
Fwd: Report on “Interactive Session on the scientific focus on *C. elegans* as a research model” by Prof. Rakesh Pandey

2 messages

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Wed, Mar 19, 2025 at 11:34 AM

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From: **Mohd Aamir Qureshi** <aamirq@iul.ac.in>

Date: Tue, 25 Feb, 2025, 3:19 pm

Subject: Report on “Interactive Session on the scientific focus on *C. elegans* as a research model” by Prof. Rakesh Pandey

To: Snober Mir <smir@iul.ac.in>

A Report on “Interactive Session on the scientific focus on *C. elegans* as a research model” by Prof. Rakesh Pandey

On February 13, 2025, the Department of Biosciences at Integral University, Lucknow had the privilege of hosting an enlightening guest lecture by **Prof. Rakesh Pandey**, a distinguished scientist who currently holds the position of **Professor Emeritus** at the **CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP)**, Lucknow, a role he has maintained since 2020. The lecture focused on the application of ***Caenorhabditis elegans* (*C. elegans*)** in scientific research and provided valuable insights to the attending research scholars.

The session was graced by the presence of **Prof. Wahajul Haq**, Dean of Research & Development and Director ICIER, Integral University and **Prof. Snober S. Mir**, Head of the Department of Biosciences, Integral University, Faculty members from the Department of Biosciences, passionate research scholars and eager students, were among the enthusiastic attendees.

Prof. Pandey commenced his lecture with a powerful motivational message directed at the research scholars in attendance. He emphasized four cardinal virtues essential for success in the research domain: **hard work, honesty, faithfulness, and sincerity**. The professor articulated a profound life philosophy by cautioning that individuals who lack honesty and fail to invest sufficient effort during the first half of their lives inevitably face significant challenges and hardships in the latter half. This perspective underscores the importance of establishing strong foundational habits and values early in one's academic and professional journey. In addition to highlighting these core values, Prof. Pandey encouraged **healthy competition among the students**. He suggested that self-competition and striving to outperform one's peers could serve as powerful motivators for academic and research excellence. This approach, he implied, would foster a culture of continuous improvement and innovation within the university's research community.

The substantial technical portion of the lecture was dedicated to elucidating the merits of ***C. elegans* as an exemplary model organism for research purposes**. He provided a comprehensive explanation of why this nematode has become invaluable in various fields of biological research.

Prof. Pandey detailed the remarkably simple anatomical structure of the nematode, noting that *C. elegans* consists of precisely 959 somatic cells and a nervous system consisting of only 302 neurons. This simplicity, he explained, offers extraordinary research advantages, particularly in neuroscience studies. He illustrated

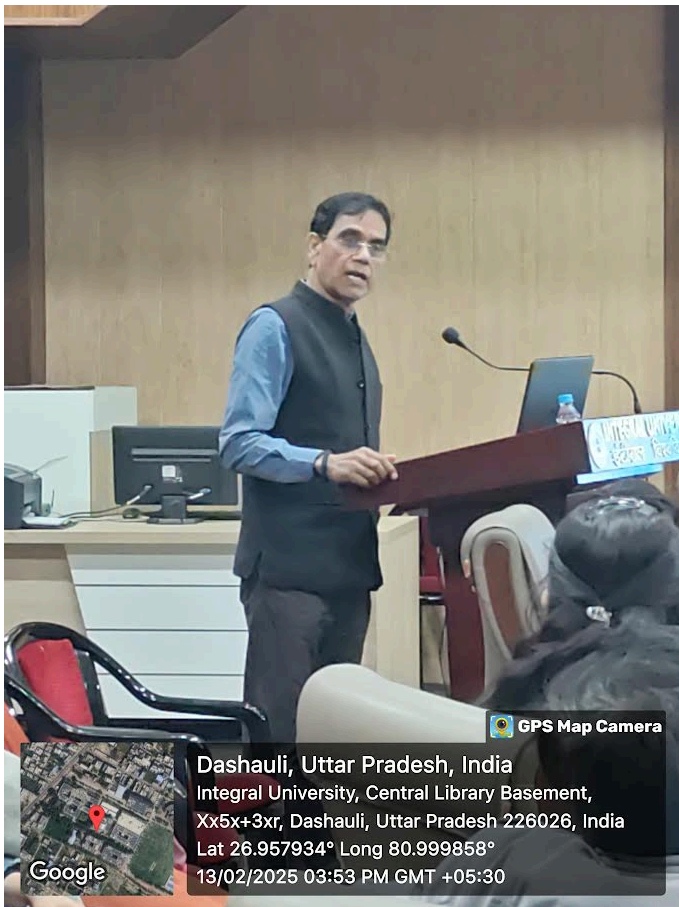
this point with a striking example: when researchers perform laser ablation to eliminate even a single neuron in *C. elegans*, they can observe direct and measurable effects on the organism's phenotype. This characteristic makes *C. elegans* an ideal model for studying neuronal function and neural circuits with exceptional precision. The lecture proceeded with a comparative analysis of *C. elegans* against other common research models, specifically *Drosophila* (fruit flies) and laboratory rats. Prof. Pandey highlighted three significant advantages that *C. elegans* offers: an extraordinarily rapid life cycle of just three days, allowing for quick generation of experimental populations, a short lifespan of only 2-3 weeks, enabling longitudinal studies of aging and development within practical timeframes and Significant genetic homology with human genes, making findings potentially translatable to human health applications.

