

## ORGANIZING COMMITTEE

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## FEE and APPLICATION

**EUR 1000 for academic participants and EUR 1600 for industry participants.**

The fee covers course registration and materials (course book), accommodation in two-bed rooms (shared with another participant), meals, transportation from/to Barcelona airport (see the time schedule for the bus below). **Participants have the possibility to be hosted in single room (limited to availability) at an extra cost of 125 Euros to be paid directly in the hotel.**

A **limited number of grants**, covering the course fee (not travel cost), are provided by ESACT. Applicants to the grants should indicate it in the course application, together with a motivation statement. Priority will be given to young PhD students from Academia.

**All applications should be sent before 15<sup>th</sup> of June. Accepted applicants will be notified by July 10<sup>th</sup> and should register and complete payment by August 15<sup>th</sup>.**

## REGISTRATION and CONTACT

Updated information will be available at ESACT website ([www.esact.org](http://www.esact.org))  
**Final registration deadline is August 15<sup>th</sup>, 2019.**

**Contact for registration:**  
Birgit Marckhgott  
E-mail: office@esact.org

## AIM

This is an introductory course to Animal Cell Technology (ACT), providing an overview of the field, from the more basic aspects to the final application. It should be of interest to those starting their research activity in ACT, both from Academia and Companies. It is also of interest for those wishing an up-date of the state-of-the-art of ACT in a short course.

## COURSE OUTLINE

After the interest received by the previous eight editions and the excellent feed-back from the attendants, the 9<sup>th</sup> edition of the ACT course will be organized by the ESACT (European Society of Animal Cell Technology) in Llafranc, Costa Brava/Spain, from 22<sup>nd</sup> – 26<sup>th</sup> September 2019. ESACT is presenting this activity as one more contribution to the community involved in the use of animal cells in Biotechnology and Biomedicine.

The course is planned in an intensive four-day schedule with a number of participants limited to 30 in order to facilitate the interaction among them and with the lecturers. Lecturers will stay for most of the course duration. The course comprises lectures covering the main topics of Animal Cell Technology:

1. Cell line development
2. Cellular mechanisms
3. Omics analysis for systems biology of cells
4. Post-translational modifications
5. Bioreactor design
6. Bioreactor scale-up, scale-down and single use bioreactors
7. Downstream processing
8. Integrated bioprocess for protein production
9. Integrated bioprocess for stem cells
10. Economical aspects of ACT bioprocesses
11. Industrial perspectives of ACT

The programme has slots dedicated to the preparation and presentation of case studies by participants and provides time for discussion with the lecturers.

## LECTURERS

Confirmed lecturers include Hansjörg Hauser (HZI, Germany), Terry Papoutsakis (University Delaware, USA), Manuel Carrondo and Paula Alves (iBET, Portugal), Francesc Gòdia (UAB, Spain), Stefanos Grammatikos (UCB Pharma, Belgium) and Anne Tolstrup (BPTC, USA). Other information can be found in [www.esact.org](http://www.esact.org).

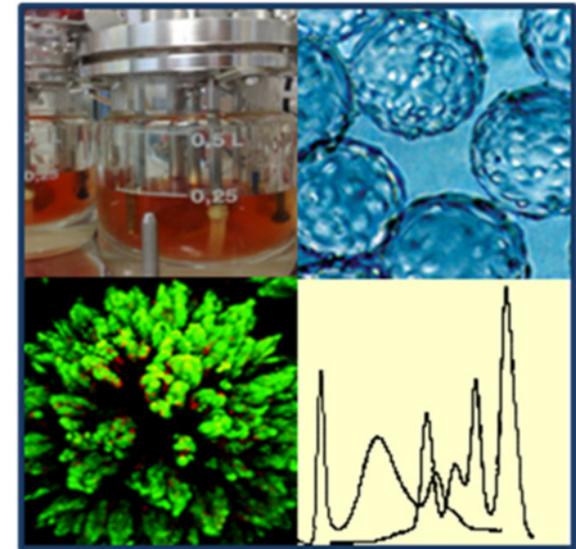


# ANIMAL CELL TECHNOLOGY COURSE 2019

NINTH EDITION

September 22<sup>nd</sup> - 26<sup>th</sup>, 2019

Llafranc, Costa Brava / Spain



Photos: [www.ibet.pt](http://www.ibet.pt)

With the contribution of:



