

21ST INTERNATIONAL CONGRESS

ESTIV

PROGRAMME BOOK

BARCELONA 2022
21 - 25 NOVEMBER

(c) 2022 ESTIV. All rights reserved



GARD[®]skin OECD TG 442E

THE FIRST AND ONLY
Genomics and Machine-learning
based *in vitro* skin sensitization test

Demonstrated applicability to “difficult-to-test” samples

- Complex mixtures
- Indirectly acting haptens
- Lipophilic compounds
- Metal and metal salts

READ MORE



SENZA
GEN

www.senzagen.com

TABLE OF CONTENTS

TABLE OF CONTENTS	2
WELCOME ADDRESS	4
COMMITTEES	5
GENERAL INFORMATION A-Z	7
VENUE MAP	9
SOCIAL PROGRAMME	10
WORKSHOPS AND SIDE-MEETINGS	11
PROGRAM AT A GLANCE	13
KEYNOTE AND INVITED SPEAKERS	16
DETAILED PROGRAMME	21
POSTER PRESENTATIONS	42
SPONSORS AND EXHIBITORS	46



www.lushprize.org

WELCOME ADDRESS

Dear delegates,

The long-awaited 21st International Congress of the European Society of Toxicology In Vitro (ESTIV 2022) is happening in Barcelona-Sitges, Spain, from 21st to 25th November 2022. The 21st ESTIV congress had to be postponed from 2020 to 2022 due to public health concerns and limitations in international travels. The ESTIV Board also took into consideration the postponement of the World Congress on Alternatives from 2020 to 2021 when deciding to move the ESTIV congress to 2022.

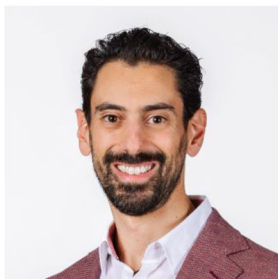
The Organising and the Scientific Committees of ESTIV 2022 took very seriously all the organisational and programme commitments made before the postponement of the congress. To make the congress even more attractive and to reflect on the developing science, the Scientific Committee decided to implement for the first time parallel sessions, allowing for the inclusion of several emerging topics, such as the role of in vitro and in silico approaches in COVID-19 research, Organ-on-a-chip & Microphysiology systems and Developmental Neurotoxicity (DNT) research.

The ESTIV Board and the Scientific Committee are grateful to all Session chairs and abstract reviewers for their excellent evaluations of the submitted abstracts and for ensuring a very high quality and high standards of the scientific programme.

Last, but certainly not least, the ESTIV Board cordially thanks all authors, who submitted their scientific works to the ESTIV 2022 Congress.

The Congress Committees of the ESTIV 2022 warmly welcome you at the 21st ESTIV Congress in Barcelona-Sitges and look forward to see so many colleagues working in the area of in vitro and in silico toxicology finally reuniting!

Helena Kandarova and João Barroso



Acknowledgements

The ESTIV 2022 congress would not have been possible without the logistic assistance of the conference organiser Klinkhamer Group | conferences & events as well as the financial support of the ESTIV supporters and sponsors.

COMMITTEES

Congress chairs

- **Helena Kandárová**
Centre of Experimental Medicine, Slovak Academy of Sciences, Bratislava, Slovakia
- **João Barroso**
European Commission, Joint Research Centre, Ispra-Italy

Organising Committee

- **João Barroso**
European Commission, Joint Research Centre, Ispra-Italy
- **Markéta Dvořáková**
National Institute of Public Health, Prague – Czech Republic
- **Arno Gutleb**
Luxembourg Institute of Science and Technology, Belvaux-Luxembourg
- **Sofia Batista Leite**
European Commission, Joint Research Centre, Ispra-Italy
- **Jochem Louisse**
Wageningen Food Safety Research, Wageningen -The Netherlands
- **Clive Roper**
Roper Toxicology Consulting Limited, Edinburgh, UK
- **Erwin van Vliet**
Innovitox Consulting & Services, Houten-The Netherlands

Awards Committee

- **João Barroso**
European Commission, Joint Research Centre, Ispra-Italy
- **Yasunari Kanda**
National Institute of Health Sciences (NIHS), Kanagawa-Japan
- **Jochem Louisse**
Wageningen Food Safety Research, Wageningen -The Netherlands
- **Montserrat Mitjans**
Department of Biochemistry and Physiology, Universitat de Barcelona, Barcelona-Spain
- **Helena Kandarova**
Centre of Experimental Medicine, Slovak Academy of Sciences, Bratislava-Slovakia

