

[At the] Limits of Life: Dealing with Biofacts, Embryoids and Hybrids – Perspectives from Sciences and Humanities

Summer Academy | 10 – 15 September 2023 | Marsilius Kolleg, Heidelberg

Description

The **Marsilius Academy 2023** is a joint project of Heidelberg University, the European Molecular Biology Laboratory, and the Max Planck Institute for Medical Research. It will take place from Sunday, 10 September, to Friday, 15 September 2023, in Heidelberg, Germany, and aims to bring together an international group of excellent PhD students and early Post-docs from from the life sciences, social sciences and humanities for a week-long program. Fuelled by the expertise of internationally renowned scientists, it addresses fundamental societal challenges arising from recent research in biology, biomedicine and bioengineering. Its focus are the *limits of life* that are touched by life sciences in several respects:

First, the borderline between the living and the non-living has been addressed by a variety of new developments. Biohybrid systems, intentionally designed in the lab but consisting of re-designed living materials, organoids and other *biofacts*, challenge societal understandings of our world as separable into animate *beings* and inanimate *things*.

Second, embryo-like structures are produced by reprogramming single cells or by synthetically composing different cell types into embryoids. This enables researchers not only to investigate the early development of organic life but also to shape it in ways that intrigue some and unsettle others. The origin of life, its first temporal limit, becomes subject to scientific access in a new way.

Third, the limits between species have become blurred. Hybrids and chimera are produced with therapeutic aims (such as xenotransplantation) as well as with fundamental research interests.

Exciting new opportunities as well as ethical, legal and societal issues arise. Each of these issues is very specific; nevertheless, it is promising to discuss them together in order to get a more comprehensive picture of the challenges arising. To that aim, the Marsilius academy brings together doctoral students and young postdocs who view the new developments from different disciplinary perspectives, including, but not restricted to biology, biomedicine and bioengineering, social and cultural sciences, philosophy, theology and law. The program (shown below in more detail) will consist of four columns:

1. The spine of the program will be group discussions, fuelled by participants’ presentations of their research approaches. Talks of senior experts will highlight specific issues.
2. Twinning is a format in which one participant each from the Sciences and the Humanities will develop a joint short presentation on a topic related to the outlined Limits of Life based on their own prior scientific work/knowledge. This talk will be given to the rest of the participants on the last day of the Academy. An excursion and other social events will intensify the experience of mutual learning.
3. Four in-depth master courses on challenges of cutting-edge life science will be held by internationally renowned researchers like stem cell biologist Jacob (Yaqub) Hanna from the Weizman Institut in Rehovot (Israel), philosopher of science Nicole Karafyllis (Technical University Braunschweig), and bioethicist Ben Hurlbut (Arizona State University in Tempe, USA) for a part of the group, respectively.
4. A public discussion with the master class speakers will support the exchange between science and society. In addition, a workshop on science communication will foster participants’ competence to speak publicly about their research.

Conference Leaders

- Prof. Dr. Joachim Wittbrodt, Centre for Organismal Studies (COS)
- Prof. Dr. Thorsten Moos, Faculty of Theology
- Prof. Dr. Eileen Furlong, European Molecular Biology Laboratory (EMBL)
- Prof. Dr. Joachim Spatz, Max Planck Institute for Medical Research (MPIImF)

Masterclass Speakers

- Prof. Jacob (Yacub) Hanna, PhD, Weizmann IoS/Rehovot
- Prof. Nicole Karafyllis, PhD, TU Braunschweig
- Ass. Prof. Ben Hurlbut, PhD; Arizona State/Tempe, AZ
- Fourth Speaker outstanding

Workshop Speakers:

- Prof. Christine Selhuber-Unkel, PhD, IMSEAM/Heidelberg
- Prof. Eileen Furlong, PhD, EMBL/Heidelberg
- Prof. em. Klaus Tanner, PhD, Heidelberg University
- Prof. Fruszina Molnár-Gábor, PhD, BioQuant

Science Communication Speaker:

- Eva Wolfangel, Nature Marsilius Visiting Professor 2021/22

Target audience

- Doctoral Students and Early Post-Docs
- Humanities, Natural, Life, and Social Sciences
- Comprehensive English skills are required

Date and Venue

- September 10th-15th, 2023 (6 days)
- Marsilius Kolleg of Heidelberg University
Im Neuenheimer Feld 130.1
69120 Heidelberg
 - Open Session on Wednesday,
September 13th at 7.30 pm,
Alte Aula of Heidelberg University

Organisation & Expenditure management

- Marsilius Kolleg of Heidelberg University
- Contact: Nils Schütz
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Fees and Stipends

- General participation fee 750€
- **Participants without institutional travel/conference budget are encouraged to either apply for the elimination of their participation fee or for assistance with their travel costs (of up to 2000€). Individual solutions for students from underrepresented communities possible upon request.**

MARSILIUS ACADEMY AT MARSILIUS-KOLLEG (SEPTEMBER, 10TH-15TH)

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Conference Leaders: Prof. Jochen Wittbrodt, PhD; Prof. Thorsten Moos, PhD; Prof. Eileen Furlong, PhD; Prof. Jochen Spatz, PhD

Time	Sunday, Sep 10th	Monday, Sep 11th	Tuesday, Sep 12th	Wednesday, Sep 13th	Thursday, Sep 14th	Friday, Sep 15th	Saturday, Sep 16th		
8.15 – 9.00	From 2pm: Arrival	Breakfast			Excursion Hiking to EMBL	Breakfast	Departure		
9.00 - 10.30		[At the] Limits of Life J. Wittbrodt/T. Moos/ N. Schütz	Workshop Molec. Sys. Eng. (1 st Part) Keynote by: Ch. Selhuber-Unkel	Workshop Med./Health Law (1 st Part) Keynote by: F. Molnár-Gábor		Workshop Bioethics (1 st Part) Keynote by: K. Tanner			
10.30 - 11.00		Coffee break				Coffee Break			
11.00 - 12.30		Workshop Genome Biology (1 st Part) Keynote by: E. Furlong	Workshop Molecular Systems Engineering (2 nd Part) Participants’ presentations	Workshop Medical/Health Law (2 nd Part) Participants’ presentations		Workshop Bioethics (2 nd Part) Participants’ presentations			
12.30-14.00		Lunch at Zentralmensa	Catered Lunch			Lunch at EMBL		Lunch at Zentralmensa	
14.00-15.30		Workshop Genome Biology (2 nd Part) Participants’ presentations	13.30 Guided Tour At MPLmR	13.30 Twinning (1 st Part)		Twinning (2 nd Part)		Twinning Final presentation (4 th Part)	
15.30-16.00		Coffee break							
16.00-18.00		Science Communication Training E. Wolfangel (1 st Part)	Masterclass 1&2 J. Hanna/N. Karafyllis/B. Hurlbut/n.n.	Masterclass 3&4 J. Hanna/N. Karafyllis/B. Hurlbut/n.n.		Twinning (3 rd Part)		Twinning Flash talks/ Final presentation (5 th Part)	
18.00-19.00		City Tour (& Pub Crawl)	Dinner at Café Botanik	Dinner at Bräustadel (not included)		Dinner at Marstallmensa		Dinner at Café Botanik	
19.00-21.00		Science Communication Training E. Wolfangel (2 nd Part)	Free Evening	Public Session at Alte Aula Masterclass Speakers		Conference-Dinner		Participants’ Eve	