

Program - AVW-11

Plenary - Sylvain Moineau

24/05/2023 9:00 to 9:45

9h00 CRISPR, the memory of past viral infections
Moineau, Sylvain

Talks 1

24/05/2023 10:15 to 11:45

- 10h15 The abundance, community structure, and monthly dynamics of cyanopodovirus populations over five years in Pacific surface waters
Ahlgren, Nathan - Fuhrman, Jed
- 10h30 Inter and intra-polar lakes contrasted biogeography of giant viruses
Pitot, Thomas - Roux, Simon - Schulz, Frederik - Culley, Alexander
- 10h45 Functional profiling and evolutionary analysis of a marine coccolithophorid virus pangenome
Lobb, Briallen - Shapter, Anson - Doxey, Andrew - Nissimov, Jozef
- 11h00 Resolving novel host-virus interactions in the marine environment at a single-cell resolution
Fromm, Amir - Hevroni, Gur - Vincent, Flora - Martinez-Gutierrez, Carolina A. - Schatz, Daniella - Aylward, Frank - Vardi, Assaf
- 11h15 Transcriptomics suggest mitomycin C is not useful for lysogeny research in freshwater cyanobacterial communities
Martin, Robbie - Pound, Helena - Chaffin, Justin - Wilhelm, Steven
- 11h30 Protist genomes are packed with polinton-like viruses and virophages
Bellas, Christopher - Hackl, Thomas - Plakolb, Marie-Sophie - Koslová, Anna - Fischer, Matthias - Sommaruga, Ruben

Plenary - Alison Buchan

24/05/2023 13:15 to 14:00

13h15 Host-phage interactions: why do they have to be so complicated?!
Buchan, Alison

Talks 2

24/05/2023 14:00 to 14:45

- 14h00 Uncovering the Diversity, Seasonal Dynamics, and Interactions of Antarctic Eukaryotic Viruses
Piedade, Gonçalo - Biggs, Tristan - Schön, Max Emil - Bolhuis, Henk - Fischer, Matthias - Yutin, Natalya - Dutilh, Bas - Brussaard, Corina
- 14h15 THE TRADEOFF BETWEEN RESISTANCE TO PHAGES AND NITROGEN FIXATION IN BLOOM-FORMING CYANOBACTERIA
Kolan, Dikla - Avrani, Sarit

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- 14h30 Small RNAs and metatranscriptomics: a window into the world of viruses infecting copepods
Chang, Tianyi - Hirai, Junya - Hunt, Brian - Suttle, Curtis

Talks 3

24/05/2023 15:00 to 16:00

- 15h00 Diverse Viruses Infect a Freshwater Prymnesiophyte
Short, Steven - Inamoto, Ichiro - Palermo, Christine
- 15h15 Influence of temperature on cyanobacteria-phage interactions
Arsenieff, Laure - Lindell, Debbie
- 15h30 Cometa virus, a tailed giant virus from a high-mountain lake
Fischer, Matthias - Hackl, Thomas - Mersdorf, Ulrike - Stadens, Nadia - Koslova, Anna - Bellas, Christopher - Sommaruga, Ruben
- 15h45 THE CURIOUS CASE OF CYANOBACTERIA: A TALE OF LIGHT AND DARKNESS
Lee, Victoria - Zheng, Sally - Meza-Padilla, Isaac - Nissimov, Jozef

Poster session 1

24/05/2023 16:00 to 17:00

- 16h00 A Deep Dive Into the Dark Virome Activity Using Metatranscriptomics
Finke, Jan - Savage, Rose-Lynne - Kellogg, Colleen - Suttle, Curtis
- 16h00 Analysis of virus-host interactions in Osaka Bay using MAG-based host prediction and virome method
Hamana, Shunsuke - Nishimon, Kohei - Yamamoto, Keigo - Kamikawa, Ryoma - Yoshida, Takashi
- 16h00 Cell-to-cell heterogeneity drives host virus coexistence between *Emiliana huxleyi* and its virus
Joffe, Nir - Kuhlisch, Constanze - Schleyer, Guy - Ahlers, Nadia - Vardi, Assaf
- 16h00 *Cuneo* sp. Virus, a New Giant Virus Infecting a Heterotrophic Protist
Yang, Qi - Chan, Amy - Deeg, Christoph M. - Suttle, Curtis
- 16h00 Diversity of Viral Communities in a Northern Temperate Lake through Metagenomics
Collis, Cody - Tromas, Nicolas - Nissimov, Jozef
- 16h00 ECOLOGICAL SIGNIFICANCE OF EXTRACELLULAR VESICLES IN MODULATING HOST-VIRUS INTERACTIONS DURING ALGAL BLOOMS
Schatz, Daniella - Schleyer, Guy - Saltvedt, Marius - Feldmesser, Ester - Sandaa, Ruth-Anne - Vardi, Assaf
- 16h00 Effects of phytoplankton-virus dynamics on carbon and nutrient flows in the Baltic Sea under current and future environmental conditions a comprehensive approach combining laboratory experiments and ecosystem modelling
Listmann, Luisa - Schaum, Elisa

