

EDITORIAL

***Escherichia coli*-Related Diseases in Latin America Remain in the Spotlight: the Brazilian Efforts to Understand *E. coli* Pathogenesis**

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Although the 21st century has seen significant changes in health care reforms and practices, and has experienced quick progression in the understanding of infectious diseases, diarrhea caused by enteric infections is a major factor in morbidity and mortality worldwide and it is estimated 2-4 billion episodes of infectious diarrhea occur each year and are especially prevalent in infants. Further, diarrhea as well as other infections associated with different pathogenic *Escherichia coli* strains continue to be a health problem in some tropical and subtropical areas and are one of the leading causes of disease and death in humans and animals [1]. In Latin America, infectious disease research, as well as basic and applied science in general, is receiving significant attention, despite many challenges that the scientific community are still facing in this region. In response to the significant increase in the number of scientific papers published by Latin American authors, governments (particularly those of Brazil, Argentina, Chile, and Mexico) have announced packages and incentives to foster science and technology [2].

A good example from incentives that have begun to deliver results are those made by the Brazilian government which in the past 15 years have increased the number of graduate school programs, support research centers of excellence, and to establish and to consolidate a national system for science, technology and innovation [2]. Apart from the country's estimated 7.5% economic growth in 2010, efforts continue for the consolidation and expansion of research at traditional Universities and Institutes, allowing the investigators to partner with private investors and/or companies, advancing Research and Development [3], while promoting science and technology to Society.

The significant scientific advances currently happening in different Brazilian laboratories is represented in this mini

hot topic issue entitled "Recent advances in the study of pathogenic *Escherichia coli* in Brazil". The issue highlights the diversity of research topics in the *E. coli* field currently explored in this country; including the identification of potentially virulent *E. coli* strains in parrots and parakeets; the discovery that different avian pathogenic *E. coli* subgroups are associated to a specific infectious syndrome in poultry; the characterization of different phenotypic characteristics of human pathogenic *E. coli* strains; and the importance of Shiga toxin-producing *E. coli* O157 as agents of Hemolytic Uremic Syndrome in Brazilian patients.

The highlighted research papers in this issue are part of a largest effort in Latin America by the pathogenic *E. coli* scientific community to foster long-standing continent-wide collaborations for the promotion and dissemination of their research and to educate and prepare the next generation of Latin American *E. coli* investigators. In response to this effort, the Latin American Coalition for *Escherichia coli* Research (LACER) was created, consisting of a multi-disciplinary network of more than 60 international research groups working on pathogenic *E. coli*, with the ultimate goal of advancing our understanding and disseminating the *E. coli* research in this region. One of the first accomplishments of LACER was the publication of an e-book that contains a comprehensive analysis of the most common categories of *E. coli* associated with diarrheal illness in Latin America [1]. As a second major effort to disseminate the research performed in specific laboratories in the region, the mini-hot topic issue in The Open Microbiology Journal became a reality.

REFERENCES

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