

formulations as garlic food safety is of prime importance. Development of bigger clove garlic varieties with high resistance to toxic shock syndrome (TSS suitable) for processing industries is the need of the hour. Varieties with low reducing sugars, thereby avoiding yellowing in processed garlic also need to be developed.

It was also suggested that farmer-friendly nutrient, pest and disease symptoms chart along with control measures

should be developed. Gene chip technology (micro array) should be developed for identification of all pathogens, including virus/fungus. The garlic sample from different states should be collected for the study of pesticide residues in terms of food safety measures. The mechanization in garlic by pelleting of garlic clove may be tested through collaborative work. Krishna Kumar also suggested that the brain storming session on garlic should be organized once in every three

years and review of the previous year's recommendations must be made. The strategies suggested can boost production, productivity and quality of garlic in the country.

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MEETING REPORT

SERB School in neuroscience*

The VIII SERB School in Neuroscience was recently organized with a view to provide insights into some of the cutting-edge areas in neurosciences. Twenty-four participants, including undergraduates, Ph D scholars, postdoctoral fellows and young faculty members from diverse disciplines participated in the course. Twenty-seven faculty members with expertise in research and teaching skills, from India and abroad, were invited to deliver pedagogical talks and share their excitement in science.

The School began with lectures on fundamental aspects and rapidly took the participants to challenging depths. Starting with an introduction to the brain, the participants learnt about the electrical properties of neurons and synaptic transmission, axonal transport and neuronal tracing, and synaptic and neural plasticity. They also learnt about the development of neuronal connectivity, the molecular mechanisms governing neuronal regeneration and functioning of circadian clocks. Recent concepts in sensory perception were explored in minute details. The fascinating story of the evolution of the limbic system vis-à-vis emotional behaviours was another highlight. Participants were also introduced to the concept of central pattern generation and its underlying computational logic. Additionally, they learnt about the

recent concepts in memory formation and reorganization of neural circuits. Computational neuroscience is an emerging area and provides enormous scope to the students with interdisciplinary skills. There were extensive sessions in this area.

The most exciting component was the hands-on sessions ranging from wet-lab to computational strategies in brain circuit research. There was a demonstration of comparative neuroanatomy, and participants performed the techniques on neuronal tracings. The visualization locomotor behaviour under optogenetic control was a particular highlight. Electrical circuit design and action potential simulations were used to explore concepts in electrophysiology, and electrical activity was recorded from the locust antennal lobe. Extracellular multichannel recording from behaving animals was also demonstrated. The computational sessions involved the use of various computational tools like the NEURON and M-Cell packages and analysis of neuronal processing as dynamical systems.

The School included a grant proposal writing exercise, wherein the participants were divided into groups and were expected to work on a novel research idea and write a grant proposal. The groups defended their proposal in front of a review committee composed of professors. This was a great opportunity to collaborate with fellow participants from diverse disciplines. Additionally, there was a poster session where participants presented a paper unrelated to their research

interests. These activities fed into another measure of the School's success – passionate, freewheeling discussions between students and scientists over lunch and dinner.

A unique attraction of the School was the evening research lectures where one could hear first hand how the concepts and techniques discussed in pedagogical lectures were applied to generate new knowledge.

In retrospect, the School not only exposed the participants to different areas of research in neuroscience, but also provided them with insights into experimental strategies and analytical techniques that could be implemented in their own research. The opportunity to interact with dedicated experts and like-minded individuals from across the country and globe was invaluable. The SERB School in Neuroscience is an ideal platform for initiating young researchers into neuroscience and encouraging collaborative interdisciplinary research. While SERB, Department of Science & Technology, Government of India supported the School, IISER Pune was a perfect host. We hope the School continues to inspire young minds, thus catalysing neuroscience research.

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