NUS National University of Singapore | Department of Biological Sciences, Faculty of Science

# PUBLIC LECTURE

## Friday 26 April 2019 | 7pm | LT 20

# **TOXINS** are NOT villains but unsung heroes:
## Fascinating future in toxin research






*By* **R. Manjunatha Kini**

Professor, Department of Biological Sciences, NUS


Toxins are thought as villains as they cause death and debilitation. In reality, they have contributed more to improving our lives than cause death. Toxins have played crucial roles in the discovery and development of therapeutic and diagnostic agents for human diseases. They have also contributed as important research tools and helped us to understand molecular mechanisms of normal physiological processes such as neurotransmission, blood coagulation and platelet aggregation. Our lab in NUS has been studying structure-function relationships and mechanism of actions of novel toxins from various sources. Our research has contributed to both basic and applied sciences. Based on the functional sites of the toxins, we have developed a number of therapeutic agents for various human diseases. This talk will provide an overview of toxin research and the distinct dimension of both basic and applied research in the field. I will describe the development of cardiovascular drugs in our lab along with recent advances and future prospects in toxin research.

***About the speaker***

*Manjunatha Kini conducts basic and applied research on snake venoms and saliva of blood-feeding animals, both contain pharmacologically-active proteins. He is an established world leader in the field of toxins as well as in blood clotting (thrombosis and hemostasis). His main research focus is "From Toxins to Therapeutics", where he identifies novel bioactive proteins from venoms or saliva, determines their modes of action, and designs potential drug-leads based on their structure. He is President-Elect of the International Society on Toxinology and the Vice President of the International Proteolysis Society.*

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