



Adenylate Cyclase (CyaA) Toxin

Guest Editor:

Dr. Alexandre Chenal

Unité de Biochimie des
Interactions Macromoléculaires,
CNRS UMR 3528, Département de
Biologie Structurale et Chimie,
Institut Pasteur, 28 rue du Dr
Roux, 75724 Paris cedex 15,
France

Deadline for manuscript
submissions:

closed (15 November 2017)

Message from the Guest Editor

Dear Colleagues,

The adenylate cyclase (CyaA) toxin is produced by *Bordetella pertussis*, the causative agent of whooping cough. The incidence of pertussis is currently increasing and represents a global public health concern. *Bordetella pertussis*, a Gram-negative bacteria, was identified by Jules Bordet and Octave Gengou. During the last few decades, multidisciplinary approaches have contributed to improve our knowledge on CyaA and showed that this toxin plays a crucial role in the early stages of respiratory tract colonization by disrupting the host immune response. CyaA is a 1706-residue long, multi-domain and bifunctional toxin. This toxin is the unique well-characterized bacterial toxin able to translocate its catalytic domain directly across the plasma membrane of target cells. The molecular mechanism by which CyaA intoxicates host cells remains, however, largely unknown. Recent advances worldwide open new perspectives for both basic sciences and CyaA-based biotechnological applications. These various aspects are discussed in the *Toxins* on the adenylate cyclase toxin.

Dr. Alexandre Chenal
Guest Editor





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Jay Fox

Department of Microbiology,
University of Virginia,
Charlottesville, VA, USA

Message from the Editor-in-Chief

Toxinology is an incredibly diverse area of study, ranging from field surveys of environmental toxins to the study of toxin action at the molecular level. The editorial board and staff of *Toxins* are dedicated to providing a timely, peer-reviewed outlet for exciting, innovative primary research articles and concise, informative reviews from investigators in the myriad of disciplines contributing to our knowledge on toxins. We are committed to meeting the needs of the toxin research community by offering useful and timely reviews of all manuscripts submitted. Please consider *Toxins* when submitting your work for publication.

Author Benefits

Open Access: free for readers, with **article processing charges (APC)** paid by authors or their institutions.

High Visibility: indexed within **Scopus**, **SCIE (Web of Science)**, **PubMed**, **MEDLINE**, **PMC**, **Embase**, **CAPLus / SciFinder**, **AGRIS**, and **other databases**.

Journal Rank: JCR - Q1 (*Toxicology*) / CiteScore - Q1 (*Toxicology*)

Contact Us

Toxins Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/toxins
toxins@mdpi.com
[X@Toxins_Mdpi](https://twitter.com/Toxins_Mdpi)