Scientific Committee

- **Timothy E.H. Allen**
Ladder Therapeutics, Toronto – Canada
- **Erin Hill**
Institute for In Vitro Sciences, Inc., Gaithersburg, MA-United States
- **Yasunari Kanda**
National Institute of Health Sciences (NIHS), Kanagawa-Japan
- **Helena Kandárová**
Centre of Experimental Medicine, Slovak Academy of Sciences, Bratislava-Slovakia
- **Sofia Batista Leite**
European Commission, Joint Research Centre, Ispra-Italy
- **Jochem Louisse**
Wageningen Food Safety Research, Wageningen-The Netherlands
- **Montserrat Mitjans**
Department of Biochemistry and Physiology, Universitat de Barcelona, Barcelona-Spain
- **Pau Sancho-Bru**
Institut d'Investigacions Biomèdiques August Pi i Sunyer, Barcelona-Spain
- **Clive Roper**
Roper Toxicology Consulting Limited, Edinburgh, UK
- **Erwin van Vliet**
Innovitox Consulting & Services, Houten-The Netherlands
- **M. Pilar Vinardell**
Department of Biochemistry and Physiology, Universitat de Barcelona, Barcelona-Spain

Abstract book editors

- **Helena Kandárová**
Centre of Experimental Medicine, Slovak Academy of Sciences, Bratislava, Slovakia
- **João Barroso**
European Commission, Joint Research Centre, Ispra-Italy

ESTIV 2022 reviewers:

- **Helena Kandárová**
Centre of Experimental Medicine, Slovak Academy of Sciences, Bratislava, Slovakia
- **João Barroso**
European Commission, Joint Research Centre, Ispra-Italy
- **Markéta Dvořáková**
National Institute of Public Health, Prague – Czech Republic
- **Michael Rothe**
Hannover Medical School, Hannover, Germany
- **Montserrat Mitjans**
Department of Biochemistry and Physiology, Universitat de Barcelona, Barcelona-Spain
- **Nathalie Alépée**
L'Oréal R&I, Paris, France
- **Nicole Kleinstreuer**
The NTP Interagency Center for the Evaluation of Alternative Toxicological Methods, USA
- **Olivier Taboureau**
Université Paris Cité, Paris, France
- **Pau Sancho-Bru**
Institut d'Investigacions Biomèdiques August Pi i Sunyer, Barcelona-Spain
- **Peter Loskill**
University of Tübingen, Tübingen, Germany
- **M. Pilar Vinardell**
Department of Biochemistry and Physiology, Universitat de Barcelona, Barcelona-Spain
- **Sofia Batista Leite**
European Commission, Joint Research Centre, Ispra-Italy
- **Thomas Knudsen**
US EPA, Durham, USA
- **Timothy E. H. Allen**
Ladder Therapeutics, Toronto – Canada
- **Yasunari Kanda**
National Institute of Health Sciences (NIHS). Kanagawa-Japan
- **Andreas Kortenkamp**
Brunel University London, Institute of Environment, Health and Societies, Kingston Lane, Uxbridge, United Kingdom
- **Anne Marie Vinggaard**
National Food Institute, Technical University of Denmark, Lyngby, Denmark
- **Arno Gutleb**
Luxembourg Institute of Science and Technology, Belvaux-Luxembourg
- **Christian Pellevoisin**
MatTek Life Sciences, France
- **Emanuela Corsini**
Laboratory of Toxicology, Dept. of Environmental and Political Sciences, University of Milan, Italy
- **Erin Hill**
Institute for In Vitro Sciences, Inc., Gaithersburg, MA-United States
- **Erwin van Vliet**
Innovitox Consulting & Services, Houten-The Netherlands
- **Jochem Louisse**
Wageningen Food Safety Research, Wageningen -The Netherlands

GENERAL INFORMATION A-Z

Awards

ESTIV is proud to present as many as 13 awards during ESTIV 2022:

- *ESTIV Best poster award*
- *ESTIV Best oral presentation award*
- *ATLA/Frame Best poster award*
- *ECOPA Award – Best young scientist contribution*
- *EPAA award*
- *Doerenkamp-Zbinden Foundation best poster award*
- *Toxicology in vitro/ELSEVIER best poster award*
- *AIVT best paper award*
- *EUROTOX best poster award*
- *JSAAE best poster award*
- *JSAAE best oral presentation award*
- *ESACT best poster award*
- *UB Award*

The awards will be presented during the closing ceremony on Thursday, November 24, 2022 from 12:40-13:30 in the Auditorium.

