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## Identification and characterization of human genes radio-modulated by ionizing and non-ionizing radiation: Importance in cancer prevention and diagnosis

Farid Menaa Fluorotronics Inc., USA

Radiotherapy is a common strategy to treat cancer patients. In this case, a high dose (e.g. 80 Gy) of ionizing radiation is often delivered in fractions of 2-3 Gy. However, natural or induced solar radiation can cause deleterious effects to individuals exposed to it at certain conditions of time, dose and distance. The risk/benefit ratio of received ionizing or non-ionizing radiation could be estimated from the expression of key biomarkers involved in the radiation response. The identification and characterization of these biomarkers have been performed from MCF-7 breast cancer cells as well as from biopsies of patients with metastatic breast cancers. SSH and then microarrays has been performed to identify radio-modulated genes. Messenger RNA and total protein have been isolated to performed qPCR and Western blots, respectively. The signalling pathways of new key genes have been unravelled.

## **Biography**

Farid Menaa has completed his PhD in radiation oncology and gerontology from the French Atomic Energy Authority (CEA- 2003) and University of Paris (Jussieu-Sorbonne). Thereafter, he completed three international post-doctoral terms in medicine, genomics, sciences and technology. Among other professional activities, he is currently the R&D Executive Director of Fluorotronics Inc., a chemical and Nanotechnology Company. He has published many papers in reputed journals and serving as an Editorial Board Member of prestigious scientific journals.

dr.fmenaa@gmail.com

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