

## Summit Research Program

The Summit Research Program is a unique research-oriented programme that prepares selected students for global challenges at leading academic institutions and corporate R&D teams. The program provides students with hands-on exposure to pioneering research in state-of-the-art global research environments, experience with writing technical papers, personal mentorship, and interactions with internationally acclaimed research practitioners and experts. Through innovative research in specialised labs and facilities, our scholars gain the knowledge they need to go to the best research universities in the world, take on challenging jobs in high-tech start-ups, or do pioneering research in the business world.

### Summit Research Program

Opportunity to work directly with faculty and Ph.D. students on live research projects

Get mentored by reputed academics and teachers

Opportunity to co-author a paper in a reputed Indian and International journal

Visit and explore some of the best life-sciences research laboratories in the world

Option to take courses or conduct lab work in premiere universities abroad

Participate in cutting-edge research in areas such as anti-cancer treatment, gene manipulation for improved crop yields and etiology of human diseases;

Summit scholars are selected entirely on their merit and aptitude to succeed in the programme. Outstanding undergrad research scholars can also participate in a short-term student exchange programme at one of our institution's partner institutions across the globe. Foreign exchange programmes allow students to study in a foreign nation and environment while learning about another country's history and culture, making new friends, and advancing their personal growth. Students are also motivated to develop a global perspective through international exchange programs.

### Course

The SRP course is a self-paced course designed to meet the demand for students to be nurtured uniquely without adding to their academic load, ensuring that each student learns to their full potential. The



Dean, R & D

course is broken down into three competency levels, with students working at their own pace to accomplish each one.

### **Level: Foundational**

Students are taught about the fundamentals of scientific literacy and the notions concerning research articles, review papers, hypotheses, and dissertations throughout this stage. Students will also be encouraged to participate in numerous academic conferences, web seminars, and boot camps throughout this stage to broaden their knowledge

### **Level: Intermediate**

Students will be fully mentored to write review papers, web articles, and scientific newsletters in journals at this stage, students will be pushed out of their comfort zones to compete in various researched-based competitions with our Institutional Innovation council in the University at the national and international level, students will be regularly engaged in peer learning sessions, organizing symposia, and conducting bi-monthly journal and club sessions. Students will be required to apply for a variety of summer and winter fellowships and scholarships at the national level, with the most talented students being selected for international exchange programs.

### **Level: Advanced**

At this stage, students are encouraged to create and innovate using the skills they have learned throughout the programme. Students will select and work on a long-term research project, as well as write numerous research papers. As the pinnacle achievement of this course, the most gifted student can use their knowledge to develop novel products, technologies that can be patented, the research mentor will provide necessary assistance, and the Institution Innovation council [IIC] offers full support through its in-house IPR office. Students with a biotech entrepreneurial attitude will be recognized and celebrated.

### **Achievements**

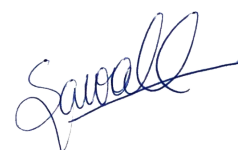
The number of students interested in joining the SRP programme is growing year after year, demonstrating the program's rapid success. Furthermore, students in the first and second batches who have made substantial progress in their research projects have begun writing and presenting their findings through research publications. SRP students have been routinely accepted for the summer or winter internship they apply for. During the summer vacation (July 2018), Sichuan University, PRC, invited six of our first batch of students to participate in a two-week university immersion programme



in Chengdu. One of our students, Ms. Vanshika, was chosen as a MEXT scholar for 2021, and she also received an excellence award for her proposal to construct a bio fungicide in Taiwan.

### **Publications by SRP Students**

1. **Rastogi YR**, Sharma A, Nagraik R, AygünA, Şen F. The novel coronavirus 2019-nCoV: its evolution and transmission into humans causing global COVID-19 pandemic. *International Journal of Environmental Science and Technology*. 2020 Oct 2;17:4381-8.
2. **Rastogi YR**, Saini AK, Thakur VK, Saini RV. New insights into molecular links between microbiota and gastrointestinal cancers: a literature review. *International journal of molecular sciences*. 2020 Jan;21(9):3212.
3. Thakur P, Mohammad A, **Rastogi YR**, Saini RV, Saini AK. Yoga as an intervention to manage multiple sclerosis symptoms. *Journal of Ayurveda and integrative medicine*. 2020 Apr 1;11(2):114-7.
4. Saini AK, **Rastogi YR**, Saini RV. Advances in directional delivery of DNA and siRNA. *Advances in polymers for biomedical applications*. 2020.
5. Gupta T, Kumari C, **Vanshika** Kulshrestha S. First Report of Mycovirus Infected *Sclerotinia sclerotiorum* in Cauliflower from Sirmaur District of Himachal Pradesh. *Recent Patents on Biotechnology*. 2020 Dec 1;14(4):283-94.
6. Kulshrestha S, Bhardwaj A., **Vanshika** sGeminiviruses: Taxonomic Structure and Diversity in Genomic Organization. *Recent patents on biotechnology*. 2020 Jun 1;14(2):86-98.
7. Gupta T, Kumari C, **Vanshika**, Kulshrestha S. Biology and mycovirus-assisted biological control of *Sclerotinia sclerotiorum* infecting vegetable and oilseed crops. *Archives of Phytopathology and Plant Protection*. 2019 Aug 27;52(13-14):1049-67.
8. **Mukherjee S**, Suresh SN. Neuron–Astrocyte Liaison to Maintain Lipid Metabolism of Brain. *Trends in Endocrinology & Metabolism*. 2019 Sep 1;30(9):573-5.
9. **Mukherjee S**, Sharma D, Sharma AK, Jaiswal S, Sharma N, Borah S, Kaur G. Flavan-based phytoconstituents inhibit Mpro, a SARS-COV-2 molecular target, in silico. 2021 Jul 25:1-5.
10. Nagraik R, Sharma A, Kumar D, **Mukherjee S**, Sen F, Kumar AP. Amalgamation of biosensors and nanotechnology in disease diagnosis: Mini-review. *Sensors International*. 2021 Mar 4:100089.



## Glimpse of SRP Tours

### China Visit (Sichuan University, China)



### Visit to NABI



### Taiwan Visit



*Sawall*