Prof. Pandey concluded his informative lecture with an inspiring call to action for the assembled students. He challenged them to **strive toward becoming the most outstanding students at Integral University and to elevate the institution's reputation through their academic and research achievements**. His parting message resonated with optimism and encouragement as he assured the students that with determination and proper application of the values he had discussed, nothing in life would be too difficult to achieve. This concluding note reinforced his opening emphasis on the importance of character, diligence, and competitive spirit in pursuing scientific excellence.

The lecture was attended by around 100 attendees including research scholars, eager students and faculty members, providing them with both technical knowledge regarding an important research model and valuable perspective on the personal qualities necessary for long-term success in scientific research. **Prof. Snober S Mir** extended her heartfelt gratitude to **Prof. Rakesh Pandey**, for his enlightening lecture and for taking time from his busy schedule.

Glimpses of the event







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Wed, Mar 19, 2025 at 1:06 PM

A Report on “Interactive Session on the scientific focus on *C. elegans* as a research model” by Prof. Rakesh Pandey

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The lecture focused on the application of *Caenorhabditis elegans* (*C. elegans*) in scientific research and provided valuable insights to the attending research scholars.

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The substantial technical portion of the lecture was dedicated to elucidating the merits of *C. elegans* as an **exemplary model organism for research purposes**. He provided a comprehensive explanation of why this nematode has become invaluable in various fields of biological research.

Prof. Pandey detailed the remarkably simple anatomical structure of the nematode, noting that *C. elegans* consists of precisely 959 somatic cells and a nervous system consisting of only 302 neurons. This simplicity, he explained, offers extraordinary research advantages, particularly in neuroscience studies. He illustrated this point with a striking example: when researchers perform laser ablation to eliminate even a single neuron in *C. elegans*, they can observe direct and measurable effects on the organism's phenotype. This characteristic makes *C. elegans* an ideal model for studying neuronal function and neural circuits with exceptional precision. The lecture proceeded with a comparative analysis of *C. elegans* against other common research models, specifically *Drosophila* (fruit flies) and laboratory rats. Prof. Pandey highlighted three significant advantages that *C. elegans* offers: an extraordinarily rapid life cycle of just three days, allowing for quick generation of experimental populations, a short lifespan of only 2-3 weeks, enabling longitudinal studies of aging and development within practical timeframes and Significant genetic homology with human genes, making findings potentially translatable to human health applications.

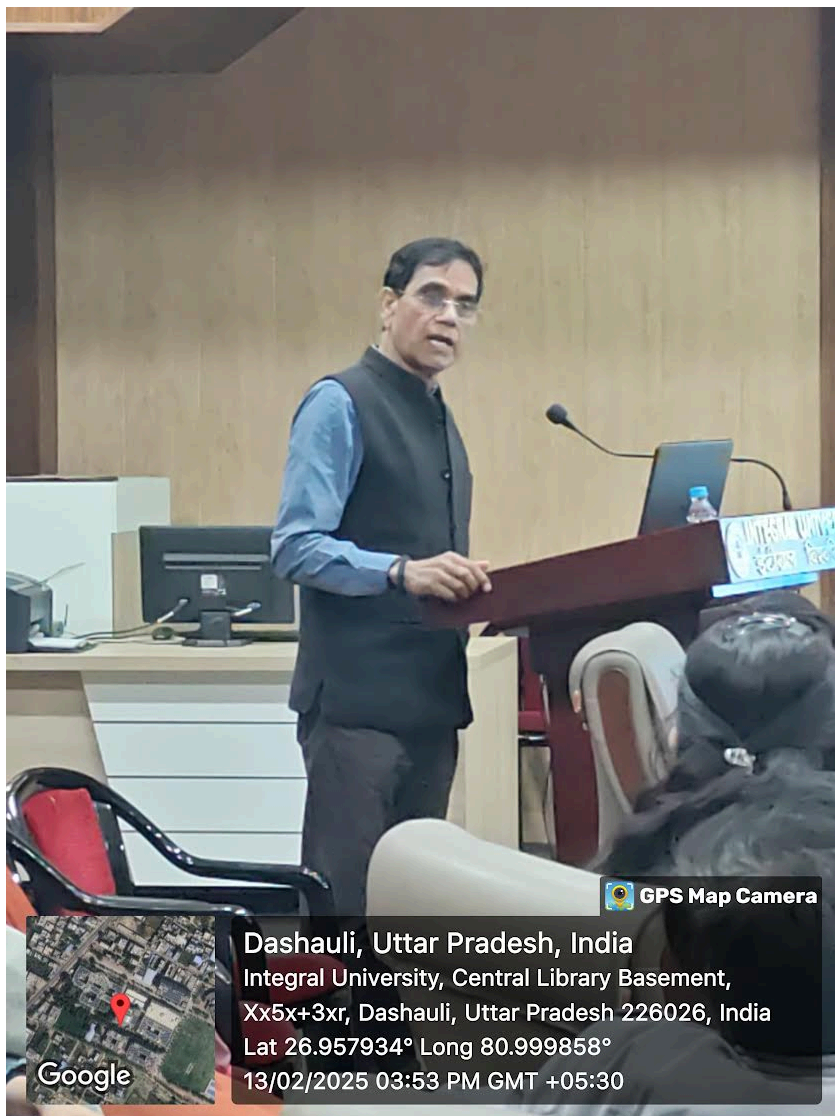
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Glimpses of the event







Best Regards
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