Special Issue

Stress Response Effectors and Strategies in Probiotics

Message from the Guest Editor

Probiotics are gaining increasing attention thanks to the health-promoting activities associated to their dietary intake, and to their occurrence and persistence in the gut microbiota. According to the specific type of stress, probiotic cells have been found to respond by i) up-regulating chaperones that stabilize, refold, and/or prevent precipitation of denaturing proteins; ii) producing proteolytic enzymes to degrade irreversibly damaged structures; iii) activating diverse detoxifying systems; and iv) modulating cell membrane lipid composition and surface adhesion properties. Insight into the molecular mechanisms carried out by probiotics to cope with stress shall increase our overall knowledge of the cellular strategies to overcome stress, thereby providing a paradigm for general cell stress response. Moreover, from a more applicative point of view, such studies may help to rationalize the use of beneficial microbes and to improve their efficacy. This Special Issue aims to collect original research articles and reviews covering recent advances related to the stress response mechanisms in probiotics.

Guest Editor

Dr. Daniela Fiocco
Department of Clinical and Experimental Medicine, University of Foggia, Via Napoli, 20, 71122 Foggia, Italy

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International Journal of Molecular Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijms@mdpi.com

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Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology "Jose Mataix", Biomedical Research Center, University of Granada, Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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