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- 16h00 Enhancing commercial algal productivity: Investigation of the MicroVirome constituents
Levesque, Alice - Rabines, Ariel - Steinhauer, Clara - Alrubaijan, Entesar - Oliver, Aaron - Podell, Sheila - Allen, Eric - Fulbright, Scott - Hazlebeck, Dave - Lane, Todd - Mahan, Kristina - Pinowska, Aga - Traller, Jesse - Zeigler Allen, Lisa
- 16h00 EXPLORING THE TRANSCRIPTIONAL PLASTICITY OF ALGAL RESPONSE TO VIRAL INFECTION THAT ENABLES THEIR COEXISTENCE
Sima Shaler, Talia - Joffe, Nir - Feldmesser, Ester - Schatz, Daniella - Vardi, Assaf
- 16h00 Historical dynamics and molecular diversity of *Heterocapsa circularisquama* RNA virus
Takahashi, Michiko - Wada, Kei - Urayama, Syun-ichi - Masuda, Yuichi - Chiba, Yuto - Tomaru, Yuji - Nagasaki, Keizo
- 16h00 INTER-ANNUAL COMPARISON OF VIRAL LYSIS AND MICROZOOPLANKTON GRAZING RATES OF ANTARCTIC PHYTOPLANKTON
Biggs, Tristan - Piedade, Gonalo - Evans, Claire - Brussaard, Corina
- 16h00 Interruption of Diel Cycling of *Aureococcus anophagefferens* By a Giant Virus
Truchon, Alexander - Chase, Emily - Creasey, Brooke - Stark, Ashton - Wilhelm, Steven
- 16h00 Recurring cyanophage infection results in increased fitness rather than changes in host range
Greenbaum, Jonathan - Lindell, Debbie
- 16h00 Mixed infection of different mimivirus lineages highlights mechanisms that drive viral speciation
Hikida, Hiroyuki - Ogata, Hiroyuki
- 16h00 Pathogens and passengers: roles for crustacean zooplankton viruses in the ocean
Roberts, Alastair - Suttle, Curtis
- 16h00 Pervasive host-virus-virophage interactions in the marine alga *Bigelowiella natans*
Schön, Max Emil - Malkewitz, Silja - Schvarcz, Christopher - Koslova, Anna - Hackl, Thomas - Mersdorf, Ulrike - McBeain, Kelsey - Edwards, Kyle - Steward, Grieg - Fischer, Matthias
- 16h00 Polar adaptations of marine eukaryotic viruses are reflected in gene repertoires
Meng, Lingjie - O. Delmont, Tom - Gaïa, Morgan - Pelletier, Eric - Fernández-Guerra, Antonio - Chaffron, Samuel - Y. Neches, Russell - Wu, Junyi - Kaneko, Hiroto - Endo, Hisashi - Ogata, Hiroyuki
- 16h00 Seasonal variation in viral assemblages related to a persistent brown tide bloom
Walker, Jordan - Bachand, Paxton - Turner, Jeffrey - Labonté, Jessica
- 16h00 Shift in Marine Viral Life Traits in Pairwise versus Community Settings
Dey, Raunak - Coenen, Ashley - Solonenko, Natalie - Sun, Christine - Burris, Marie - Domínguez-Huerta, Guillermo - Mackey, Anna - Chittick, Lauren - Demory, David - Beckett, Stephen - Sullivan, Matthew - Weitz, Joshua S.
- 16h00 Stand-alone and integrated 'Mirusviricota'-like genomic elements in a thraustochytrid protist
Gallot-Lavallée, Lucie - Archibald, John - Collier, Jackie - Rest, Joshua
- 16h00 Studying the unknown mechanisms of resistance to viral infection in marine algae
Labbell, Ben - Schatz, Daniella - Sanchez, Frédéric - Vincent, Flora - Ben-Dor, Shifra - Yau, Sheree - Vardi, Assaf

