**Tata Institute of Fundamental Research**
Survey No. 36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy Dist., Hyderabad – 500 046

# Seminar

## From Lab to Law: What AMR Teaches Policymakers & What Scientists Must Do Next

## Swetavalli Raghavan

### Royal Society of Chemistry

Antimicrobial resistance (AMR) is often described as a scientific challenge, but for policymakers it is, above all, a systems challenge. As Advisor to the Government of Karnataka, working at the interface of science, regulation, and public health, I have seen how India generates exceptional microbiology and genomics research yet struggles to translate it into decisions, standards, and safeguards that can withstand the pressures of real-world healthcare. AMR exposes this fault line clearly: we diagnose too late, we lack interoperable surveillance, data rarely reaches decision-makers in actionable form, and innovations are not designed with scale, cost, or public-sector workflows in mind.

This talk uses AMR as a prism to explain what governments actually need from scientists, and why the gap between labs and legislatures persists. I outline the barriers that prevent good research from becoming policy: fragmented validation pipelines, absence of regulatory-ready data, lack of deployment science, and missing mechanisms for states to adopt new diagnostics or genomic intelligence. I then lay out a blueprint for how Indian scientists can design policy-compatible research: problem-first framing, clear decision pathways, translational milestones, robust evidence standards, interoperability by design, and early engagement with implementers. The AMR crisis is not just a warning; it is a template for how India must think about the next generation of biological threats, from emerging pathogens to environmental health.

Ultimately, this talk argues that scientific impact in India will be defined not by publications but by the ability to shape laws, systems, and safeguards that protect 1.4 billion people. AMR shows us the way forward, if we choose to design science that is not only excellent, but also adoptable.

***Monday, Dec 8th 2025***

***11:30 Hrs (Tea / Coffee 11:15 Hrs)***

***Auditorium, TIFRH***