

Final program of the ProSynFest2022 Workshop and Conference

Cordoba (Spain), March 16-19, 2022

Date	Time	Event or Course	
Wednesday March 16th WORKSHOP	8:30-9:00	Registration of workshop attendants / Welcome tea, coffee, ...	
	<i>Parallel sessions</i>	<i>Laboratory track</i>	<i>Computational track</i>
	9:00-10:00	Culturing picocyanobacteria Contributors: Allison Coe (on-line) & Lisa Moore	Rekha Seshadri: Comparative genomics for gene discovery using Integrated Microbial Genomes (IMG)
	10:00-11:00	Marine cyanophages Contributor: Debbie Lindell	
	11:00-11:30	Coffee break	
	11:30-13:00	Vesicles and Lipids Contributors: Steven Biller (on-line) & María del Carmen Muñoz-Marín	Bonnie Hurwitz: Planet Microbe: a cyberinfrastructure for integrating oceanographic omics, environmental and physiochemical data layers
	13:00-14:00	Lunch	
	14:00-15:30	Genetics in Cyanobacteria Contributors: David Kehoe, David Lea-Smith, Nikolai Radzinski & Giovanna Capovilla (on-line)	Frédéric Partensky & Gregory K. Farrant: Cyanorak v2.1: a scalable information system dedicated to the visualization and expert curation of genomes from the Cyanobacteria Cluster 5 radiation
	15:30-16:00	Coffee break	
	16:00-17:30	Genetics in Cyanobacteria (cont'd)	Peter Karp (on-line) & Lisa Moore: Curated Cyanobacterial Databases at the BioCyc.org Microbial Genome Web Portal
	17:30-18:30		Mohammad Dehghani Ashkezari & Ginger Armbrust & (on-line): Simons CMAP: an interconnected oceanic data portal
	19:30	Welcome of all participants to the conference Equestrian show at Caballerizas Reales / Drinks + appetizers	

	Time	Event	Speakers/Organizers
Thursday March 17 th CONFERENCE DAY 1	8:00-8:30	registration of the remaining participants / coffee	Conference center staff, local committee & granted students
	8:30-9:00	Inauguration of the conference: welcome addresses from organizers and local representatives	
	Session 1: Ecology, distribution and dynamics: past, present and future. Chairs: W. Hess (morning) / L.R. Moore (afternoon)		
	9:00-9:25	S1-invited talk 1: A short story of the diversity and activity of cyanobacteria in the global ocean	Zackary Johnson
	9:25-9:50	S1-invited talk 2 (on-line): Diversity and adaptation of <i>Synechococcus</i> in estuarine waters	Liu Hongbin
	9:50-10:15	S1-invited talk 3 (on-line): Comparative and ecological genomics of marine picocyanobacterial	Laurence Garczarek
	10:15-10:40	S1-invited talk 4 (on-line): Faster growth of the major prokaryotic versus eukaryotic CO ₂ fixers in the oligotrophic ocean	Mikhail Zubkov
	10:40-10:55	S1-short talk 1: Novel constraints improve divergence time estimates for picocyanobacteria, suggesting a history marked by mass extinctions and recoveries	Gregory Fournier
	10:55-11:15	Coffee break	
	11:15-11:40	S1-invited talk 5: Ecological controls of <i>Prochlorococcus</i> and <i>Synechococcus</i> global distributions now and in the future	Stephanie Dutkiewicz
	11:40-11:55	S1-short talk 2 (on-line): <i>Synechococcus</i> spp. living in the mesopelagic anoxic realm of the black sea	Cristiana Callieri
	11:55-12:10	S1-short talk 3: <i>Synechococcus</i> tolerance to environmental stressors in the warm Red Sea	Susana Agustí
	12:10-12:25	S1-short talk 4: When are niche models predictive?: Reconciling opposing predictions for <i>Prochlorococcus</i> in a warming ocean	Christopher Follett
	12:25-12:40	S1-short talk 5: Proteome mapping of a cyanobacterium reveals distinct compartment organisation and cell dispersed metabolism	David Lea-Smith
	12:40-12:55	S1-short talk 6 (on-line): Picocyanobacteria in Inland Seas	Maureen Coleman
	13:00-14:00	Lunch in conference center	
	14:00-14:50	Keynote speech (on-line): <i>Prochlorococcus</i> : Then and now	Sallie W. (Penny) Chisholm
	14:50-15:15	S1-invited talk 6 (on-line): Seasons of <i>Syn</i> : insights into the annual patterns of a coastal <i>Synechococcus</i> population from <i>in-situ</i> flow cytometry	Kristen Hunter-Cevera
	15:15-15:40	S1-invited talk 7: Understanding ocean biogeochemical cycles through the lens of <i>Prochlorococcus</i> and <i>Synechococcus</i>	Adam C. Martiny
	15:40-16:05	S1-invited talk 8: Exploring the diverse functional attributes of marine cyanobacteria in natural populations	Mak Saito
	16:05-16:25	Coffee break	
16:25-16:50	S1-invited talk 9 (on-line): Data driven models of <i>Prochlorococcus</i> and <i>Synechococcus</i> abundance distributions	Ginger Armbrust	