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- 16h00 The diversity and abundance of metagenomic viral populations over a 48 hour diel and tidal cycle reflect phenotypic infection dynamics
Ferrell, Barbra - Dums, Jacob - Schreiber, Zachary - Keown, Rachel - Polson, Shawn - Wommack, Eric
- 16h00 THE ROLE OF PHOTOSYNTHESIS IN A MODEL MICROALGAE-VIRUS SYSTEM: AUREOCOCCUS ANOPHAGEFFERENS AND FLOREOVIRUS QUANTUCKENSIS
Chase, Emily - Truchon, Alexander - Creasey, Brooke - Wilhelm, Steven
- 16h00 Viral infection of algal blooms leaves a halogenated footprint on the marine DOM pool
Kuhlisch, Constanze - Schleyer, Guy - Ben-Asher, Shira - Nussbaum, Inbal - Ben-Dor, Shifra - Vardi, Assaf
- 16h00 Viral infection of winter phytoplankton communities in a North American Great Lake revealed through metatranscriptomics
Denison, Elizabeth - Zepernick, Brittany - Bullerjahn, George - McKay, R. Michael - Wilhelm, Steven

Plenary - Jessica Labonté

25/05/2023 9:00 to 9:45

- 9h00 How are extreme events such as hurricanes and flooding impacting viral assemblages?
Labonté, Jessica - Woods, Alaina - Walker, Jordan

Talks 1

25/05/2023 10:15 to 11:45

- 10h15 SO MANY VIRUSES, SO LITTLE PATHOLOGY: WHAT VIROMES HAVE TOLD US ABOUT THE NATURE OF ECHINODERM-VIRUS ASSOCIATIONS
Hewson, Ian
- 10h30 The efficient co-evolution of NCLDV's through virus-to-virus horizontal gene transfer
Wu, Junyi - Meng, Lingjie - Gaia, Morgan - Hikida, Hiroyuki - Okazaki, Yusuke - Endo, Hisashi - Ogata, Hiroyuki
- 10h45 Conservation of CRISPR-based immunity in a decade of Microcystis-phage interactions in a natural lake
Tomas, Nicolas - Biswas, Ambarish - Castelli, Mathieu - Somerville, Vincent - Shapiro, Jesse
- 11h00 SUB-TELOMERIC REGIONS IN ACANTHAMOEBA GENOMES: VIRAL GENE GRAVEYARDS OR LAUNCH PADS FOR INTEGRATION?
Blais, Cédric - Colp, Morgan - Wuotila, Jack - Archibald, John
- 11h15 Intraspecific interactions between Heterosigma akashiwo and its virus HaV
Morimoto, Daichi - Funaoka, Yusaku - Hiromoto, Haruna - Takahashi, Michiko - Wada, Kei - Nagasaki, Keizo
- 11h30 Chloroviruses Encode Many Glycosyltransferases
Van Etten, James - Agarkova, Irina - Speciale, Immacolata - De Castro, Cristina

Program -

Plenary - Frank Aylward

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13h15 Plenary - Frank Aylward

Talks 2

25/05/2023 14:00 to 15:00

- 14h00 From the host perspective: the antiviral arsenal of marine prokaryotes revealed by single-cell genomics
Weinheimer, Alaina - Chang, Tianyi - Gavelis, Gregory - Brown, Julia - Stepanauskas, Ramunas
- 14h15 Hybrid metagenomics unveils daily dynamics and ecological parameters of diverse marine Nucleocytoviricota
Gomez, Annika - Elsherbini, Joseph - Martin-Platero, Antonio - Cordero, Otto - Polz, Martin
- 14h30 Possible molecular mechanism determining complicated intraspecific infection specificity of Heterosigma akashiwo virus (HaV)
Funaoka, Yusaku
- 14h45 Eukaryotic viruses associated with aquatic plants
Breitbart, Mya - Rosario, Karyna - Van Bogaert, Noemi - Ritchie, Isabella

