

SCIENTIFIC PROGRAM (first complete version) -- OLD2023
Palacio Miramar, Donostia- San Sebastian, Basque Country, Spain--- Oct 2-4 (2023)

| TIME / DAY | Monday, Oct 2 | Tuesday, Oct 3 | Wednesday, Oct 4 |
|---------------|------------------------------|-----------------------------|-----------------------------|
| 8:00 – 9:00 | Registration & welcome (krm) | | |
| 9:00 – 10:00 | - Jack Szostak | - Karin Oberg | - Ram Krishnamurthy |
| 10:00 – 10:30 | - Edoardo Gianni (OC1) | - Grégoire Danger (OC6) | - Andrés dl Escosura (OC11) |
| 10:30 – 11:00 | - Christof Mast (OC2) | - Martina Preiner (OC7) | - Yannick Geiger (OC12) |
| 11:00 – 11:30 | <i>Coffee break</i> | <i>Coffee break</i> | <i>Coffee break</i> |
| 11:30 – 12:15 | - Matthew Powner | - Dora Tang | - Peter Walde |
| 12:15 – 12:45 | - Klara Hlouchova (OC3) | - Anju Tomar (OC8) | - Nathalie Katsonis (OC13) |
| 12:45 – 13:00 | - Short (3min) poster comm. | - Short (3min) poster comm. | - Short (3min) poster comm. |
| 13:00 – 14:30 | <i>Lunch break</i> | <i>Lunch break</i> | <i>Lunch break</i> |
| 14:30 – 15:30 | - Irene Chen | - Daniel Segré | - Claudia Bonfio |
| 15:30 – 16:00 | - Antonio Lazcano (OC4) | - Emilie Werner (OC9) | - Nemanja Cvjetan (OC14) |
| 16:00 – 16:15 | - Short (3min) poster comm. | - Short (3min) poster comm. | - Short (3min) poster comm. |
| 16:15 – 16:45 | <i>Coffee break</i> | <i>Coffee break</i> | <i>Coffee break</i> |
| 16:45 – 17:30 | - Joana Xavier | - Joseph Moran | - Sheref Mansy |
| 17:30 – 18:00 | - Quoc Phuong Tran (OC5) | - Robert Pascal (OC10) | - Alvaro Moreno (OC15) |
| 18:00 – 18:30 | | | Recap & conclusion (krm) |

KEYNOTES: 45 min + 15 min (questions/debate) // Invited: 35 min + 10 min (q/d) // OC: 25 min + 5 min (q/d)

Scientific Program

Monday, Oct. 2

8:00 – Registration + poster setup (day 1)

8:30 – Welcome by **Kepa Ruiz-Mirazo**

Early morning session -- Chairperson: Sheref Mansy

9:00 – **Jack Szostak** (**Opening Keynote Lecture**): Why did biology begin with RNA and not some other genetic material?

10:00 – **Edoardo Gianni** (**Oral Comm. 01**): In vitro evolution of ribozymes for self-synthesis

10:30 – **Christof Mast** (**Oral Comm. 02**): Physical non-equilibrium environments as prebiotic selector

11:00 – Coffee Break

Late morning session -- Chairperson: Joseph Moran

11:30 – **Matthew Powner** (**Invited Speaker**): On the cyanosulfidic origins of peptides, nucleotides, and metabolism

12:15 – **Klara Hlouchova** (**Oral Comm. 03**): Why these amino acids and not others?

12:45 – Short Poster Presentation (up to 5 -- 3min each)

13:00 – Lunch Break

Early afternoon session -- Chairperson: Dora Tang

14:30 – **Irene Chen** (**Keynote Lecture**): Keeping it together: from protocells to phages

15:30 – **Antonio Lazcano** (**Oral Comm. 04**): On the nature of cellular genomes before DNA: insights from the RNA virosphere

16:00 – Short Poster Presentation (up to 5 -- 3min each)

16:15 – Coffee Break

Late afternoon session -- Chairperson: Robert Pascal

16:45 – **Joana Xavier** (**Invited Speaker**): The future of autocatalysis in origins research

