

O P E N I N G L E C T U R E

MASTER ON INTEGRATIVE SYNTHETIC BIOLOGY

www.misb-synbio.com

THE ORIGIN OF CELLULAR LIFE

Thursday 7 October 2021

16:00h CET

Live on YouTube

CSIC Comunicación



Nobel Prize
Medicine 2009

Prof. *Jack W. Szostak*

Department of Chemistry
and Chemical Biology
Harvard University

UIMP
Universidad Internacional
Menéndez Pelayo

 **CSIC**
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS



Monday, October 18, 2021
Online session

16:00-17:00h

Genetic requirements for cell division in a genetically minimal cell

James Pelletier

Faculty of Physics, UCM (Madrid)

17:00 -18:00h

Roundtable on minimal cells

James Pelletier (UCM)

Christophe Danelon (TU-Delft)

Rosario Gil (I2SysBio-CSIC-UValencia)

Kepa Ruiz-Mirazo (BIOFISIKA, UPV, CSIC)

Chairpersons:

Rafael Giraldo (CNB-CSIC), Juli Peretó (I2SysBio-CSIC-UValencia)
and Germán Rivas (CIB Margarita Salas, CSIC)

Registration required:
https://18oct_minimal_cells.eventbrite.es

Friday, November 12, 2021
Online session

10:00-11:00h

Designing and building a synthetic cell

Christophe Danelon

Technical University of Delft. Kali Institute of Nano Science.
Department of Bionanoscience. Delft, The Netherlands

12:00 -13:00h

Synthetic cells: *De novo* assembly with DNA nanotechnology

Kerstin Göpfrich

Max Planck Institute for Medical Research.
Biophysical Engineering of Life Group. Heidelberg, Germany

Registration required:
https://12nov_bottom_up_biology.eventbrite.es

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**MASTER'S DEGREE
ON INTEGRATIVE SYNTHETIC BIOLOGY**

**Friday, November 26, 2021
12:00h Online Seminar**

**Cell-free synthetic
biology: on biochemical
constructors and
synthetic cells**



École Polytechnique Fédérale
de Lausanne
Lausanne, Switzerland

Prof. SEBASTIAN MAERKL

REGISTRATION

https://26nov_cell_free_synthetic_biology.eventbrite.es

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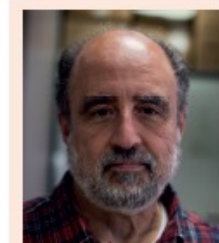
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**MASTER'S DEGREE
ON INTEGRATIVE SYNTHETIC BIOLOGY**

**Friday, December 10, 2021
12:00h On-site Seminar
Additional online streaming upon registration**

**Bacterial
computing**



FERNANDO DE LA CRUZ

Molecular Biology Department. School of Medicine. University of Cantabria
Instituto de Biomedicina y Biotecnología de Cantabria (CSIC-UCAN)
Santander (Spain)

REGISTRATION

https://10dec_bacterial_computing.eventbrite.es

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Organized by:
Germán Rivas
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Workshops

Origins & Synthesis of Life

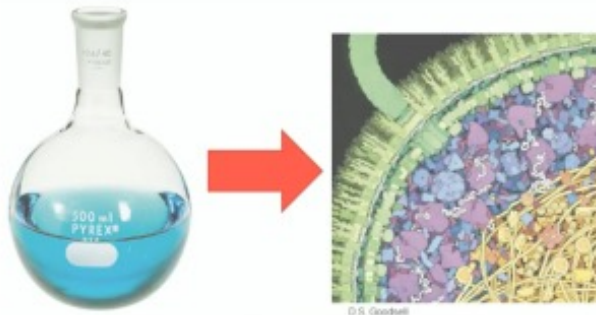
7-11/03/2022

Instituto de Química Física "Rocasolano"
CSIC. Serrano, 119, 28006 Madrid &online

Origins of life (7-9/03)

- **PREBIOTIC CHEMISTRY:** From interstellar space to the first biomolecules
- **TOWARD THE FIRST PROTO-CELL:** Primordial RNA world, prebiotic systems chemistry and the emergence of function

Izaskun Jiménez-Serra, Emilio Cocinero, Marta Ruiz, César Menor, Andrés de la Escosura, Juan M. García-Ruiz, David Hochberg, Eva Mateo-Martí, Carlos Briones, Alfredo Berzal, Jordi Gómez, Kepa Ruiz-Mirazo, Susanna Manrubia, Jacobo Aguirre, Germán Rivas, Dieter Braun (LMU-Munich)