Talks 3

25/05/2023 15:15 to 16:00

- 15h15 Cyanophage auxiliary metabolic protein NbIA is directly involved in phycobilisome degradation in infected marine Synechococcus
Nadel, Omer
- 15h30 Infection Strategy Encoded by Marine Giant Viruses Haptolina ericina Virus RF02 and Pymnesium kappa Virus RF02
Wang, Haina - Saltvedt, Marius - Blanc-Mathieu, Romain - Dahle, Håkon - Ugartemendia, Sara - Castro, Gabriela - Stokke, Runar - Steen, Ida - Martin, Carmen - Ogata, Hiroyuki - Sandaa, Ruth-Anne
- 15h45 Untangling the infection outcome of host-virus dynamics in algal blooms in the ocean
Vardi, Assaf - Vincent, Flora - Kuhlisch, Constanze - Schleyer, Guy - Hevroni, Gur - fromm, Amir - Joffe, Nir - Labbel, Ben - Sima Shaler, Talia - Schatz, Daniella

Poster session 2

25/05/2023 16:15 to 17:15

- 16h15 Assessing Prophage Induction in Roseobacteraceae Member Sulfitobacter pontiacus Following Environmental Stress
Jackson, Cameron - Britt, Anna-Stuart - May, Frank - Buchan, Alison
- 16h15 Cyanophage species are widely distributed along the US Atlantic Coast
Ouellette, Veronica - Briggs, Michael - Dickson, Jemma - Ferrell, Barbra - Polson, Shawn - Wommack, Eric - Marston, Marcia

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- 16h15 Eco-evolutionary dynamics of temperate viruses in periodic environments
Goel, Tapan - Weitz, Joshua S.
- 16h15 Elucidation of a novel plasmid-dependence by marine phage
May, Frank - Guzel, Mustafa - Jackson, Cameron - Edwards, Hannah - Buchan, Alison
- 16h15 Exploring viral communities in serpentinizing environments
Simeon, Oladapo - Culley, Alexander - Lang, Andrew - Morrill, Penny
- 16h15 Genomic Analysis of Mobile Genetic Elements in the Roseobacteraceae species *Sulfitobacter pontiacus*
Guzel, Mustafa - May, Frank - Jackson, Cameron - Buchan, Alison
- 16h15 Genomic Characterization of Cyanophages in the Nebraska Sandhills Alkaline Lakes
Marston, Marcia - Ghosh, Jayadri - Carlson, Roger - Dunigan, David
- 16h15 High cyanophage infection in the South Pacific Ocean
Shopen Gochev, Camelia - Demory, David - Weitz, Joshua S. - Lindell, Debbie
- 16h15 Hot and Salty: Atlantis II Deep Brine Pool harbours unique viral communities
Zhong, Kevin Xu - Sanger, Alia - Ziegler, Maren - Woodcroft, Ben - Rowe, Katherine - Brüwer, Jan - Chan, Amy - Tyson, Gene - Voolstra, Christian - Suttle, Curtis
- 16h15 Identification and characterization of host take-over genes in T4-like cyanophages
Tahan, Ran - Lindell, Debbie
- 16h15 Identification and Characterization of Host Take-Over Genes in T7-like Cyanophages
Said, Bashir - Lindell, Debbie
- 16h15 Infection Patterns Among Co-Occurring *Synechococcus* and Cyanophages in Narragansett Bay, Rhode Island, USA
Briggs, Michael - Mackenzie, Cammi - Mullis, Megan - Ahlgren, Nathan - Marston, Marcia
- 16h15 Latent period variability affects virus-microbe dynamics
Dominguez-Mirazo, Marian - Demory, David - Harris, Jeremy - Weitz, Joshua S.
- 16h15 Modeling coalition formation in genetically similar temperate phages with a shared host
Harris, Jeremy - Goel, Tapan - Weitz, Joshua S.
- 16h15 Multiple viruses infecting a single cyanobacterial population dominating in Osaka Bay revealed by the multiple-omics analyses
Ashitani, Tomoka - Nishimon, Kohei - Tominaga, Kento - Takebe, Hiroaki - Fujiwara, Kentaro - Tatsuhiro, Isozaki - Yamamoto, Keigo - Kamikawa, Ryoma - Yoshida, Takashi
- 16h15 Passive and Active Selection Generates Viral Resistance in *Microcystis aeruginosa*
Smith, Laura - Martin, Robbie - Wilhelm, Steven

