

# COLLOQUIUM BY STEVEN G. ROZEN

BIOINFORMATICS AND THE GENOMIC REVOLUTION WITH EXAMPLES FROM CANCER BIOLOGY

TIME: SEPTEMBER 3, 2018, MONDAY, 5:00-6:00 PM

VENUE: AUDITORIUM, ACADEMIC BUILDING

## *Bioinformatics and the Genomic Revolution with Examples from Cancer Biology*

**Speaker:** Dr. Steven G. Rozen, Director, Duke-NUS Centre for Computational Biology

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### ABSTRACT:

High throughput data generation technologies, especially incredibly cheap DNA and RNA sequencing, are foundational in biomedical research. Bioinformatics is essential for deriving biological knowledge from these data. I will first provide a very high-level overview of how bioinformatics makes sense of high-throughput biological data. I will then present some detailed examples from my laboratory's work on cancer epidemiology and the effects of a carcinogen that occurs in some traditional herbal medicine.

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### BIO:

Steve Rozen's research has spanned bioinformatics, human genetics and cancer genomics. Rozen founded and directs the Duke-NUS Centre for Computational Biology, which has published > 250 scientific papers since 2013. Rozen's own laboratory focuses on bioinformatics and cancer genomics, and is part of a team-science effort in cancer genomics that led to multiple papers, including 5 in Nature Genetics. This research was recognized by the American Association for Cancer Research (AACR) 2018 Team Science Award and the 2015 Singapore President's Science Award. Within cancer genomics, the Rozen Lab studies alternative splicing, lncRNAs, and the use of mutational signatures as tools for studying cancer. Rozen also created and maintains the widely-used Primer3 software for PCR

primer design. Previously, he studied rearrangement mutations in human Y chromosomes and their clinical consequences.

*This event is open to all. For any queries, email [yijun.gu@dukekunshan.edu.cn](mailto:yijun.gu@dukekunshan.edu.cn), or call 3665 7149.*