

## **Tata Transformation Prize, 2025**

**Prelims:** Current events of national and international relations | Science & Technology

## Why in news?

The Bengaluru-based scientists win the 2025 Tata Transformation Prize.

- Announced by The New York Academy of Sciences & Tata Sons.
- Purpose To advance innovation and support visionary scientists in India developing breakthrough technologies to address India's societal challenges.
- It is awarded *annually*.
- 3 categories Food Security, Sustainability, and Healthcare
- **Selection** 3 winners chosen from 212 nominations across 27 Indian States by an international jury of scientists, clinicians, technologists, and engineers.
- **Prize** Each winner will receive **Rs. 2 crore** to advance their research and scale real-world impact.

## Winners -

- Padubidri V. Shivaprasad, from National Centre for Biological Sciences

   Food Security.
- Developed <u>epigenetically engineered rice</u> using small RNA based modifications to enhance stress tolerance and nutritional quality.
- Helps reducing fertilizer/pesticide use and lower production costs.
- Balasubramanian Gopal from Indian Institute of Science -Sustainability.
- Developed a green chemistry platform using bioengineered E. coli to produce key chemicals used in pharmaceuticals, cosmetics, and agriculture.
- Integrating AI-designed enzymes to produce chemicals sustainably, replacing traditional chemical manufacturing and helps reducing pollution

- 3. Ambarish Ghosh from Indian Institute of Science Healthcare.
- Developed magnetic nanorobots—tiny, spiral-shaped devices for <u>targeted</u>
   <u>cancer treatment</u>.
- $_{\circ}$  It is capable of navigating the body, delivering drugs to tumors, and enabling real-time imaging.

## Reference

- 1. The Hindu | Tata Transformation Prize, 2025
- 2. The New York Academy of Sciences | Tata Transformation Prize, 2025

