

## Accepted Manuscript

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Authors: Ennio Avolio, Gilda Fazzari, Merylin Zizza, Antonino De Lorenzo, Laura Di Renzo, Raffaella Alò, Rosa Maria Facciolo, Marcello Canonaco



PII: S0166-4328(18)30662-4  
DOI: <https://doi.org/10.1016/j.bbr.2018.09.010>  
Reference: BBR 11571

To appear in: *Behavioural Brain Research*

Received date: 10-5-2018  
Revised date: 12-9-2018  
Accepted date: 12-9-2018

Please cite this article as: Avolio E, Fazzari G, Zizza M, De Lorenzo A, Di Renzo L, Alò R, Facciolo RM, Canonaco M, Probiotics modify body weight together with anxiety states via pro-inflammatory factors in HFD-treated Syrian golden hamster, *Behavioural Brain Research* (2018), <https://doi.org/10.1016/j.bbr.2018.09.010>

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## **Probiotics modify body weight together with anxiety states via pro-inflammatory factors in HFD-treated Syrian golden hamster**

Ennio Avolio<sup>1,2</sup>\*, Gilda Fazzari<sup>1</sup>, Merylin Zizza<sup>1</sup>, Antonino De Lorenzo<sup>2</sup>, Laura Di Renzo<sup>2</sup>,  
Raffaella Alò<sup>1</sup>, Rosa Maria Facciolo<sup>1</sup> and Marcello Canonaco<sup>1</sup>

<sup>1</sup>Laboratory of Comparative Neuroanatomy Dept. of Biology, Ecology and Earth Science Dept. (DiBEST) University of Calabria, Cosenza, Italy; <sup>2</sup>Department of Biomedicine and Prevention, Section of Clinical Nutrition and Nutrigenomic, University of Rome "Tor Vergata", Rome, Italy.

### **#Corresponding authors:**

Dr. Ennio Avolio, PhD

Laboratory of Comparative Neuroanatomy, Dept of Biology, Ecology and Earth Science (DiBest), University of Calabria, 87036 Rende (CS), Italy.

Telephone: 0984 492973. Fax: 0984 492986.

E-mail: [ennioavolio@libero.it](mailto:ennioavolio@libero.it)

### **Abstract**

Emerging studies are beginning to suggest that emotional states together with healthful measures constitute pertinent features of our lifestyle in which bad eating habits but more importantly what our gut has to host are causing great concern. It is well known that humans have established mutual relationships with a wide array of colonized microbes (collectively called gut microbiota) consisting of bacteria, fungi, eukaryotic parasites and viruses. The gut microbiota has exhibited a notable ability of communicating with the brain via a two-way system that includes the vagus nerve, immune sites, and a number of neurotransmitters. Interestingly, stressful along with obesity, cognitive, and brain developmental states are strongly influenced by microbiota homeostatic conditions. It was our aim to investigate behavioral and obesity effects evoked by treatment with probiotics via neuroinflammatory

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