



## Dr. Chandrima Shaha

**D**r. Chandrima Shaha (born on 14<sup>th</sup> October 1952) was the first woman president of the Indian National Science Academy (INSA), the apex body of scientists, from 2020 to 2022. She is currently a JC Bose Chair distinguished professor at the Indian Institute of Chemical Biology, Kolkata. It is very

interesting to learn about the diverse accomplishments of this inspiring woman scientist. She is a prolific writer, photographer, a professional cricketer who was the Vice captain of the West Bengal's first women's cricket team and the first woman cricket commentator for All India Radio!

Chandrima was born in

Calcutta to accomplished parents. Her father Shambhu Shaha was best known as Rabindranath Tagore's photographer. A science graduate turned a creative photographer, his work encompasses a wide range of subjects. Her mother Karuna was a painter, singer, champion of women empowerment and led movements against the British.

About her parents, Dr. Chandrima writes, "My interest in science was kindled by my father, a remarkable teacher. Although by profession he was not a scientist, he built me a small laboratory complete with a light microscope, Bunsen burner, test tubes and some chemicals. My father believed in holistic education and taught me carpentry, photography, gardening and the reading of classic literature. I spent much enjoyable time with him doing various projects like



looking at pond-water droplets under the microscope or putting together a circuit for a small radio. As a result, my interest in scientific enquiry got deeply rooted while I was very young. Also my childhood acquaintances were largely from the fine arts faculty because both my parents were well-known artists of the Bengal school; and conversations at home generally revolved around the art scenario the world over, occasionally sprinkled with discussions on a wide variety of culinary delights.”

During her school days, she loved to run after insects and collect small animals. “My mother was never interested in my odd desire to keep a variety of snakes and turtles at home, but was tolerant

of my inordinate love for animals and appreciated the creative part of my endeavours”, quips this biologist. Holidays meant collecting caterpillars to watch them metamorphose into butterflies, maintaining detailed photographic records of the events, using a Leica camera fitted with a bellow for close-ups. This probably made her take up research in understanding the events of reproduction and to understand the fascinating phenomenon of how life begins. She adds, “Childhood events being most essential for scientific and philosophical development, I feel that the early influences that shaped my future interests were my family and committed school teachers.”

While in college, she

developed other interests to become vice-captain of the Bengal women’s cricket team at a time when women’s cricket was at a nascent stage. “Cricket brought a completely different flavour into my life because team activity was very enjoyable. Our success in winning the National Championship for three consecutive years was certainly delectable! My parents were supportive of my interest in sports and gave me the freedom to do whatever I most preferred”. Shaha graduated with a Master’s degree from Calcutta University with endocrinology as specialisation.

With the limitation of resources in that period when the country was opening up towards research in specialised fields, finding a suitable laboratory to pursue her interest in reproductive biology research itself was a challenge. Fortunately, she got a placement at what is now known as CSIR- Indian Institute of Chemical Biology (IICB) and completed her doctoral studies there. She then went to Kansas University Medical Center in the United States with a Ford Foundation fellowship, to do post-doc research exploring female reproductive physiology. Dr. Chandrima worked on the mechanisms related to ovarian steroidogenesis and on studying similar phenomena in male reproductive organs. Though life was not easy there, she took a deep dive into productive lab work!

In 1984, Chandrima Shaha returned to her motherland, to join the National Institute of Immunology (NII) in New Delhi, then an upcoming institution. With sheer commitment and team work, she went up the ladder to become its Director a few decades later.

Talking about her bold decision to join such a new institution, and to face teething problems in the initial

### Indian National Science Academy (INSA)



# CHANDRIMA SHAHA

## ELECTED INSA'S FIRST WOMAN PRESIDENT

- 1 Renowned biologist Chandrima Shaha is set to become first woman president of the Indian National Science Academy (INSA).
- 2 She will head INSA from 2020 to 2022 after taking over as president from incumbent Ajay K. Sood.
- 3 She was formerly the Director of the National Institute of Immunology, Delhi.
- 4 The Indian National Science Academy in New Delhi is the apex body of Indian scientists representing all branches of science and technology.





years, she recalls, "I now look back with great fondness at that period of instability, surprises and continuous pressure. I have realised that there are very many experiences in life which appear different when you look back at them over the distance of time rather than when you are actually undergoing them". Here, she started a laboratory with a group of people interested in exploring the possibilities of developing a vaccine related to fertility.

Her research interests also centre on the elucidation of the paths that lead to death of cells under varying physiological conditions.

This helps researchers analyse conditions for diverse organisms to thrive. Her work on understanding how parasite death occurs is important as successful killing of the Leishmania parasite causing the deadly Kala-azar disease. Her work on understanding how cancer cells survive and divide at a very fast rate provides insight into better cure and discovery of new medicines.

Dr. Chandrima served as the chair of the Department of Biotechnology (DBT) task force on biotechnology based programme for Women, member of task force on human genetics and genome analysis, and basic research in modern biology, scientific advisory board, Indian Council of Medical Research (ICMR).

She is currently serving as a member of the various governing councils, scientific advisory committees and task forces working to improve the health and living conditions of public.

She is an elected fellow of The World Academy of Sciences,

the Indian Academy of Sciences, the National Academy of Sciences, and the West Bengal Academy of Science and Technology. She served as vice-president of international affairs of INSA and as a member of the councils of all three national academies.

At IIT, she initiated a programme called **Science Setu** which allowed scientists to teach undergraduate students, identify the talented youngsters and direct them towards research.

#### Awards / accolades

- ▶ Ranbaxy Science Foundation Award for basic sciences
- ▶ J.C. Bose National Fellowship
- ▶ Shanti Swarup Bhatnagar Medal of INSA
- ▶ Shakuntala Amir Chand Award of the Indian Council of Medical Research
- ▶ Prof. Archana Sharma Memorial Award of the National Academy of Sciences
- ▶ Darshan Ranganathan Memorial Award
- ▶ Life Time Achievement Award of Biopharma Honours
- ▶ Chandrakala Hora Memorial Medal

The contribution of Dr. Chandrima to the field of life sciences is mind blowing and especially her work on death of cells, cellular defence systems and evolution of species during stress.

This great researcher, administrator, institution builder and a teacher is a source of inspiration for many youngsters to take up research!

**Steroidogenesis** is the multistep process for biosynthesis of steroid hormones from cholesterol.

