



# Phage-based Technologies Against AMR Conference

## 15-16 September 2016

### Organised and funded by:

- [EVOPROG](#) "General-Purpose Programmable Evolution Machine on a Chip" ([FET Proactive](#) project under contract number 610730)
- [INTEGRATE AMR](#) "Integrating Expertise Across Disciplines to Tackle Antimicrobial Resistance" (EPSRC 'Bridging the Gaps' project EP/M027503/1)

### With the participation of:

[PLASWIRES](#) consortium ([FET Proactive](#) project under contract number 612146).

Warwick Antimicrobial Resistance Interdisciplinary Centre

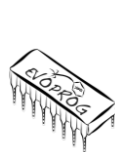
Twitter: @Warwick\_AMR

### Conference chair:

[Prof. Alfonso Jaramillo](#), Chair of Synthetic Biology, University of Warwick (Coventry, UK) & Directeur de Recherches CNRS, ISSB-CNRS-U. Evry (Evry, France). Coordinator of the EVOPROG consortium. Email: [Alfonso.Jaramillo@gmail.com](mailto:Alfonso.Jaramillo@gmail.com)

Twitter: @synth\_bio | @a\_jaramillo\_r | **Hashtag: #phtech16**

**Venue:** [The Other Place, Royal Shakespeare Company](#), Royal Shakespeare Theatre, Southern Ln, Waterside, Stratford-upon-Avon, Warwickshire, CV37 6BB, UK. Tel: 01789 403493.





**Thursday 15<sup>th</sup> Sep 2016. The Other Place, Royal Shakespeare Co., Stratford-upon-Avon, UK**

**13:00-14:00 Lunch and Arrivals**

**Session 1 – Phage and plasmid tools**

**14:00-14:10 Prof. Alfonso Jaramillo, University of Warwick, UK.**

Opening by conference chair

**14:10-14:50 Prof. Didier Mazel, Institute Pasteur, France.**

How to stabilize plasmids in bacteria: lessons from the secondary chromosomes of *Vibrio* species

**14:50-15:30 Prof. Alfonso Rodriguez-Paton, Universidad Politecnica de Madrid, Spain.**

Individual-based modeling of horizontal gene transfer with GRO

**15:30-16:10 Dr. Mark Isalan, Imperial College London, UK.**

Directed evolution of orthogonal dual transcription factors for multi-input synthetic promoters

**16:10-16:40 Coffee Break**

**16:40-17:20 Prof. Alfonso Jaramillo, University of Warwick, UK.**

Synthetic gene circuits by evolutionary technologies

**17:20-18:00 Prof. Victor de Lorenzo, CNB-CSIC, Madrid, Spain.**

Learning from the enemy: spreading beneficial traits through the global environmental microbiome

**18:00-18:40 Prof. Fernando de la Cruz, Universidad de Cantabria, Spain**

Bacterial conjugation and the fight against antibiotic resistance

**18:40-19:20 Prof. Jim Haseloff and Dr. Pakpoom Subsoontorn, Cambridge University, UK.**

Dynamic models of cell-cell interactions in synthetic biofilms

**19:45- Dinner at the Rooftop Restaurant of the Royal Shakespeare theatre** (included to all participants, but confirmation is required on the same day)



**Friday 16<sup>th</sup> Sep 2016. The Other Place, Royal Shakespeare Co., Stratford-upon-Avon, UK**

### **Session 2 – Phages against AMR**

**09:00-09:40 Prof. Andrzej Gorski, Polish Academy of Sciences, Poland.**

Phage therapy: today treating complications, tomorrow targeting diseases

**09:40-10:20 Prof. George Salmond, University of Cambridge, UK.**

The triumph of death: how bacteria control phage infection by altruistic suicide

**10:20-11:00 Prof. Stephen Abedon, Ohio State University, USA.**

Phage therapy from a pharmacological perspective: various perspectives on how to improve the art

**11:00-11:30 Coffee Break**

**11:30-11:50 Prof. Ramesh Wigneshweraraj, MRC Centre for Molecular Bacteriology & Infection, Imperial College London, UK.**

Phage-inspired inhibition of the bacterial transcription machinery.

**11:50-12:10 Dr. Antonia Sagona, University of Warwick, UK.**

Developing an *in vitro* model system for phage therapy against pathogenic *E.coli*

**12:10-12:30 Dr. Akos Nyerges, Hungarian Academy of Sciences, Hungary.**

Deciphering the Achilles' heel of multidrug resistant bacteria by novel genome engineering tools

**12:30-13:30 Lunch**

**13:30-14:30 Social activity: Royal Shakespeare Theatre Tour**

### **Session 3 – Towards Synthetic Phages**

**14:30-15:10 Prof. Ian Molineux, University of Texas at Austin, USA.**

A molecular basis for phage infection specificity of bacteria

**15:10-15:50 Dr. David Harper, Evolution Biotechnologies, UK.**

Bacteriophages as biological control agents

**15:50-16:30 Dr. Mark van Raaij, CNB-CSIC, Madrid, Spain.**

Structural analysis of bacteriophage receptor-binding proteins: towards phages with designed host specificity

**16:30-17:00 Coffee Break**

**17:00-17:40 Prof. Martha Clokie, University of Leicester, UK.**

Developing *Clostridium difficile* phages as novel therapeutics



**17:40-18:20 Dr. Udi Qimron, Tel Aviv University, Israel.**

Bacteriophages programmed to reverse antibiotic resistance of bacteria

**18:20-18:40 Dr. Freya Harrison, University of Warwick, UK.**

Building & dismantling chronic infection biofilm.

**18:40-19:00 Dr. Meera Unnikrishnan, University of Warwick, UK.**

Innovative tools for probing complex host-microbe interactions

**19:00-19:10 Close by conference chair**

**19:45- Dinner at the Rooftop Restaurant of the Royal Shakespeare theatre** (included to all participants, but confirmation is required on the same day)