



Simran Tandon

Professor

Specialization: Stem Cell Biology, Developmental Toxicity, Drug Screening, Alternative Therapies, Cancer Biology, Gastric pathophysiology

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Dr. Simran Tandon obtained her PhD degree from PGIMER, Chandigarh in the area of gastrointestinal pathophysiology. Later, she moved to US and joined the Department of Anatomy and Cell Biology at KUMC, Kansas City as a Postdoctoral fellow and there she worked on cystic fibrosis (CF). After coming back to India, she joined as an Assistant Professor at Jaypee University, Solan Himachal Pradesh and in 2015, she joined as a Professor of Amity Institute of Molecular Medicine and Stem Cell Research. Her broad area of research interest lies in Stem Cell Biology, Cancer Biology and Gastric pathophysiology. She has successfully implemented two DBT sponsored projects in the area of Stem Cell Biology. Her lab is working on various aspects of developmental toxicity using mouse embryonic stem (ES) cells as a model system for screening drugs for their potential toxicity, wherein inhibition of differentiation of ES cells into cardiomyocytes and changes in the expression of marker genes occur. Her group is establishing a drug screening system using human embryonic stem cell (KIND2) derived cardiac precursors. Her current interest lies in the use of alternative therapies for various diseases such as urolithiasis and cancer for which she has explored various plant based extracts as well as homeopathic medicines on cell lines. Apart from her research, she is involved in teaching courses related to Cancer and Stem Cell Biology and Cell Culture Technology.

Current Research Project:

Central Council for Research in Homeopathy (CCRH) funded research project entitled ***"In Vitro Approaches to Investigate the Efficacy and Mechanism of Action of Homeopathic Medicines against Hormone Dependent and Independent Breast and Prostate Cancer"***

Selected Recent Publications:

1. Narula S, Tandon C, **Tandon S (2018)** Role of matrix metalloproteinases in degenerative kidney disorders. **Curr Med Chem**. Volume 25, DOI : 10.2174/0929867325666171205143441 **(IF-3.249)**
2. Narula S, **Tandon S**, Baligar P, Singh SK, Tandon C **(2017)** Human kidney stone matrix: Latent potential to restrain COM induced cytotoxicity and inflammatory response. **Chem Biol Interact** Oct 17. pii: S0009-2797(17)30718-4. doi: 10.1016/j.cbi.2017.10.018.**(IF-3.143)**
3. Jyoti S, **Tandon S (2016)** Impact of homeopathic remedies on the expression of lineage differentiation genes: an in vitro approach using embryonic stem cells. *Homeopathy* May;105(2):148-59 **(IF – 1.16)**
4. Jyoti S, **Tandon S (2015)** Chemical and physical factors influencing the dynamics of differentiation in embryonic stem cells. **Curr Stem Cell Res Ther**. 10(6):477-91 **(IF – 2.684)**
5. Jyoti S, **Tandon S (2015)** Genetic basis for developmental toxicity due to statin intake using embryonic stem cell differentiation model. **Hum Exp Toxicol**. Oct;34 (10):965-84 **(IF – 1.802)**
6. Jyoti S, **Tandon S (2014)** Hypocapnia leads to enhanced expression of pluripotency and mesoendodermal differentiation genes in mouse embryonic stem cells. **Exp Cell Res**. Apr 1;322(2):389-401 **(IF – 3.546)**