

## RAGNA Deep Dive

### Manufacturing of antibiotics, emission and waste management

23 April 2025 at 09.00-11.00 CET



Dear Colleagues, welcome to our next opportunity for a deeper look into important topics in the AMR field.

#### **Deep Dive manufacturing of antibiotics, emission and waste management**

23 April 2025 at 09.00-11.00 CEST, Microsoft Teams

This second Deep Dive is organized by the [Swedish Knowledge Centre on pharmaceuticals in the environment](#) | [Swedish Medical Products Agency](#) | [Läkemedelsverket](#), on behalf of RAGNA.

The Deep Dive will take a closer look at manufacturing of antibiotics, emission and waste management. Pharmaceutical manufacturing is considered to be one of the sources for development of antimicrobial resistance. In the WHO guideline on waste and wastewater management, with focus on manufacturing of antibiotics, this is expressed in a comprehensive way.

While the overall largest volume of active pharmaceutical ingredients (APIs) that reach the environment most likely originates from usage, the highest environmental concentrations found are the result of pollution from manufacturing (Larsson 2014).

Pollution with antimicrobials provides a case of special concern. In addition to direct ecological effects (Brandt et al. 2015), environmental pollution with antimicrobials may also contribute to the development of resistance, in both non-pathogenic and pathogenic microbes, thereby threatening the use of antimicrobials as effective therapeutic agents in humans, domestic animals and crops (Larsson et al. 2023; United Nations Environment Programme 2023; Larsson and Flach 2022). Such effects are not restricted to the site of the emissions, as microorganisms could propagate and eventually spread world-wide.

Hopefully this Deep Dive will give us an opportunity to increase knowledge and highlight some of the challenges and opportunities linked to manufacturing of antibiotics.

## Preliminary AGENDA

### Opening remarks

Stefan Berggren

*Swedish Knowledge Centre for Pharmaceuticals in the Environment / RAGNA secretariat*

### Awareness raising, entry points in the life cycle. An introduction

Professor Ramanan Laxminarayan

*One Health Trust, WHO Collaborating Center on Antimicrobial Resistance*

### Life cycle perspective – regulatory possibilities

Nada Hanna

*UNEP*

### WHO Guidance on wastewater and solid waste management for manufacturing of antibiotics

Kate Medicott

*WHO*

### Ensuring compliance to standards – our view of where industry practices are now

Courtney Soulsby

*British Standards Institute*

### How does the industry work globally with manufacturing standards?

Steve Brooks

*AMR Industry Alliance*

### Panel discussion

#### “How can the risk of AMR development in production of antibiotics be mitigated?”

Amit Khurana, *CSE, India*

Wayne Muller, *Health Products Regulatory Agency, South Africa*

Courtney Soulsby, *BSI*

Kate Medicott, *WHO*

Steve Brooks, *AMRIA*

### How to register

Clicking the link will take you to a registration form, where you fill out your details and confirm your participation:

[Click here to register](#)

The MS Teams meeting link will be sent out to you in the week before the meeting and also on the day before. Please register by April 16 at the latest, since the RAGNA Secretariat is closed 18-21 April due to Easter Holidays.

Best wishes,

#### Katarina Lönnquist

*Global Project Manager*

*Regulatory Agencies Global Network against AMR*

#### Stefan Berggren

*Director*

*Swedish Knowledge Centre for Pharmaceuticals in the Environment*

#### Contact

If you should have any questions, please do not hesitate to contact us.

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RAGNA Coordination team

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