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### Biomaterials as biosensors for microbial biomarkers in human tears and saliva: Proof of concept

In this presentation, we will enumerate the important role played during last decade by biosensing and bioelectronics in developing new diagnostic methodologies and tools. A comparative study of different existing techniques measuring biological signals is also announced. Accordingly, in this work we introduce proof of concepts of biosensing in eye tears and saliva using different biomaterials. Hence, using biomarkers present in human tear and saliva as medium of pathology detection leads to development of accurate diagnosis and early recognition of disease. This concept of biomarker biosensor using biomaterials has potential possibility of rapid, point-of-care diagnostic. Our preliminary results showed that the biomaterial biosensor was capable of detecting microbial biomarkers at low concentrations. The biomaterial biosensor was also considerably faster at detecting the target molecules, completing the analysis in short time.

### Biography

Mouad Lamrani is the Director of R&D Innovation Center, Menicon Co., Ltd., Geneva, Switzerland that he established in 2015. From 2010 to 2015, he was Dean and General Manager of French Ivy League School of Engineering ISMANS, situated in Le Mans, France. In 2013 & 2015, he and Dr. Shuguang Zhang organized in Le Mans, France and Geneva, Switzerland respectively, First and Second International Congresses of Peptides & Proteins. He was the Director and General Manager of Menicon Global R&D since 2005. While he was the first non-Japanese Researcher to enter Menicon Co. Ltd., Japan, he was responsible for establishing 3 branches of Menicon R&D in Strasbourg and Lyon, France as well as Singapore. He developed, for Menicon Co. Ltd, global network of research with outstanding researchers, universities and companies across Asia, Europe and USA. He is specialized in materials science, electrochemistry, bioelectronics, biomaterials and surface coating for health applications. He obtained the EU award of "Human Capital Mobility" which led him to Research Position in Instituto de Ciencia y Materiales Autonoma de Barcelona. He was appointed Assistant Professor at Korean Institute of Science and Technology (KAIST) in Taejeon. In 1997, he obtained the award of Japanese Society for Promotion of Science (JSPS) in Chemistry. He was Assistant Professor at the Laboratory of Professor Yoshinori Yamamoto at Tohoku University in Sendai. In 1999, he was awarded prize of Japan Novartis Foundation for Young Scientist. Since 2000, he has been working with Menicon Co. Ltd., first and oldest ophthalmology Japanese company (66 years).

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