

# A Roadmap for Universal Life

## Workshop Program

### Monday 29 October 2018

09:30 – 10:00	Arrival, registration and coffee
10:00 – 10:15	Welcome (by Lorenz Center)
10:15 – 10:45	Layout of the workshop (by organizers)
10:45 – 12:00	Icebreaker - speed networking
12:00 – 14:00	Lunch
14:00 – 14:45	<b>Wilhelm Huck</b> - Biology and the origin of life: 101
14:45 – 15:30	<b>Inge Loes ten Kate</b> - Geology and the origin of life: 101
15:30 – 16:00	Coffee Break
16:00 – 16:45	<b>John Sutherland</b> - Chemistry and the origin of life: 101
16:45 – 17:30	<b>Ewine van Dischoeck</b> - Astronomy and the origin of life: 101
17:30 – 18:00	<b>Marian Carlson</b> - The Simons Collaboration on the Origins of Life
18:00	Welcome Party - Wine and Cheese & Poster Session

### Tuesday 30 October 2018

#### The environmental demand for the emergence of life

09:30 – 10:00	<b>Angelica Mariani</b> - From high-energy atmospheric chemistry to a storable, light-releasable prebiotic activating agent <b>Martin Ferus</b> - Origin of biomolecules on Earth-like exoplanet undergoing heavy bombardment
10:00 – 10:45	<b>Didier Queloz</b> - The environmental demand for the emergence of life (future perspectives)
10:45 – 11:00	Coffee Break
11:00 – 12:00	<b>Dimitar Sasselov</b> - The environmental demand for the emergence of life (key questions and discussion)
12:00 – 14:00	Lunch
14:00 – 15:00	Workshop activity: split into groups, each group discusses about one of the questions, highlighting the strength and the weakness points. Questions and ideas could be sketched, drawn or written on a whiteboard.
15:00 – 16:00	<b>Sukrit Ranjan</b> and <b>Oliver Shorttle</b> - The environmental demand for the emergence of life (Overviews)
16:00 – 16:15	Coffee Break
16:15 – 17:00	Discussion panel: roadmap session drafting short, medium, long-term questions emerged during the workshop activity - <b>Karin Oberg</b>

## Wednesday 31 October 2018

### The transition from geochemistry to biochemistry

09:30 – 10:00	<b>Christoph Mast</b> - Heat and light - non-equilibrium tools to break early symmetry <b>Evan Spruijt</b> - Self-organization and chemical evolution in coacervate droplets
10:00 – 10:45	<b>Chris Danelon</b> - The transition from geochemistry to biochemistry (future perspectives)
10:45 – 11:00	Coffee Break
11:00 – 12:00	<b>Sheref Mansy</b> - The transition from geochemistry to biochemistry (key questions and discussion)
12:00 – 14:00	Lunch
14:00 – 15:00	Workshop activity: split into groups, each group discusses about one of the questions, highlighting the strength and the weakness points. Questions and ideas could be sketched, drawn or written on a whiteboard.
15:00 – 15:30	Coffee Break
15:30 – 16:15	Discussion panel: roadmap session drafting short, medium, long term questions emerged during the workshop activity - <b>Sijbren Otto</b>
16:15 – 16:45	Departure from Lorentz Center by bus to workshop dinner
16:45 – 20:45	Workshop dinner on boat (Indonesian buffet)
20:45 – 21:15	Bus back to Lorentz Center, Hotel van der Valk and Leiden Central Station

## Thursday 1 November 2018

### The search for biosignatures in the Universe

09:30 – 10:00	<b>Sarah McIntyre</b> - The search for biosignatures in the Universe (recent results) <b>Clara Sousa-Silva</b> - Fantastical biosignatures and how to find them (recent results)
10:00 – 10:45	<b>Charley Lineweaver</b> - The search for biosignatures in the Universe (future perspectives)
10:45 – 11:00	Coffee Break
11:00 – 12:00	<b>Ignas Snellen</b> - The search for biosignatures in the Universe (key questions and discussion)
12:00 – 14:00	Lunch
14:00 – 15:00	Workshop activity: split into groups, each group discusses about one of the questions, highlighting the strength and the weakness

points. Questions and ideas could be sketched, drawn or written on a whiteboard.

- 15:00 – 15:15 **Sijbren Otto** - Presentation and description of the new Origins Center: the right place to make connections with the Dutch scientists
- 15:15 – 15:45 **Marileen Dogterom** - Presentation and description of the BaSyC research programme
- 15:45 – 16:00 **Yacintha Vermeer** - Presentation and description of the European Young Chemists Network
- 16:00 – 16:15 Coffee Break
- 16:15 – 17:00 Discussion panel: roadmap session drafting short, medium, long term questions emerged during the workshop activity - **Clare Cousins**

## Friday 2 November 2018

- 09:30 – 10:30 Discussion panel on the final version of the roadmap, outlining short, medium, long-term questions emerged during the workshop activities - **Organisers**
- 10:30 – 11:00 Coffee Break
- 11:00 – 12:00 **Courtney Dressing** - Introduction to Bayesian Statistics and ranking exoplanet habitability
- 12:00 – 14:00 Lunch
- 14:00 – 15:00 **Dieter Braun** - Connection talk
- 15:00 – 15:30 Final discussion and remarks