34th Euro-Global Summit on **Cancer Therapy & Radiation Oncology**

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6th International Conference on **Big Data Analysis and Data Mining**

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13th International Conference on **Orthopedics, Arthroplasty and Rheumatology**

July 25-27, 2019 London, UK

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Translational research and cancer patient stratification based on modern molecular biological methods

The use of molecular biological methods especially droplet-digital PCR and NanoString technology offer several possibilities for translational research and cancer patient stratification. In this workshop some examples based on RNA or microRNA expression in solid tumors will be discussed. MicroRNAs are pivotal regulators for RNA silencing and post-transcriptional regulation of gene expression under physiological as well as pathological conditions. MicroRNAs can be detected in tissues and in most biologic fluids including serum, plasma and urines. Secreted microRNAs are either incorporated into micro-vesicles or circulate bound to proteins. In both cases microRNAs are protected from RNase degradation so that they may remain intact for long periods of time. Therefore they might represent potential new biomarkers. We analyzed expression of 800 miRNA's using nCounter NanoString technology in cancer cell lines, formalin fixed paraffin embedded tissues and plasma from cancer patients. Potential clinical applications of microRNA detection for cancer patients' management will be discussed.

Recent Publications

1. EC Smyth et al. (2018) A seven-Gene Signature assay improves prognostic risk stratification of perioperative chemotherapy treated gastroesophageal cancer patients from the MAGIC trial. Annal Oncol 29(12):2356-2362.
2. M Ratti, et al., (2018) Microsatellite instability in gastric cancer: molecular bases, clinical perspectives, and new treatment approaches. Cell Mol Life Sci. 75(22):4151-4162.
3. KH Khan, et al., (2018) Longitudinal liquid biopsy and mathematical modeling of clonal evolution forecast time to treatment failure in the PROSPECT-C Phase II colorectal cancer clinical trial. Cancer Discov. 8(10):1270-1285.
4. J C Hahne and Valeri N (2018) Non-Coding RNAs and resistance to anticancer drugs in gastrointestinal tumors. Front Oncol. 8:226.
5. G Vlachogiannis, et al., (2018) Patient-derived organoids model treatment response of metastatic gastrointestinal cancers. Science. 359(6378):920-926.

Biography

J C Hahne has obtained his PhD in Biochemistry at the Albert-Ludwigs-University Freiburg i.Br. Germany. During his PhD work he was trained in virology, cell- and molecular-biology. During several postdoc positions, he received broad training and knowledge in molecular pathology and cancer research. Currently, he is working in the Department of Molecular Pathology at the ICR, London, UK. He has published more than 60 papers in reputed journals and has been serving as an Editorial Board Member of reputed journals.

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