

## Food mutagens as prooxidants

**Rana Zaidi**

Department of Biochemistry, Jamia Hamdard University, India

The discovery that cooked food can be mutagenic has led to efforts for isolating mutagenic/carcinogenic compounds from food. Cancer is a worldwide problem and has to be understood intricately in the vital global interest of human health. Nutrition and dietary habits potentially have a key role in the development of several cancers such as prostate, colon, liver and breast. Approximately twenty four different types of food mutagens have been identified till date. In this study, we attempted to explore the isolation employing solid phase extraction, identification and characterization of the representative food mutagens present in protein rich Indian meat foods. Dietary mutagens explored in this work include IQ (imidazoquinolines), MeIQ (2-amino-3,4 dimethylimidazo[4,5-f] quinoline, MeIQx(2-amino,3,8 dimethylimidazo(4,5-f-quinoxaline) and PhIP(2-amino,1-methyl 6 phenylimidazo (4,5-b) pyridine and other Imidazoazaarenes (IAA). Analytical techniques employed for this purpose are High pressure liquid chromatography, Gas chromatography and Gas chromatography/Mass spectrometry. If identified, such species would be quantified. Further, prostatic carcinoma (PC3) cell lines and hepatocarcinoma cell lines (DU 145) would be targeted for establishing the mutagenicity. The proposed work would be a step forward in understanding prevalent cancer types in Indian population, their exposures to carcinogenic compounds and to evaluate the potential risks involved in consuming such diets. We also propose to take up bioantimutagenicity of food.

### Biography

Rana Zaidi completed her M.Phil, Ph.D in Biochemistry from Aligarh Muslim University, India in 1991. She is associate professor in the department of biochemistry at Jamia Hamdard (a deemed to be university) New Delhi, India. She is engaged in teaching and research in the field of DNA damage, chemical carcinogenesis and free radical chemistry and has published in reputed journals.

[ranaamu@yahoo.com](mailto:ranaamu@yahoo.com)