**ACTIP**

# PROGRAMME

Time	Sunday 22 <sup>nd</sup> Sep	Monday 23 <sup>rd</sup> Sep	Tuesday 24 <sup>th</sup> Sep	Wednesday 25 <sup>th</sup> Sep	Thursday 26 <sup>th</sup> Sep	
9.00 - 10.00	Arrival to Barcelona/Girona airports and transfer to Hotel Terramar in Llafranc	<b>Introduction of course participants presentation</b>	<b>Omics analysis for systems biology of cells (I)</b> H. Hauser	<b>Bioreactor scale-up and scale-down</b> S. Grammatikos	<b>Integrated bioprocess for protein production</b> A. Tolstrup	
10.00 - 11.00		<b>Overview Lecture</b> M. Carrondo	<b>Omics analysis for systems biology of cells (II)</b> H. Hauser	<b>Miniaturized and Single-Use Bioreactors</b> S. Grammatikos	<b>Integrated bioprocess for stem cells</b> P. Alves	
Coffee break						
11.30 - 12.30		<b>Cell line development (I)</b> H. Hauser	<b>Post-translational modifications (I)</b> E. Papoutsakis	<b>Downstream processing (I)</b> M. Carrondo	<b>Industrial perspectives of ACT</b> A. Tolstrup	
12.30 - 13.30		<b>Cell line development (II)</b> H. Hauser	<b>Post-translational modifications (II)</b> E. Papoutsakis	<b>Downstream processing (II)</b> M. Carrondo	<b>Wrap-up session</b>	
Lunch and Free time						
15.30 - 16.30		<b>Cellular mechanisms (I)</b> E. Papoutsakis	<b>Bioreactor Design (I)</b> F. Gòdia	<b>Integrated bioprocess for cell culture-based vaccines</b> P. Alves	Course adjournment, hotel check-out and departure to Barcelona/Girona airports	
Coffee break						
17.15 - 18.15		<b>Cellular mechanisms (II)</b> E. Papoutsakis	<b>Bioreactor Design (II)</b> F. Gòdia	<b>Economical aspects of ACT bioprocesses</b> A. Tolstrup		
18.30 - 19.30		<b>Introduction / Study case presentation</b> S. Grammatikos	<b>Study case / progress discussion</b>	<b>Study case / final discussion</b> S. Grammatikos		
Free time						
20.30	Welcome and dinner	Dinner				



ACT course 2018



ACT course 2017

## Testimonials of ACT Course Participants

"The organization of the course was excellent. The lecturers and all participants were cooperative, sensible and supportive. I enjoyed the course."

**Robert Beck**  
Private researcher, Germany

"A very well organized and balanced course that enabled me to refresh some basic cell culture concepts and to learn about some of the latest innovations in the field, and all this in a very friendly atmosphere and a beautiful environment!"

**Boris FESSLER**  
UCB Pharma, Belgium

"The ESACT course in Llafranc was a great opportunity to improve my knowledge in the Biotechnology area. The professors were very attentive and the structure of the course was very organized, providing us comfort and tranquility to enjoy the lectures."

**Renata Alvim**  
Biotechnology technician, Brazil

"The leveling-board lies very high. I really want to thank ESACT and all the people involved in organizing that course, it was brilliant joining you."

**Sebastian Schwamb**  
PhD Student, Germany

"I had the opportunity to improve my knowledge in the Biotechnology field. It was a great opportunity to interact with the most important researchers in this area. The professors always were very attentive and the lectures were excellent."

**André Luís Inocencio**  
Master Student, Brazil

"I felt that the 2013 ESACT ACT course gave me much needed insight into several aspects of Bioprocess Engineering, and for me, as an academic researcher, the opportunity to interact with scientists and engineers working in industry was invaluable."

**Steve George**  
Graduate Student, Canada

## LOCATION AND TRAVEL INFORMATION

The course will be held in Hotel Terramar, a 3-star hotel ([www.hterramar.com](http://www.hterramar.com)) in a small town named Llafranc in the heart of Costa Brava, Girona, Spain. The hotel is right on a very nice sandy beach, providing a cosy and relaxing atmosphere for the participants. Weather in Llafranc at this time of the year is generally pleasant. Travel organization to the meeting is of participants responsibility, ensuring their participation to the full course. Access by road from Girona airport (30 min) or Barcelona airport (90 min) is suggested. **IMPORTANT NOTE: ONE BUS will be leaving from Barcelona airport at 18h on Sunday 22<sup>nd</sup> September to drive participants to Hotel Terramar at Llafranc. On Thursday 26<sup>th</sup> September, ONE BUS will be leaving from Hotel Terramar at 15h to drive participants to Barcelona airport. Participants should arrange their travelling accordingly or alternatively arrange for their transportation on their own.**



LLAFRANC