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- 16h15 Phylogenetic diversity and functional potential of large and cell-associated viruses in the Bay of Bengal
Minch, Benjamin - Rahman, Md Shaminur - Ahmed, Md Firoz - Moniruzzaman, Mohammad
- 16h15 Ribonucleotide reductase genes influence the ecology of marine viruses
Harrison, Amelia - Moore, Ryan - Ferrell, Barbra - Wommack, Eric
- 16h15 Synechococcus and cyanophage communities across Atlantic estuaries are largely interconnected but occasionally exhibit decoupled patterns
McIlvenna, Cameron - Marston, Marcia - Ahlgren, Nathan
- 16h15 Temperature changes that drive increased cyanotoxin production also lead to "phage resistant" mutants in *Microcystis aeruginosa* NIES 298
Hambrick, Kennedy - Smith, Laura - Martin, Robbie - Zinser, Erik - Talmy, David - Wilhelm, Steven
- 16h15 The viral diversity and host interactions in cryoconite holes on the Ward Hunt Ice Rise
Cadore, Karel
- 16h15 Unwinding the world of Viral Genetic Diversity: Helicases as phenotypic marker genes
Keown, Rachel - Schreiber, Zach - Ferrell, Barbra - Wommack, Eric - Polson, Shawn

Plenary - Sheree Yau

26/05/2023 9:00 to 9:45

- 9h00 Virus and host perspectives in the Prasinovirus-O. tauri model system
Yau, Sheree - Thomy, Julie - Pontier, Dominique - Lagrange, Thierry - Gourbiere, Sebastien - Demory, David - Piganeau, Gwenael - Sanchez, Frédéric - Lamothe, Laure - Grimsley, Nigel

Talks 1

26/05/2023 10:15 to 11:45

- 10h15 COVARIATION BETWEEN CYANOPHAGE ABUNDANCE, INFECTION FREQUENCY AND MARINE CYANOBACTERIA IN THE NORTH PACIFIC OCEAN
Sulcius, Sigita - Carlson, Michael C.G. - Kirzner, Shay - Lindell, Debbie
- 10h30 Virus competition for same algal host
Meyer, Claudia - Jackson, Victoria - Monier, Adam - Bolhuis, Henk - Brussaard, Corina
- 10h45 Effects of viral infection for marine eukaryotic microalgae on prokaryotic community dynamics
Yoshida, Takashi - Takebe, Hiroaki - Hiromoto, Haruna - Kitagawa, Natsuko - Watanabe, Tetsuhiro - Yamamoto, Keigo - Nagasaki, Keizo - Kamikawa, Ryoma
- 11h00 A model of algal-virus population dynamics reveals underlying controls on material transfer
Talmy, David - Hinson, Audra - Fiet, Lucas - Papoulis, Spiridon - Knight, Margaret - Cho, Priscilla - Szeltner, Brielle - Sgoualis, Ioannis
- 11h15 Investigating viral predation impacts across upwelling filaments in the California Current Ecosystem
Schwenck, Sarah - Lévesque, Alice - Stukel, Michael - Landry, Michael - Allen, Andrew - Zeigler Allen, Lisa

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- 11h30 A dinoflagellate-infecting mimivirus with an extremely long tail extending up to 2.3 μm
Gajigan, Andrian - Schvarcz, Christopher - Culley, Alexander - Edwards, Kyle - Steward, Grieg

Plenary - Jed Fuhrman

26/05/2023 14:30 to 15:15

- 14h30 Lessons from virus research at the San Pedro Ocean Time Series and vicinity
Fuhrman, Jed

Talks 2

26/05/2023 15:45 to 17:00

- 15h45 Persistent RNA Viruses of Aquatic Protists
Yang, Qi - Suttle, Curtis
- 16h00 Revealing the Hidden Majority: Improving Marine Viral Metagenomics through Long- read Sequencing
Warwick-Dugdale, Joanna - Tian, Funing - Allen, Michael - Sullivan, Matthew - Temperton, Ben
- 16h15 Imaging marine virus CroV and its host Cafeteria roenbergensis with cryogenic Correlative Light and Electron Microscopy
Dong, Rui - Xian, Yuejiao - Madariaga, Alberto - Reza, Elizabeth - Zhang, Chensong - Joubert, Lydia-Marie - Chiu, Wah - Fischer, Matthias - Xiao, Chuan
- 16h30 Cyanophage Genomic Microdiversity Influences Infection Dynamics
Marston, Marcia - Matthews, Molly - Watlington, Nathan
- 16h45 Virovory - So Many Little Mouths to Feed
Dunigan, David - Van Etten, James - Al-Ameeli, Zeina - Agarkova, Irina - DeLong, John