

Postdoctoral Opportunity

SECTION OF MECHANISMS OF CARCINOGENESIS / EPIGENETICS GROUP

EPIGENETIC MECHANISMS AND CANCER DEVELOPMENT

The Epigenetics Group (EGE) conducts both mechanistic studies and epigenetic profiling, aiming to enhance our understanding of mechanisms of carcinogenesis and cancer etiology and to discover and validate new epigenetic biomarkers. EGE exploits new concepts in cancer epigenetics and recent technological advances in epigenomics. The research is carried out in collaboration with IARC laboratory scientists, epidemiologists and biostatisticians as well as external groups. EGE's activities are aimed at: (1) elucidating the mechanistic role of epigenetic changes induced by major risk factors in specific human cancers, (2) investigating epigenetic changes for the mechanistic understanding of cancer development, and (3) discovering and validating new epigenetic biomarkers. Expected outcomes of these studies are improved knowledge of mechanisms of carcinogenesis associated with environmental factors and provision of an evidence base for studies of cancer causation and prevention.

An important focus of the group is to investigate epigenetic mechanisms (DNA methylation and histone modifications) underlying cancer development and progression. This research line builds on the most recent knowledge of the cancer genome and epigenome, new concepts, and genomic databases. A postdoctoral opportunity is immediately available within the Group to apply state-of-the-art molecular/cell biology and new functional genomic tools for mechanistic studies focusing on functionally important epigenetic "driver" genes ("epidrivers") and associated molecular pathways. This also includes the development and application of in- vitro models (for example, human and mouse immortalization models), new (epi)genome editing tools, and functional genomics. We also study interactions of epidrivers with selected known and suspected carcinogens (with focus on non-genotoxic "epigenetic" agents) that may play a role in tumour initiation and progression through epigenetic mechanisms.

Candidates with a solid background in epigenetics, molecular biology, and cancer research with a good command of English are encouraged to apply. Experience in genome editing (such as CRISPR-Cas9 system), genome-wide shRNA screens and functional (epi)genomics would be an asset.

The postdoctoral opportunity is initially for one year with possibility of extension. The IARC stipend is currently €2750 per month. The cost of travel for the post-doc, and in certain circumstances for dependants, will be met, a dependant's allowance paid, and health insurance covered.

Applicants should send a CV, including list of publications and a description of previous research experience, as well as the names and addresses of two academic referees, preferably by email to: Email: ege@iarc.fr

To the attention of: Dr Zdenko Herceg, Epigenetics Group, International Agency for Research on Cancer, 150, cours Albert Thomas, 69372 Lyon Cedex 08 France, Tel +33-472738398, Fax +33-472738322