

INVITATION TO A LECTURE - SPONSORED BY SUPAMAC

Precise and sensitive analysis of DNA and RNA by mass spectrometry and applications in biology and medicine

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Location: Auditorium Medical Foundation
Building, 92-94 Parramatta Rd Camperdown NSW
Time & Date: 3PM, Monday May 21
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Mass spectrometry of DNA (and RNA) combines the sensitivity of PCR with the specificity and precision provided by a high resolution detector. Current technology includes highly automated sample processing and completely automated data interpretation. Thus, users who know nothing about the details of mass spectrometry successfully use the platform to measure genotypes, gene expression, methylation (epigenetics), and DNA sequences. Areas where applications are mature include discovery of medically important biomarkers, genetic diagnostic analyses, non-invasive detection of cancer and fetal biomarkers in serum or plasma, and multi-locus infectious disease typing.

This presentation will focus on the most recent developments of the technology including a broad, large-scale survey of potential cancer DNA methylation markers, non-invasive prenatal diagnosis and the use of mass spectrometry to study the specificity of transcription factor binding to DNA.

Charles Cantor is a founder, Chief Scientific Officer, and Member, Board of Directors, at SEQUENOM, Inc. He is also founder of SelectX Pharmaceuticals, a drug discovery company based in the Boston area. He is co-director of the Center for Advanced Biotechnology at Boston University, and professor of Biomedical Engineering. Dr. Cantor has held positions at Columbia University and University of California at Berkeley, and was also director of the Human Genome Center of the Department of Energy at Lawrence Berkeley Laboratory. He has published more than 400 peer-reviewed articles, has been granted more than 60 patents, and co-authored a three-volume textbook on Biophysical Chemistry and the first textbook on Genomics: *The Science and Technology of the Human Genome Project*. He sits on the advisory boards of more than 20 national and international organizations and is a member of the National Academy of Sciences.

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