Badges

Congress badges need to be picked-up on-site at the registration desk upon arrival. All delegates and accompanying persons must wear the congress badge visibly at any time in the venue. Entrance to session rooms as well as poster and exhibition area are only granted when wearing the congress badge.

Certificate of Attendance

One week after the congress ends, you can download your Certificate of Attendance through your congress account that you also registered with.

Climate and Clothing

You can expect very pleasant temperatures during the day. The average maximum daytime temperature is around 18.0°C (64.4°F). The average minimum temperature (usually recorded during the night) in Sitges in November is 12.0°C (53.6°F). So what to wear in November? Bring a rain jacket just to be sure, as it will rain for a few days during this period. Plan your clothing in layers. Some days or parts

of the day will be nice and warm and sometimes it may be a bit chilly. With a water temperature of about 16.0°C, there is no need to bring swimwear.

Coffee Breaks and Lunches

Coffee, tea and refreshments will be served during all morning and afternoon breaks. Lunches and refreshments will be provided during all lunch breaks. Food and refreshments will be provided to Full Congress or Exhibitor Badge holders only. There will be no lunch and afternoon break on Thursday, November 24. Participants should arrange to purchase their own lunch after the congress.

Congress Secretariat

Klinkhamer Group | conferences & events
Duboisdomein 5D01
6229 GT Maastricht
The Netherlands

Email: helpdesk@klinkhamergroup.com

Copy Shops

Small print orders (A4, max 10 pages) can be done at the congress registration desk. Should you need a copy shop please refer to the following copy shop:

Altraera Copisteria Sitges
Av. Camí dels Capellans, 20
08870 Sitges
Barcelona, Spain

Credit Cards

All major hotels, restaurants, bars and stores accept all major credit cards, but you may be asked for a photo ID to confirm your identity. Although most restaurants and stores accept credit cards, there are smaller bars, eateries and independent art galleries where you are expected to pay in cash. So it is wise to have some cash on hand.

Currency & Banks

The currency in Sitges, Spain is the euro. You will have no trouble finding an ATM in Sitges, but if you do need to ask for directions, *donde esta un cajero automatico?* should give you the answer you want. Your bank determines the exchange rate, but it is almost always much more competitive than that of a bureau de change. A very important thing to remember is

to press "no" at any bank that offers you money in your own currency. If you press "yes," the Spanish bank will convert your money at an unfavorable rate.

Electricity

The standard in Spain is 220volts, 50Hz. Participants from North America require a transformer and British participants need an adapter.

Evaluation Form

One week after the congress ends, you are invited to fill out an evaluation form through your congress account that you also registered with.

Exhibition Area

The exhibition area is positioned in the room called: Tramuntana, and hosts the exhibitors, coffee and lunch breaks.

Exhibition Opening Hours

- **Monday 21 November:**
13:00 – 20:30 hours
- **Tuesday 22 November:**
10:30 – 17:00 hours
- **Wednesday 23 November:**
10:30 – 16:30 hours
- **Thursday 24 November:**
10:30 – 13:00 hours

Language

Official language in Spain is Spanish. The official language of the congress is English. Kindly note that no translation services are provided during the congress.

Local Time

The standard time zone in Sitges, Spain is GMT(+1).

Parking

Private parking is available at the hotel. Ask the front desk for more information.

Poster Viewings and Area

All posters will be displayed in the Hall Auditorium and Hall Tramuntana (foyers next to the Auditorium and Exhibition Area) of the congress venue. Please see the poster list in this programme book (page 49) to find the board number on which to hang your poster.

Pins to hang your poster will be provided at the congress location. Poster presenters are requested to stand next to their posters for discussion during the poster sessions which will take place during breaks and lunches on all congress days. All posters should be set up before the congress starts on the first day. Posters should be dismantled before the end of the congress. The organization will remove all posters after the congress. If the poster is not collected it will be discarded after the congress.

Public Transport

Sitges is a small town and so its buses are the same. You will see the little blue vans, that seat approximately twenty people, driving around the outskirts of town. The buses start their route outside of Sitges train station. It is worth remembering that they stop running in the evenings, so after this point you will need to rely on taxis.

