



**KAMARAJ IAS ACADEMY**  
Only IAS Academy by Grandson of "Perunthalsivam Kamarajar"

# Nanobots for Cancer Therapy (IISc Breakthrough)-2025

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- **The Basics:** Nanobots are microscopic machines (billionths of a meter) designed to perform tasks at the cellular level.
- **The Breakthrough:** Dr. Ambarish Ghosh (IISc) developed **Magnetic Nanobots** (helical structures) that can be steered using external magnetic fields through the bloodstream or even dense tissues like teeth.
- **Significance:** \* **Targeted Drug Delivery:** Unlike Chemotherapy (which kills both good and bad cells), nanobots deliver drugs *only* to the tumor site, minimizing side effects.
- **Transformation Prize 2025:** Recognized for its potential to make advanced healthcare affordable in India.

**Kamaraj IAS Academy**

Plot A P.127, AF block, 6 th street, 11th Main Rd, Shanthi Colony, Anna Nagar, Chennai, Tamil Nadu 600040

Phone: **044 4353 9988 / 98403 94477** / Whatsapp : **09710729833**