Tumor Biology Laboratory
Dr. Mandal's Research Group
Department of Biochemistry, Central University of Rajasthan

Cancer and Bone Metastasis
- Osteoclastogenic factors like TRAP are inhibited in presence of cholesterol lowering drug.
- Osteolytic markers TRAP, Cathepsin K, sPAR1 are inhibited in presence of cholesterol lowering drug.
- Inhibition of these osteoclastogenic factors inhibits the progression breast cancer mediated bone metastasis under the effect of cholesterol lowering drug.

Objective: Finding the underlying molecular mechanism for cholesterol induced cancer growth and Metastasis

Relevant Publications

Cancer and Calcification
- Alizarin Red staining reveals microcalcification in malignant breast tumor samples.
- DHA inhibits microcalcification in breast cancer cells.

Objective: Investigating the molecular mechanism involved in breast cancer microcalcification and its prevention strategy

Relevant Publications

Cold Environment and Cancer
- Cold environments are associated with a greater cancer incidence in the female population of the USA. Tumor Biology, 17th Oct, 2017.

Objective: Investigating the target identification for cold-induced tumorigenesis

Relevant Publications

DNA Methylation and Mutation Prone Zone
- Amino acids, which have CG residues in their codons are the most mutable residues.
- Presence of a comon motif "CGCGCGAAGAAG" along with CG might be a signature in the mutation-prone zones.
- Cancer genome becomes nitrogen deficient after mutations, presumably due to low nitrogen supply to proliferative cells.

Objective: Study for preventing mutation in mutation prone zones of cancer genome

Relevant Publications

Natural Extracts and Cancer

Objective: Identification of bioactive secondary metabolites (S) responsible for prevention of cancer metastasis

Relevant Publications

Relationship between Cancer, Bone and adipocyte cells

Adipocyte
Bone cells
Cancer cells
Research group

Sharma T
Pachori G
Kumar S
Bhagat B
Aithana S
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