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

SEMINAR

Thurs, 10 October 2013 | 4pm | DBS Conference Room 1

Hosted by Prof Paul Matsudaira



Field-Deployable Rapid DNA Analysis:

Fully-integrated, Fully-automated Generation of Short Tandem Repeat Profiles from Buccal Swabs

By **Melissa May**
NetBio, USA

This presentation describes development of the ANDE Rapid DNA AnalysisTM System consisting of a fully automated instrument and a single accompanying BioChipSetTM Cassette that can be used by nontechnical personnel in laboratory, office, or field-based settings while dramatically reducing the time to perform STR analysis. The ANDE system BioChipSet Cassette is an integrated microfluidic biochip that performs DNA purification, highly multiplexed amplification, and electrophoretic separation and detection.
The fully automated ANDE instrument provides all the subsystems required for the completion of STR analyses, including the power, thermal cycling, pneumatic, optical, ruggedization, process control, and computer subsystems. The system has on-board an Expert System Software that performs all of the signal processing and data analysis and automatically generated STR profiles. In this presentation, we summarize our success in generating CODIS-quality STR profiles in less than 90 minutes from buccal swabs without human intervention.

Artwork by Ann Nee, DBS, NUS