Thursday March 17 th CONFERENCE DAY 1 (cont'd)	16:50-17:05	S1-short talk 7 (on-line): Genomic mosaicism underlies the adaptation of marine <i>Synechococcus</i> ecotypes to several, distinct oceanic iron niches		Nathan Ahlgren	
	17:05-17:20	S1-short talk 8: Thermal acclimation and nutrient availability control <i>Prochlorococcus</i> cell division in surface waters		François Ribalet	
	Session 2: Physiology, gene regulation and metabolism. Chair: C. Steglich				
	17:20-17:35	S2-short talk 9: Molecular mechanisms of thermal acclimation in <i>Prochlorococcus marinus</i> MIT9301		Laura Alonso Saez	
	17:35-17:50	S2-short talk 10 (on-line): <i>Prochlorococcus</i> strains employ different photosynthetic strategies under distinct conditions of oxygen concentration and light availability: mining the Ocean Protein Portal		Amanda Cockshutt	
	17:50-19:05	1st Poster session: 2 parallel sessions/10 time slots/5 posters in each slot			Non-presenting attendees circulate among the two parallel sessions
	17:50-18:05	Slot 1/Room 1	Slot 1/Room 2		
	18:05-18:20	Slot 2/Room 1	Slot 2/Room 2		
	18:20-18:35	Slot 3/Room 1	Slot 3/Room 2		
	18:35-18:50	Slot 4/Room 1	Slot 4/Room 2		
18:50-19:05	Slot 5/Room 1	Slot 5/Room 2			
20:00-21:30	Banquet				
Friday March 18 th CONFERENCE DAY 2	9:00-9:50	Keynote speech 2 (on-line): Four decades of research on marine <i>Synechococcus</i> : a globally important phototroph		David J. Scanlan	
	Session 2 (continued): Physiology, gene regulation and metabolism. Chairs: P. Berube (morning) / A. Martiny (afternoon)				
	9:50-10:15	S2-invited talk 10: From glutamine synthetase to glucose uptake: 25 years working on N and C metabolism in marine picocyanobacteria		José M. García-Fernández	
	10:15-10:40	S2-invited talk 11: Evolution and diversity of <i>Synechococcus</i> phycobilisomes		Frédéric Partensky	
	10:40-11:00	Coffee break			
	11:00-11:25	S2-invited talk 12: Chromatic acclimation in <i>Synechococcus</i> : Mechanisms and regulation		David M. Kehoe	
	11:25-11:40	S2-short talk 11: Small things reconsidered: The dark matter of genetics in Cyanobacteria		Wolfgang Hess	
	11:40-11:55	S2-short talk 12: Redefining the paradigm: Are substrate binding proteins in cyanobacteria scavenging diverse nutrients?		Bhumika Shah	
	11:55-12:20	S2-invited talk 13: Gene regulation with non-coding RNAs in <i>Prochlorococcus</i>		Claudia Steglich	
	12:20-12:45	S2-invited talk 14 (on-line): Feeling Blue? Feeling Low? <i>Prochlorococcus</i> , light & oxygen		Douglas Campbell	
	12:45-13:00	S2-short talk 13 (on-line): The evolution of siderophore use in <i>Prochlorococcus</i>		Shane Hogle	
	13:00-14:00	Lunch in conference center			
	14:00-14:25	S2-invited talk 15: How does leachate from plastic pollution affect marine primary producers?		Lisa R. Moore	
14:25-14:50	S2-invited talk 16 (on-line): Ecophysiology of marine picocyanobacteria, one cell at a time		Solange Duhamel		