17:30 – **Quoc Phuong Tran** (**Oral Comm. 05**): Nonlinear dynamics meet biomolecule synthesis- How feedstocks modulate kinetics and product distributions in a prebiotic autocatalytic reaction

18:00 – Closing + poster pickup (day 1)

Tuesday, Oct. 3

8:30 – Poster setup (day 2)

Early morning session -- Chairperson: Peter Walde

9:00 – **Karin Oberg** (**Keynote Lecture**): How to make a habitable planet: an astrochemical perspective

10:00 – **Grégoire Danger** (**Oral Comm. 06**): Origin and composition of the early Earth's reservoir of exogenous organic matter and its impact on the emergence of prebiotic chemical systems

10:30 – **Martina Preiner** (**Oral Comm. 07**): Mineral surfaces as protoenzymes: how to connect cofactors, rock pores and heterogeneous catalysis

11:00 – Coffee Break

Late morning session -- Chairperson: Matthew Powner

11:30 – **Dora Tang** (**Invited Speaker**): Possible role of coacervates during the origin of life

12:15 – **Anju Tomar** (**Oral Comm. 08**): UV-driven reduction of cysteinyl peptides with cyclic disulfide molecules

12:45 – Short Poster Presentation (up to 5 -- 3min each)

13:00 – Lunch Break

Early afternoon session -- Chairperson: Daniele De Martino

14:30 – **Daniel Segré** (**Keynote Lecture**): Metabolism as memory in the origin of life

15:30 – **Emilie Werner** (**Oral Comm. 09**): Metal/ADP complexes promote phosphorylation of ribonucleotides and ribonucleosides

16:00 – Short Poster Presentation (up to 5 -- 3min each)

16:15 – Coffee Break

Late afternoon session -- Chairperson: Antonio Lazcano

16:45 – **Joseph Moran** (**Invited Speaker**): Nonenzymatic metabolic reactions and life's origins

17:30 – **Robert Pascal** (**Oral Comm. 10**): On the evolutionary role of metabolism

18:00 – Closing + poster pickup (day 2)

Wednesday, Oct. 4

8:30 – Poster setup (day 3)

Early morning session -- Chairperson: Juli Peretó

9:00 – **Ram Krishnamurthy** (**Keynote Lecture**): Prebiotic Systems Chemistry -- Reinventing the chemistries leading to origins of life

10:00 – **Andrés de la Escosura** (**Oral Comm. 11**): Programming catalytic and replication functions with minimal nucleobase sequences

10:30 – **Yannick Geiger** (**Oral Comm. 12**): Chiral selective self-replicators

11:00 – Coffee Break

Late morning session -- Chairperson: Rudrarup Bose

11:30 – **Peter Walde** (**Invited Speaker**): Iron porphyrins as potentially prebiotic catalysts?

12:15 – **Nathalie Katsonis** (**Oral Comm. 13**): Chemical origin of lipids and protocells in the primeval ocean

12:45 – Short Poster Presentation (up to 5 -- 3min each)

13:00 – Lunch Break

Early afternoon session -- Chairperson: Nino Lauber

14:30 – **Claudia Bonfio** (**ESR Keynote Lecture**): Shaping early life: primitive cells, primitive membranes

15:30 – **Nemanja Cvjetan** (**Oral Comm. 14**): Investigation of peroxidase-like catalytic activity of ferric heme b in aqueous micellar systems

16:00 – Short Poster Presentation (up to 5 -- 3min each)

16:15 – Coffee Break

Late afternoon session -- Chairperson: Joana Xavier

16:45 – **Sheref Mansy** (**Invited Speaker**): Formation, growth, and division of model protocells

17:30 – **Alvaro Moreno** (**Oral Comm. 15**): On the prebiotic origins of regulation: the problem of minimal metabolic robustness

18:00 – Recapitulation and conclusions -- **Kepa Ruiz-Mirazo**

18:30 – Closure + poster pickup (day 3)

20:30 – Conference Dinner (Donostia – downtown, details TBA)