

# Bio Sketch of Supervisor

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Dr. Suman Kapur joined BITS Pilani on 17th July 2004 as Professor in the center for Biotechnology, department of Biological Sciences. She is presently working as the Dean, International Programs and Collaboration Division since June 2012. She has earlier served in several senior administrative positions like Dean, Research & Consultancy at the Hyderabad Campus and Chief of Community Welfare and International Relations Unit at BITS-Pilani.

Dr. Kapur is a popular teacher at BITS, Pilani and has been instrumental in introducing several new courses, namely MPH G513, MPH G522, MPH G692, MPH G539, MPH G521, MPH G681, BIO G515 and has developed the curriculum for a new degree program “Master of Public Health”, incorporating learning through field visits and interdisciplinary teaching. Several of her students have gone to make excellent careers for themselves as CEO’s of start up companies and faculty at some of the best institutions in USA. She has published more than 100 research articles in International and national journals.

Dr. Kapur’s research interests lie in identifying biomarkers for unraveling the genetic basis of human diseases such as psychiatric disorders like depression, schizophrenia, addiction and Alzheimer’s disease and metabolic disorders such as diabetes (T2DM), obesity, cataract and metabolic syndrome. Early and specific diagnosis is the backbone of effective treatment and reduction of both disease associated morbidity and mortality. Ours is the first group to show that in the Indian population a mutation in the mu opiate receptor is linked to risk for addiction to opiates, a mutation in the Ob (leptin) gene may be linked to hypertension in depressed

individuals and similarly mutations in CRYGA & B, SPHK and SPAG 16 genes are linked to Cataract.

Modern day integration of electronics and biological possibilities on an integrated chip can be successfully used to develop POC devices, especially suited for low-cost settings and our group has already developed two such devices for bacterial antibiotic susceptibility and blood glucose monitoring. She has founded a biotechnology start up company for commercialization of the same.

Revival of research on Traditional Medicine/Herbal Remedies with a locally-relevant evidence-based, disease-oriented approach is particularly relevant for India. Her group is also involved in developing clonal variants of Indian Medicinal plants and screening natural products for anti-diabetic, anti-inflammatory and anti-obesity activities in specific animal models for these diseases. Several industry sponsored projects are also in progress for bio-conversion, -remediation & effluent treatment using consortia of microbial populations.