Prof. Dr. Özcan Erel

Prof. Dr. Özcan Erel is a prominent scientist and world-leading expert in the fields of **clinical biochemistry**, **molecular diagnostics** and **oxidative stress biology** with seminal contributions in **biomedical** and **biotechnological** research. His seminal work has contributed to a paradigm shift in **understanding, measuring**, and **clinically interpreting oxidative** and **antioxidative processes** in **health and disease**.

He is principally known for the establishment of the **Total Antioxidant Status (TAS) and Total Oxidant Status (TOS)** methods - novel, **fully automated** and **reproducible assays**, which are widely used as reference methods globally in the field of oxidative stress. These techniques have been widely exploited in **human** and **veterinary medicine**, in **biotechnology**, **pharmaceutical research**, in the field of **nutraceuticals**, and **experimental biology** and are extensively quoted in journals of high impact.

Prof. Dr. Erel's work uniquely combines **chemistry** and **translational science** and revolves around oxidative stress, redox homeostasis, inflammation, metabolic disease, cardiovascular disease, neurodegenerative disease, and cancer. Through his work, researchers and clinicians can numerically evaluate oxidative balance in complex biological systems and in doing so support both basic and clinical sciences.

In addition to his achievements in method development , Prof. Dr. Erel has further contributed to the **harmonization of laboratory medicine, assay validation and biomarker identification**. His science consists of many peer-reviewed publications, book chapters, and invited lectures, indicating a long-term dedication to scientific rigor and novel approaches. In biotechnology, his career is the demonstration of how traditional biochemical concepts can be converted into broad-based, commercial diagnostic products. His techniques have proven robust and are routinely employed in academic labs, research hospitals and industrial R&D, highlighting their cross-disciplinary applicability.

As a keynote speaker at **ICABB**, Prof. Dr. Erel has a distinctive viewpoint between the convergence of **biotechnology**, **clinical diagnostics** and **molecular medicine**. His talk will be of interest to those involved in the evaluation of oxidative stress, biomarker-based research approaches, and the prospective role of redox biology in precision medicine and biotechnological innovation.

Theoretical and experimental contributions of Prof. Dr. Özcan Erel are **still paradigm defining today**, therefore he is considered as one of the most **influential leaders** in the world in biotechnology and biomedical sciences.