<https://www.sitges-tourist-guide.com/en/transport/buses-sitges.html>

End of service: 20:45

Registration Desk / Opening Hours

For receiving your congress materials or for registering on-site, please contact the organisers at the registration desk. It will operate daily as follows:

- **Monday 21 November:**
08:00 – 19:00 hours
- **Tuesday 22 November:**
07:00 – 19:00 hours
- **Wednesday 23 November:**
07:00 – 19:00 hours
- **Thursday 24 November:**
07:00 – 13:00 hours

Safety

Sitges is lucky in that it does not share Barcelona's association with petty crime and pickpockets. Nonetheless, as whenever you are abroad, be a little vigilant as there is always a minority element who may see you, or your belongings, as rich pickings. Don't leave bags unattended, or valuables out in plain view.

Smoking Policy

ESTIV 2022 is a non-smoking congress. It is prohibited to smoke anywhere inside the venue. In general, it is prohibited to smoke in

public buildings (including restaurants and bars) in Sitges.

Special Needs

Participants with special needs are invited to advise the congress organizers concerning any special requirements. The congress venue is equipped with all necessary facilities for persons with special needs.

Taxi

Sitges is a small town, but you may find that you need to use a taxi whilst you are there. There are two main taxi firms in Sitges - one based outside the train station and one outside the main tourist information office. You do not need to go to these points to catch a taxi - you can call the numbers provided below and ask them to come to pick you up. Alternatively you can hail a taxi in the street.

This page: <https://www.sitges-tourist-guide.com/en/transport/taxis-sitges.html> provides more information and contact telephone numbers for the two taxi firms in Sitges. Or call directly (see next column)

1. Tel: +34 93 894 1329
2. Tel: +34 93 894 1329

Telephone

The dial in code for Spain is +34.

Venue

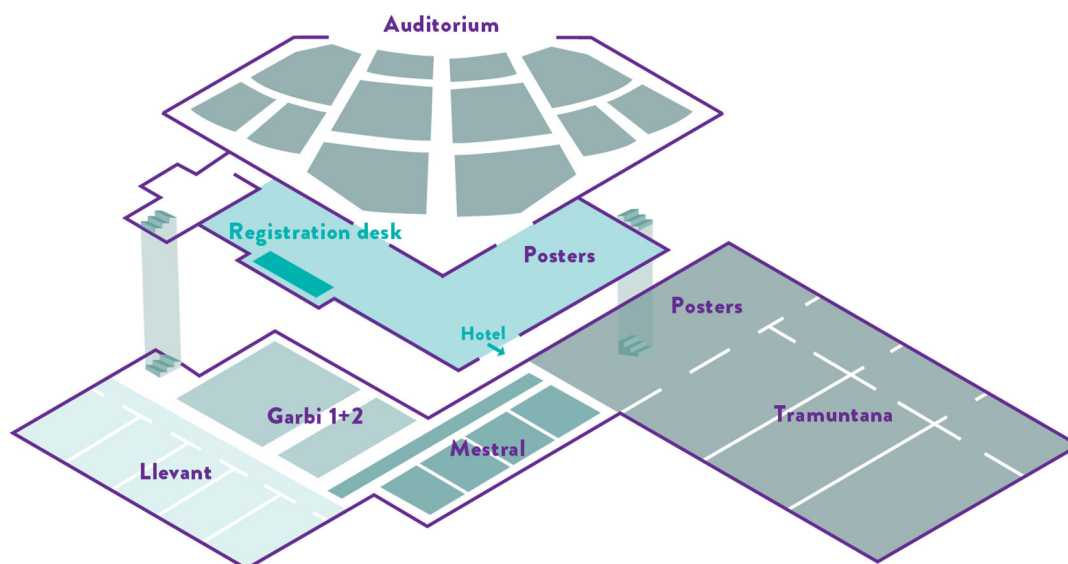
Meliá Sitges Hotel
 Address: Carrer de Joan Salvat Papasseit, 38,
 08870 Sitges, Barcelona, Spanje

Telephone: +34 938 11 08 11
www.melia.com/sitges

WiFi

Free Basic WiFi is available in the conference venue. It is intended for reading e-mail and basic Internet use. It is not intended for heavy uploading and downloading.

