMID: 29220570 DOI: 10.1021/acchemneuro.7b00373

*"Nous passons en revue ici les découvertes récentes dans le nouveau domaine passionnant de la neuromicrobiologie. Ce domaine englobe les interactions entre le microbiome et le système nerveux central. Le microbiome a un impact considérable sur la santé humaine. En particulier, le microbiote intestinal peut jouer un rôle clé dans de nombreux processus essentiels à la santé et la maladie grâce à l'activité de l'axe intestin-cerveau, contribuant potentiellement au spectre de l'autisme, à la maladie d'Alzheimer, à la maladie de Parkinson, à la dépression et aux troubles anxieux. Les microbes intestinaux peuvent également être impliqués dans la nociception, dans les comportements sophistiqués de l'hôte et dans le développement du cerveau."*