



*AUC International Conference on Research in African Challenges (ICRAC)*

*Track S: Science contribution to alleviating poverty*

SUB-TRACK S3: ENABLING TECHNOLOGIES FOR POINT OF CARE DIAGNOSTICS IN POOR COMMUNITIES

**Chair: Dr. Hassan Azzazy**

**Co-chair: Rudi Pauwels**

Forty years ago, Alma Ata declaration accentuated the significance of health benefits near where individuals live, and of society support. Back then, healthcare was delivered in the patient's home through physician house visits. As new technologies developed, care then shifted to specialized hospitals with centralized laboratories. Most recently, several point of care diagnostics have become available and supported shifting healthcare toward early detection of disease, prevention, and management of chronic conditions.

In this sub-track, new disease specific biomarkers, innovative diagnostic methodologies, and enabling technologies for point of care testing in remote locations will be examined. In addition, strategies to provide low cost screening for infectious (existing and emerging) and non-communicable diseases will be presented.

**Biographies**

**Hassan Azzazy** Hassan Azzazy is a tenured professor of Chemistry (2003-present) at The American University in Cairo (AUC). He serves as the Chairman of Chemistry Department and was the Associate Dean for Graduate Studies and Research at the School of Sciences and Engineering, AUC. He is the founder of the Novel Diagnostics & Therapeutics Research group and the director of the International Medical Laboratory Scientists training program at AUC.

Azzazy was a postdoctoral fellow and assistant professor at University of Maryland School of Medicine, Baltimore, MD (1995-2002). Azzazy is a graduate of Alexandria University, Egypt and received his PhD from the School of Biomedical Sciences, University of North Texas Health Science Center, Fort Worth, TX (1994). He holds two board certifications in Clinical Chemistry and Molecular Diagnostics from the American Board of Clinical Chemistry, Washington, DC. He is certified as a Specialist in Chemistry by the Board of Certification, the American Society for Clinical Pathology in Chicago, IL.

Azzazy has over 28 years of experience in biomedical research and he is the founder of Novel Diagnostics and Therapeutics Research group. A core interest of this group is the development of innovative diagnostics for accurate and affordable detection of biomarkers of infectious agents and cancer. Detection strategies combine the use of Nano sensors, chips, smart phones, 3D printers, and/or robotics. He is also interested in drug design, subcellular targeting of drugs using smart biodegradable Nano carriers, and development of biodegradable honey chitosan nanofibers for use as antibacterial wound dressings.

Azzazy authored over 85 scientific publications in international refereed journals, 70 conference presentations, and 25 book chapters. He serves on the editorial boards of Clinical Biochemistry (Elsevier), Clinica Chimica Acta (Elsevier), and Clinical Chemistry Laboratory Medicine (De Gruyter). Azzazy has co-founded two nanomedicine



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startup companies. He is the CTO of D-Kimia, LLC innovative diagnostic solutions and the CEO of NanoEbers, LLC for nanofiber wound dressings.

**Rudi Pauwels** (born 1960) is a Belgian pharmacologist. He studied pharmaceutical sciences at the Catholic University of Leuven, Belgium, and obtained a PhD with a dissertation on Development of New Anti-HIV Agents. He did research on virology at the Rega Institute for Medical Research .[1] In 1994 he founded the Belgian biotech company Tibotec, together with his wife Carine Claeys, and in 1995 he co-founded Virco. At Tibotec he continued his work on HIV in 1999, he was elected as board member of the Flemish Institute for Biotechnology (VIB).Rudi Pauwels is also the co-founder, director and CEO of a molecular diagnostic company,