HbA1c and Hidden Variants: How CE Gets It Right

Registration for BMS SEMINAR

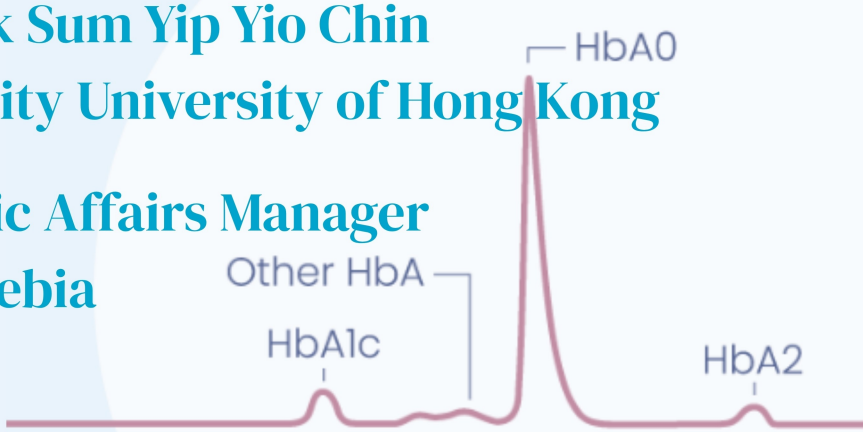
MLT Board CPD pending

ALL ARE WELCOME

20 Nov 2025 (Thur) 19:00-20:00

Room 3614, 3/F, Li Dak Sum Yip Yio Chin Academic Building, City University of Hong Kong

Dr. Ivan Lam, Scientific Affairs Manager
SEA & APAC Export, Sebia



Abstract:

Accurate HbA1c measurement is paramount to **diabetes diagnosis** and long term therapeutic glycaemic control. Yet discordance between glycaemic control and measured HbA1c in actual practice remains a risk of erroneous clinical decisions or diabetic drug prescription, affecting patient outcomes. Haemoglobin variants have been shown to affect HbA1c values, as the variant haemoglobin glycation rate may differ from that of HbA. Yet this is missed in the mainstream of standardized separation or immunoassay HbA1c testing methods, where limitations in resolving hemoglobin variants or non-specificity in identifying glycated variants respectively remains a potential source of error. Increasing recognition of this issue is evident as recent American Diabetes Association guidelines recommend that HbA1c cannot be measured in individuals who are homozygous variants naturally lacking HbA.

Capillary Electrophoresis (CE) based HbA1c testing is a superior resolution charge-based separation method built on the premises of hemoglobinopathy screening, which overcomes poorly resolving protein fractions in traditional pressure driven column separation methods. As rising immigration increases complexity of patient haemoglobin genotypes in populations, HbA1c analysis with superior resolution is increasingly important for detection of highly probable yet elusive haemoglobinopathy backgrounds to explain discordant A1c results and safeguard against erroneous diagnosis. In this talk, the principles of Capillary Electrophoresis for HbA1c measurement will be thoroughly explained. Superior resolution capabilities of Capillary Electrophoresis leading to clearly defined haemoglobin fraction separation, ease of HbA1c testing operation and results interpretation will also be discussed.

Organized by:

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