

# 7<sup>th</sup> EURO BIOSENSORS AND BIOELECTRONICS CONFERENCE

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### **Establishing gene expression for early and high-throughput prediction of the hematological acute radiation syndrome**

We aimed to predict occurrence of hematological acute radiation syndrome (HARS) and its severity based on early detected changes in gene expression. Using peripheral blood from baboons irradiated with 2.5 or 5 Gy (whole body equivalent dose), we examined changes in gene expression occurring one and two days after exposure in relation to unexposed blood samples (pre-exposure samples). Utilizing whole genome microarrays and validating candidate genes with qRT-PCR finally allowed us to identify a set of 29 baboon genes forwarded for cross-species validation using human samples. Within this presentation, we will provide first results on this cross-species validation and share preliminary results on our envisioned 1,000 sample exercise to examine the feature of high-throughput diagnostic of the HARS using gene expression.

#### **Biography**

Michael Abend completed his Medical Doctor degree at University of Cologne, a Professorship in Radiobiology at Technical University Munich and, studied Epidemiology at Gutenberg University in Mainz, Germany. He worked at different Institutions such as: Armed Forces Radiobiology Research Institute, Bethesda and National Cancer Institute (Radiation Epidemiology Branch), Rockville, USA. He received several scientific awards and published about 100 peer reviewed scientific papers. He is currently a Deputy Director and Leader of Genomic department at Bundeswehr Institute of Radiobiology.

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