Friday March 18 th CONFERENCE DAY 2 (cont'd)	14:50-17:40	2d Poster session (face-to-face – all printed posters) 14:50-16:15 even numbers 16:15-17:40 odd numbers	Attendees on site only Coffee/tea will be served around 16:15 without a break
	Evening	Free time or commented visit of the Mosque (start at 17:45)	
		Dinner in town	Attendees on their own
Saturday March 19 th CONFERENCE DAY 3	Session 2 (continued): Physiology, gene regulation and metabolism. Chair: D. Kehoe		
	9:00-9:25	S2- invited talk 17: Indigenous <i>Prochlorococcus</i> from oxygen-depleted oceanic waters	Osvaldo Ulloa
	9:25-9:50	S2-invited talk 18: Emerging complexity of N cycling in <i>Prochlorococcus</i> populations	Paul M. Berube
	9:50-10:15	S2-invited talk 19: Identifying the role of transport in open ocean cyanobacterial symbionts by expression in model heterologous systems	Rachel Foster
	10:15-10:30	S2-short talk 14: Electron transport and carbon metabolism in low-light and high-light ecotypes of <i>Prochlorococcus marinus</i>	Ondrej Prasil
	10:30-10:45	S2-short talk 15: Stabilization of extensive fine-scale diversity by dispersal and ecologically driven spatio-temporal chaos	Daniel Fisher
	10:45-11:05	Coffee break	
	Session 3: Predation and trophic interactions. Chairs: E. Zinser (morning) / D. Lindell (afternoon) / R. Foster (after roundtables)		
	11:05-11:30	S3-invited talk 20: Coexistence and resistance among cyanobacteria and their phages in the oceans	Debbie Lindell
	11:30-11:45	S3-short talk 16 (on-line): Temporal transcriptional patterns of cyanophage genes suggest synchronized infection of cyanobacteria in the oceans	Qinglu Zeng
	11:45-12:00	S3-short talk 17: Extracellular vesicles secreted by <i>Synechococcus</i> : effect of stress in their production and content	María del Carmen Muñoz-Marín
	12:00-12:15	S3-short talk 18 (on-line): Integrative elements abundant in marine vesicles shape <i>Prochlorococcus</i> genomic plasticity	Thomas Hackl
	12:15-12:30	S3-short talk 19: Biochemical characterization of cyanophage encoded auxiliary metabolic proteins give insights into their role during infection	Nicole Frankenberg-Dinkel
	12:30-12:45	S3-short talk 20: Pico-parachutes: marine picocyanobacteria use pili as a strategy to retain optimal positions in the water column and evade predation	Joseph Christie-Oleza
	12:45-13:00	S3-short talk 21: Macroplanktonic pelagic tunicates prey on picocyanobacteria	Anne Thompson
	13:00-14:00	Lunch in conference center	
	14:00-14:25	S3-invited talk 21: <i>Prochlorococcus</i> and <i>Synechococcus</i> : Friends, enemies, frenemies?	Erik Zinser
14:25-14:50	S3-invited talk 22 (on-line): Cyanobacterial extracellular vesicles: origins, contents, and community interactions	Steven J. Biller	
14:50-15:05	S3-short talk 22: With a little help from my friends: <i>Prochlorococcus</i> survival and growth under low nutrient and energy conditions through metabolic interactions with heterotrophs.	Daniel Sher	

	15:05-15:20	S3-short talk 23 (on-line): Proteomics of nitrogen incorporation in <i>Synechococcus</i> , <i>Prochlorococcus</i> and their phage		Jacob Waldbauer	
	15:20-15:35	S3-short talk 24 (on-line): Cyanovirocell infochemicals driving microbial interactions		Sheri Floge	
	15:35-16:00	S3-invited talk 23 (on-line): Experimental evolution of a simple <i>Prochlorococcus</i> community		Jeffrey Morris	
	16:00-16:20	Coffee break			
Saturday March 19th CONFERENCE DAY 3 (cont'd)	16:20-17:00	3rd Poster session: 2 parallel time slots with 6 posters each			Non-presenting attendees circulate among the parallel events
	16:20-16:40	Slot 6/Room 1	Slot 6/Room 2		
	16:40-17:00	Slot 7/Room 1	Slot 7/Room 2		
	17:00-17:50	Parallel roundtables: - R1: Phylogenomics and species/genus concept: Co-chairs: W. Hess, F. Partensky, P. Cabello-Yeves & V. Salazar - R2: New flow technologies for analyzing picocyanos: Co-chairs: F. Ribalet, A. Thompson & K. Hunter-Cevera - R3: Exploiting the wealth of metagenomics data: Co-chairs: L. Garczarek, A. Martiny D. Scanlan & P. Berube			
	17:50-18:30	Keynote speech 3: Cyanobacteria in symbiosis: learning from new models		Jonathan P. (Jon) Zehr	
	18:30-19:00	Wrap up, general discussion and concluding remarks by organizers		All attendees	
	19:00	End of conference Dinner in town		Attendees on their own	