

AMRWATCH

We, on AMRWATCH, are investigating the link between pollution from antibiotic manufacturing and the risk of antimicrobial resistance in the environment. Our project is focused on Chennai and Puducherry – two regions with significant number of antibiotic producers (active pharmaceutical ingredient & finished dosage form).

As part of our work, we are validating techniques to measure different antibiotics in environmental samples and undertaking state of the art bacterial, genomic and metagenomic methods to identify AMR. The link between antibiotic presence, its toxicity and AMR proliferation will be used in the risk assessment models.

Armed with this information, our work will provide a platform to advise on the risk posed by antimicrobial manufacturing waste and ultimately identify the need for risk-reducing investments by industry to deal with the proliferation of AMR.



THE AMRWATCH TEAM

MAIN AIMS

To investigate the links between:

- Types of manufacturing;
- Volumes produced;
- Levels of antibiotics in industrial discharges;
- Environmental concentrations;
- Potential impacts on human & animal health

OBJECTIVES

- Quantify the levels of antimicrobial pollution from Antimicrobial Waste (AMW) coming from antimicrobials of different production processes
- Develop cost-effective methods for monitoring antibiotics & AMR in the receiving environment
- Investigate the proliferation of AMR in receiving environments & the risks to human & animal microbiomes
- Strengthen India's capacity to introduce a framework for monitoring antibiotics in manufacturing effluent & enforce emission limits
- Develop low cost, mass balance methods and risk assessment tools that predict concentrations and risk based on production loads of antibiotics & AMR and make policy recommendations for international environmental standards for antimicrobials in manufacturing effluents and receiving environments

EVENTS IN INDIA

10th- 12th October 2022

The International Conference on Antimicrobial Resistance (AMR) and Microbiome under Changing Climate.

Venue: Pondicherry University, India.

13th- 14th October 2022

The International Conference on Combating Antimicrobial Resistance.

Venue: The Aarupadai Veedu Medical College & Hospital (AVMC & H), India.



INTERNATIONAL CONFERENCE ON ANTIMICROBIAL RESISTANCE (AMR) AND MICROBIOME UNDER CHANGING CLIMATE

ABOUT OUR EVENTS

These events brought together India's chemists, biologists, environmental and medical professionals, hospital practitioners and students to discuss the issues and opportunities related to AMR, and how policy regulating antibiotic production and consumption could mitigate future public health risks and strengthen India's ability to tackle AMR.

Both conferences opened with traditional fire-lighting ceremonies and closed with a heart-warming and spectacular gala dinner. All part of the magnificent Indian hospitality. Our team also visited university research facilities and sampling sites. These are places of outstanding natural beauty that serve as an alarming reminder of how fragile the Indian natural world can be.

Various events and competitions were conducted on antimicrobial resistance and climate change for students, scholars, and faculties to create public awareness about environmental antibiotic pollution. Eminent Speakers from various countries and scientists from leading research institutions shared their views on the emergence and impact of antimicrobial resistance in the environment.



AMRWATCH FIELD TRIP

Our India visit also drew attention from one of India's major national newspapers, The Hindu, which published an article: 'Meet focuses on threat of anti-microbial resistance' raising awareness of AMR risks from manufacturing facilities.

AMRWATCH aims to encourage and support the Indian government in its determination to monitor and regulate antibiotic discharges from manufacturing, while supporting global efforts to combat AMR.