

Sahil Nagpal

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EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks (%)
2011-2015	Bachelor of Science (Honours)- Medical Biotechnology	Amity University, Noida	8.81
2010-2011	All India Senior School Certificate Examination	Summer Fields School, Gurgaon	84%

PROJECTS UNDERTAKEN

1. **Title: Characterization of Endoplasmic Reticulum Network Dynamics: Towards Development of Automated Detection and Analysis**

Supervision: Dr. Eija Jokitalo, Research Director, Electron Microscopy Unit, Institute of Biotechnology, University of Helsinki, Finland

Abstract: On-going master's thesis project on characterization of the ER network using confocal and super-resolution imaging concomitant with the goal to find the most suitable imaging technique to monitor ER network dynamics and to develop a segmentation plugin for the software Microscopy Image Browser.

2. **Title: Correlative Light and Electron Microscopy (CLEM)**

Supervision: Dr. Thomas Kurth, Electron Microscopy Facility Leader, Center for Regenerative Therapies, Germany

Abstract: CLEM approach was used for 3D reconstruction of retina tissue nanostructure using immunogold-labeled ultrathin serial sections.

3. **Title: Synthesis of biodegradable hydrogels and *in-vivo* studies in mouse model**

Supervision: Dr. Yixin Zhang, Group Leader, B CUBE-Center for Molecular Bioengineering, Germany

Abstract: Injectable hydrogels were synthesized from scratch and were injected into the mouse models to study its biodegradability.

4. **Title: Development of antifungal agents against *Cryptococcus neoformans***

Supervision: Dr. V. Pooja, Assistant Professor, Amity Institute of Biotechnology, Amity University

Abstract: New synthetic and natural compounds were found that could show significant *in-vitro* antifungal activity against the fungus *Cryptococcus neoformans*. Their effects on the virulence factors and their synergism with the commercially available antifungal drugs were studied.

5. Title: Variation analysis in the DNA samples of dyslexia patients using Restriction Fragment Length Polymorphism (RFLP) and Taqman assay

Supervision: Prof. Subrata Sinha, Director, National Brain Research Centre, India

Abstract: Variation in the exome sequence of three genes involved in the neuronal migration pathway in dyslexic patients was analyzed using genome resequencing bioinformatics pipeline and the results were validated using RFLP and Taqman assay.

INTERNSHIPS

2017: Student job for synthesis, coating, purification of nanoparticles and their assembly into nanoclusters at Leibniz Institute of Polymer Research, Dresden

2016: Training in wet lab work for DNA sequencing using nanopore DNA sequencing device, MinION, under Dr. Mihail Sarov, Head of Genome Engineering, Max Planck Institute of Molecular Cell Biology and Genetics Dresden

2015: Training in developmental biology techniques using zebrafish as the model organism in Dr. Michael Brand's laboratory

2014: Training in Molecular Biology techniques such as PCR-RFLP, Taqman SNP genotyping, RT-PCR for checking gene expression and bioinformatics analysis of Next-Generation Sequencing data from National Brain Research Centre, India

2013: Training in Microbiology, Clinical Biochemistry, Hematology & Serology and Phlebotomy from SRL Limited, Fortis Escorts Hospital, New Delhi

PUBLICATIONS

1. Pranjali Chandra, **Sahil Nagpal**, Mahero Ayesha Shah. Surface functionalization of gold nanoparticles and its applications in biology. (Communicated)
2. **Sahil Nagpal**, Navkiran Kaur. Role of cancer stem cells in breast cancer. *BioEvolution*, ISBN 978-81-925781-3-2, May 2014, pg 37-41

EXTRA-CURRICULAR ACTIVITIES

1. Worked as a **student coordinator** for quality management from the Master's program Molecular Bioengineering 2016-17.
2. Worked as an actor in the **drama society** of Amity Institute of Biotechnology from 2011-2015.
3. Worked as an exchange coordinator in **AIIESEC DU** in 2012.
4. Undergone **basic life support** training.
5. Coordinator at the social help organization **Umeed – A Drop of Hope**.
6. Volunteer at the social help event **Udaan** in 2012.

References, Scores & Supporting Documentation Furnished Upon Request.