



MAX-PLANCK-GESELLSCHAFT

November 17-20, 2019

4th Ringberg Symposium on Giant Virus Biology

Ringberg Castle, Tegernsee, Germany

- Scientific Program -

Sunday, November 17

15:00 Arrival, Coffee & Cake
16:00 Welcoming Remarks

16:15 - 17:15 **Alexandra Worden**
MBARI, USA & GEOMAR Kiel, Germany
A Sea of Giant Viruses

17:30 - 20:00 **Poster Session**
Sandwiches & Beverages

Monday, November 18

08:00 - 09:00 Breakfast

Diversity of Giant Viruses

Chair: *Thomas Hackl*

09:00 - 09:30 **Ruth-Anne Sandaa**
University of Bergen, Norway
Diversity of Giant Viruses Infecting Haptophytes

09:30 - 10:00 **Grieg Steward**
University of Hawai'i Mānoa, USA
Viruses in the Sea: Why Be Big?

10:00 - 10:15 **Keizo Nagasaki**
Kochi University, Japan
How a 'Small Society' For 'Giant Viruses' Started a Quarter of a Century Ago

10:15 - 10:35 Coffee Break

Structure of Giant Virus Particles

In Memoriam Michael Rossmann

Chair: *Dennis Bamford with short intro*

10:45 - 11:00 **Chuan Xiao**
University of Texas at El Paso, USA
In Memoriam Michael Rossmann

11:00 - 11:30 **Thomas Klose**
Purdue University, USA
High-resolution Structures of Large dsDNA Viruses and What We Can Learn from Them

Monday, November 18 - continued

11:30-12:00 **Steven Wilhelm**
University of Tennessee, USA
The Proteome and Structure of the AaV Particle: a Virus With a Sweet Tooth

12:00 - 12:30 **Jim Van Etten**
University of Nebraska, USA
Chloroviruses Encode Many Glycosyltransferases

12:30 Lunch

Genetics and Cell Biology

Chair: *Corina Brussaard*

14:00 - 14:30 **Jean-Michel Claverie**
IGS Aix-Marseille University, France
A Spectacular Anomaly in the 4-mer Composition of the Giant Pandoravirus Genomes

14:30 - 14:45 **Matthieu Legendre**
IGS Aix-Marseille University, France
The DNA Methylation Landscape of Giant Viruses

14:45 - 15:00 **Motohiro Akashi**
Tokyo University of Science, Japan
DNA Replication, Repair, and Evolution of Giant Viruses

15:00 - 15:15 **Rodrigo Rodrigues**
Federal University of Ouro Preto, Brazil
Trapping the Enemy: Vermamoeba Vermiformis Circumvents Faustovirus Mariensis Dissemination by Enclosing Viral Progeny Inside Cysts

15:15 - 15:45 Coffee Break

Host-Virus(-Virophage) Interactions

Chair: *Eva Lievens*

15:45 - 16:00 **Steven Short**
University of Toronto Mississauga, Canada
The CpV System: Two Viruses, Three Virophages, and One Host?

Monday, November 18 - continued

16:00 - 16:30 **Chantal Abergel**
IGS Aix-Marseille University, France
*Exploration of the Propagation of
Transpovirons Within Mimiviridae
Reveals a Unique Example of
Commensalism in the Viral World*

16:30 - 17:00 **Matthias Fischer**
Max Planck Institute for Medical Research,
Germany
*Endogenous Virophages Populate the
Genomes of Cafeteria Roenbergensis*

17:00 - 17:30 **Assaf Vardi**
Weizmann Institute of Science, Israel
*Individuality in Host-Virus Interactions
in the Ocean*

17:30 Guided Tour of Ringberg Castle

18:30 Dinner

20:00 Podcast Recording
"This Week in Virology"
With Vincent Racaniello, Rich Condit,
Nels Elde & Guests

Tuesday, November 19

08:00 - 09:00 Breakfast

**Evolution of Nucleocytoplasmic
Large DNA Viruses**
Chair: Curtis Suttle

09:00 - 09:30 **Rich Condit**
University of Florida, USA
*Poxviruses: A Window on the World of
NCLDVs*

09:30 - 10:00 **Nels Elde**
University of Utah, USA
*Poxvirus Evolution: A Big Virus Among
Giants*

10:00 - 10:15 **Natalya Yutin**
National Institutes of Health, USA
*Comparative Genomics of Fish
Mimiviruses Provides Insights into
Animal Host Adaptation*

10:15 - 10:45 Coffee Break

10:45 - 11:00 **Morgan Gaia**
CEA Genoscope, France
*The Co-Evolution of NCLDVs and Their
Role in Eukaryogenesis*

Tuesday, November 19 - continued

11:00 - 11:30 **Eugene Koonin**
National Institutes of Health, USA
*Giants and Dwarfs in All Branches of the
NCLDV*

11:30 - 12:00 **Mart Krupovic**
Institut Pasteur, France
*Chimeric Scenario for the Origin of
Viruses*

12:00 - 12:15 **Curtis Suttle**
University of British Columbia, Vancouver,
Canada
*Viruses – Unlocking Secrets of the Most
Abundant ‘Life’ on Earth*

12:30 Lunch

Free Afternoon (Hiking, Discussions, Sports,
etc.)

16:00 - 16:30 Coffee Break

**Metagenomics, Isolation & Ecology
In Memoriam Disa Bäckström**
Chair: Jeffrey Blanchard

16:30 - 17:00 **Frederik Schulz**
Joint Genome Institute, USA
*Global Diversity of the Megavirales as
Determined by Metagenomic Analysis*

17:00 - 17:15 **Bernard La Scola**
IHU Aix-Marseille University, France
*Running After Metagenomics: New
Strategies and New Tools to Discover and
Study New Giant Viruses*

17:15 - 17:30 **Hiro Ogata**
Kyoto University, Japan
*Global Genetic Data Reveal Lineages of
Giant Viruses and Other Eukaryotic
Viruses Associated With Carbon Export
Efficiency*

17:30 - 18:00 **Philippe Colson**
IHU Aix-Marseille University, France
Giant Viruses in Humans

18:00 - 18:30 **Lutz Becks**
University of Constance, Germany
*The Molecular Evolution of Eco-
Evolutionary Dynamics in a Coevolving
Host-Virus System*

18:30 Conference Dinner

20:00 Open Mic (Music Room)
- Japanese Songs
- Virus Opera
- Paint Your Virus

Wednesday, November 20

08:00-09:00 Breakfast

Biochemistry

Chair: Sarah Duponchel

09:00 - 09:30 **Gerhard Thiel**

Technical University Darmstadt, Germany

Viral Membrane Transport Proteins:

They are Everywhere

09:30 - 10:00 **Jochen Reinstein**

Max Planck Institute for Medical Research,
Germany

***Illuminating Virus-Like Particles -
Probes and Tools for Visualizing
Mavirus Assembly and Infection***

10:00 - 10:15 **Yuejiao Xian**

University of Texas at El Paso, USA

***The Roles of Electrostatic Interactions
in Capsid Assembly Mechanisms of
Giant Icosahedral Viruses***

10:15 - 10:30 **Guy Schleyer**

Weizmann Institute of Science, Israel

***Mass Spectrometry Imaging of a Viral
Plaque Reveals a Metabolic Shift in
Emiliana Huxleyi***

10:30 - 11:00 Coffee Break

11:00 - 12:00 Final Discussion

12:00 Departure

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