Organizers:

OL - Izaskun Jiménez-Serra & Carlos Briones (CAB)

SL – Eva García-Ruiz (ICP), Rafael Giraldo (CNB) & Germán Rivas (CIB)

CSICLifeHUB – Encarni Carrillo <ecarrillo@csic.es>

<https://lifehub.csic.es/>

Synthetic Life (9-11/03)

- **ASSEMBLY AND SYNTHESIS:** Reconstitution of molecular systems and cellular machines
- **BIOFACTORIES:** Next generation SynBio platforms for green and health-related solutions

Juan A. Hermoso, Rafael Giraldo, Miguel Á. Peñalva, Sonsoles Martín-Santamaría, Javier Montenegro, Iván López-Montero, Carlos Fdez Tomero, Rodrigo Bermejo, Ruth Pérez, Begoña Monterroso, Manuel Porcar, Jorge Barriuso, Miguel Alcalde, Eva García-Ruiz, Luis Á. Fernández, Irene Otero, Fernando de la Cruz, Juan Nogales, Ángel Goñi, Saúl Ares, Gonzalo Durante, Víctor de Lorenzo, Jesús Rey, Emilio Muñoz, Petra Schwille (MPI-Biochemistry)



MASTER'S DEGREE
ON INTEGRATIVE SYNTHETIC BIOLOGY

Thursday, March 31, 2022
12:00h Online Seminar

Interfacing living
and synthetic cells as
an emerging frontier
in synthetic biology



Imperial College London
London, UK

YUVAL ELANI

REGISTRATION

https://31mar_interfacing_living_and_synthetic_cells.eventbrite.es

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MASTER'S DEGREE
ON INTEGRATIVE SYNTHETIC BIOLOGY

Monday, February 14, 2022
11:00h Online Seminar

Photosynthesis 2.0:
bringing carbon to life with
new-to-nature enzymes,
synthetic pathways and
artificial chloroplasts



TOBIAS ERB

MPI-Microbiology, Marburg

REGISTRATION

https://14feb_photosynthesis_2_bringing_carbon_to_life.eventbrite.es

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**MASTER'S DEGREE
ON INTEGRATIVE SYNTHETIC BIOLOGY**



Tuesday, April 5, 2022
CIB Margarita Salas Lecture Hall.
Additional Online Streaming Upon Registration

FRONTIERS BOTTOM-UP BIOLOGY "Chemical & Synthetic Biology"

10:45 h Welcome

11:00 h Abiotic metal catalysis in cellular habitats
Prof. José Luis Mascareñas
CiQUS-Universidad de Santiago de Compostela, Spain

12:00 h Lectins and lectomes from therapeutical targets to synthetic biology
Prof. Anne Imberty
CERMAV-CNRS, Université Grenoble Alpes, France
RSEQ "Catalan-Sabatier" Award 2020

13:00 h Closing remarks

REGISTRATION

https://5apr_chemical_synthetic_biology.eventbrite.es

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Organized by:
Sonsoles Martín-Santamaría,
Ruth Pérez & Javier Cañada
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CENTRO DE INVESTIGACIONES BIOLÓGICAS Margarita Salas

Friday, May 27, 2022
12:00h On-site Seminar



University of Groningen
(The Netherlands)

**Supramolecular polymers
as biomaterials:
new avenues for the
dynamic interaction with
biological receptors**

BERT MEIJER

REGISTRATION

https://27may_supramolecular_polymers_as_biomaterials.eventbrite.es

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CENTRO DE INVESTIGACIONES BIOLÓGICAS

Margarita Salas

Centro de Investigaciones Biológicas - CSIC
Margarita Salas

Friday, June 3, 2022
12:00h On-site Seminar

The alliance of
Nanomedicine and
Biotechnology:
emerging therapies



University of
Santiago de Compostela
(Spain)

MARÍA JOSÉ ALONSO

REGISTRATION

https://3jun_alliance_nanomedicine_biotechnology.eventbrite.es

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MASTER'S DEGREE ON INTEGRATIVE SYNTHETIC BIOLOGY

Friday, June 10, 2022
12:00h On-site Seminar.
Additional online streaming upon registration.

Environmental
bacteria as authentic,
not metaphorical,
cell factories



CNB-CSIC
Madrid, Spain

VÍCTOR DE LORENZO

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https://10jun_environmental_bacteria_cell_factories.eventbrite.es

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