YIRD 2019

META ORIGIN AND FUNCTION OF ORGANISMS
COLLABORATIVE RESEARCH CENTRE 1182

3rd Young Investigator Research Day

8-9 August 2019, Kiel, Germany

Metaorganism research & career development

Career

1st day sessions:

Keynote speaker

Dr. Mary Beth Decker, Yale

- Personal development
- Proposal writing tips
- Funding opportunities:

NKS Nationale Kontaktstellen zum EU-Programm Horizont 2020

DFG Deutsche Forschungsgemeinschaft

DAAD Germany

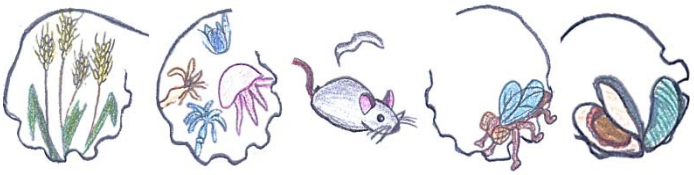
Science

2nd day sessions:

Keynote speaker

Prof. Paul Turner, Yale

- Metaorganism ecology & evolution
- Small scale host-microbe interaction
- Virus: Functional role & application



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Social

- *Networking BBQ*
- *Metaorganism PARTY*
- *Poster cross-talk*

Registration

until **10 July 2019**

No registration fee!
Social events included.

GEOMAR, Wischhofstrasse 1-3, 24148 Kiel, Germany

Organisers:

Cornelia Jaspers - GEOMAR
Jinru He - CAU

Email: yird2019@outlook.com

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C|A|U

GEOMAR

Y I R D 2019

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Thursday 8.8.2019

10:00-11:00: Registration & coffee

11:00-11:15: Opening & welcome: General outline of funding opportunities

11:15-12:00: Keynote Dr. M.B. Decker (Yale University): Women in science, career options in the US

12:00-12:30: German Exchange Service short & long term funding opportunities (Deutscher Akademischer Austauschdienst – DAAD) Cordula Behrsing cancelled to be presented by Cornelia Jaspers

12:30-13:00: How to build up a career in science Prof. P. Turner (Yale University, USA)

13:00-14:00: Lunch

14:00-14:45: Application for individual fellowships e.g. Marie Skłodowska-Curie Alexandra Pohl (NKS MSC, DLR Projektträger)

14:45-15:30: Science management - DFG as employer Astrid Evers

15:30-15:45: Coffee

15:45-17:15: Personal development - SWOT analyses (Ute Jülly)

17:15-17:30: Break

17:30-17:40*:* Group picture by Christian Urban

17:40-18:00: How to utilize strengths and weaknesses for future development (Ute Jülly)

18:00-18:45: What's the secret behind a successful academic career? Discussion round with Prof T. Bosch (Christian-Albrechts-Universität)

19:00- open: Networking *Metaorganism science BBQ*

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Friday 9.8.2019

08:45-09:00 Welcome

09:00-10:20 Metaorganism Ecology I

09:00-09:20 Mohamed-Amine Hassani

09:20-09:40 Ryszard Soluch

09:40-10:00 Jay Bathia

10:00-10:20 Fabian Nies

10:20-10:40 Poster Flash Mob I [4 min/each]

Florence Bansept, Lara Schmittmann, Christoph Giez, Barbara Pees, Kim-Sara Wagner

10:40-11:10 Coffee

11:10-12:30 Metaorganism Ecology II

11:10-11:30 Lucía Pita

11:30-11:50 Janina Lange

11:50-12:10 Julia Johnke

12:10-12:30 Michael Sieber

12:30-12:55 Poster Flash Mob II [4 min/each]

Georgios Marinos, Christine Blurton, Vaibhvi, Jakob von Frieling, Jelena Rajkov, Cornelia Jaspers

12:55-14:00 Lunch

14:00-15:40 Metaorganism Function

14:00-14:20 Román Zapién-Campos

14:20-14:40 Danielle Harris

14:40-15:00 Shauni Doms

15:00-15:20 Clinton Azuure

15:20-15:40 Felix Sommer

15:40-16:00 Metaorganism Discussion

16:00-16:15 YIRD2019 Award ceremony & Conclusion

16:30-18:00: Transport with ferry or bike to GEOMAR West shore building

18:00-18:05: Introduction by Prof. Thomas Bosch

18:05-19:00: Keynote Prof. Paul Turner (Yale) Virus and phage biodiversity: Potential in human therapy (all CRC members invited) to be held at GEOMAR West shore building

19:00-19:15: Award Ceremony of: Outstanding CRC Young Investigator Mentors

19:15-19:45: Reception with beer and wine

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Friday 9.8.2019

YIRD end

16:30-18:00: Transport with ferry or bike to GEOMAR West shore building

CRC 1182 Public lecture series (open to all)

18:00-18:05: Introduction by Prof. Thomas Bosch

18:05-19:00: Keynote Prof. Paul Turner (Yale) Virus and phage biodiversity: Potential in human therapy (all interested people welcome) to be held at GEOMAR West shore building

19:00-19:15: Award Ceremony of Outstanding CRC Young Investigator Mentors

19:15-19:45: Reception with beer and wine

CRC 1182 Event – only with registration (send mail to cjaspers@geomar.de)

20:00-open end: Networking Metaorganism Party (only for registered people)

Paul Tunrner
Virus and phage biodiversity: Potential in human therapy

Earth's biodiversity is numerically dominated by viruses that infect eukaryotes, and by phages which specifically use bacteria and archaea as hosts. Basic research on this teeming multitude yields new biological insights. In addition, these discoveries suggest that virus and phage biodiversity may be harnessed to solve difficult human problems. For example, the extreme genetic and species diversity of viruses is being used to develop oncolytic virotherapy, where tumor-destroying viruses provide alternative treatments against cancers. Also, the widespread failure of antibiotics predicts that human mortality from multidrug resistant bacterial infections will exceed cancer deaths in the coming decades, suggesting that classic phage therapy approaches should be reconsidered as possible solutions. This seminar concerns recent data on viruses and phages that are potentially useful in human therapy, especially success in bioprospecting for lytic phages that select against virulence and multidrug-resistance in target bacterial pathogens. Such phages bind to virulence-related proteins of bacteria and force evolutionary trade-offs: they kill the target bacteria, while selecting for these pathogens to evolve phage resistance by modifying (or losing) the virulence factor, causing bacterial pathogenicity to decrease, on average. Prime examples are phages that bind to bacterial proteins used in efflux (removal) of antibiotics from the cell; the phages kill susceptible bacterial cells while enriching for bacterial mutants that become re-sensitized to currently-failing antibiotics. Supportive data come from laboratory and animal studies, as well as from human cases where phages are used in emergencies to treat multidrug-resistant bacterial infections.