VENUE MAP



Hall Auditorium:	Registration Desk + Posters
Auditorium:	Plenary Sessions and Parallel Room
Tramuntana:	Exhibition Area, Breaks and Lunches
Garbi 1+2:	Parallel Room
Llevant:	Side-Meetings

SOCIAL PROGRAMME

Welcome Reception and Poster Session (including Finger Food)



DATE: Monday, November 21st, 2022
TIME: 19:00-20:30
VENUE: Meliá Sitges – Tramuntana, Hall Tramuntana and Hall Auditorium

On the first evening of the congress, all participants are kindly invited to the Welcome Reception that will take place after the scientific program on the first day of the congress. The Welcome Reception will take place in the exhibition room and the poster session will take place in the room next to the exhibition and auditorium. This is the perfect opportunity to connect with colleagues and business partners and get a first look at the posters.

Attendance is free of charge for all fully registered congress participants and exhibitors.

The Welcome Reception and Poster Session is supported by The American Society for Cellular and Computational Toxicology (ASCCT).

Wine Reception in the Poster Area



UNIVERSITAT DE
BARCELONA

DATE: Tuesday, November 22nd, 2022
TIME: 19:30-20:30
VENUE: Meliá Sitges – Tramuntana, Hall Tramuntana and Hall Auditorium

Join us during the 2nd night of the congress for the Wine Reception in the Poster Area. This is the perfect time to view the many accepted posters during ESTIV 2022 and interact with the presenters while enjoying a wine from the Catalan region in a relaxed atmosphere.

Attendance is free of charge for all fully registered congress participants and exhibitors.

The Wine Reception in the Poster Area is supported by the University of Barcelona.

Congress Dinner & Social Evening*

DATE: Wednesday, November 23rd, 2022
TIME: 19:30-22:30 / 01:00
VENUE: Finca Mas Solers



Finca Mas Solers is a Catalan mansion in late nineteenth century Renaissance style that, during its golden age, housed the former Gran Casino Barcelona. Now you can relive all that glamour by joining our Congress Gala Dinner in the charming gardens and spaces of the beautiful building!

Transport

Buses will leave in front of the Meliá Sitges hotel and congress venue at 19:00 sharp.

Clothing

The dress code is Business Casual. Since part of the dinner may be outdoors, it is wise to dress accordingly. It may cool off in the evening.


Dinner Party (from 22:30-01:00)

Delegates are also invited to the party after dinner where drinks are at their own expense. Transportation back to the venue is provided. Buses will not leave back until 1 o'clock. Delegates who do not want to stay that long will have to join the bus back at 22:30 or order a taxi.

***Entrance to the congress dinner will only be permitted for delegates with a valid ticket. Tickets can be booked upfront or on-site at the registration desk (upon availability).**

WORKSHOPS AND SIDE-MEETINGS

Monday, November 21st, 2022

Garbi 1+2 	09:00 – 13:00	Pre-conference workshop – Bridging across methods in the biosciences (BeAMs): the opportunity of COVID-19 (organised with JRC) <i>Chairs: Dr Annamaria Carusi & Dr Sofia Batista Leit</i>
--	---------------	---

Tuesday, November 22nd, 2022

Garbi 1+2 	13:00 – 14:00	ILSI/ESTIV- sponsored lunch session: Application of non-animal methods and concepts in food risk assessment <i>Chairs: Dr Isabelle Guelinckx (ILSI Europe, Belgium) & Dr Helena Kandarova (CEM SAS, Bratislava, Slovakia)</i>
--	---------------	---



Wednesday, November 23rd, 2022

Garbi 1+2 	13:00 – 14:00	JSAAE – sponsored session – Asian progress in 3Rs: 3rd Asian congress and KSAAE updates <i>Chairs: Dr Yasunari Kanda (National Institute of Health Sciences, Japan) & Dr Kwang-Mahn Kim (Yonsei University, South Korea)</i>
--	---------------	--

Thursday, November 24rd, 2022

Llevant 4+5 	14:00 – 19:00	Post-conference workshop with EPISKIN Academy https://www.estiv.org/congress2022/post-conference-workshop/
Garbi 1+2 	14:00 – 19:00	ASPIS open symposium https://aspis-cluster.eu/calendar/event-details/

Friday, November 25th, 2022

Llevant 4+5 	08:30-16:00	Post-conference workshop with EPISKIN Academy https://www.estiv.org/congress2022/post-conference-workshop/
Garbi 1+2 Llevant 1+2+3 	08:30-16:00	ASPIS open symposium https://aspis-cluster.eu/calendar/event-details/

PROGRAM AT A GLANCE

PROGRAM AT A GLANCE


MONDAY, NOVEMBER 21ST, 2022

09:00-13:00 GARBI 1 + 2	PRE-CONFERENCE WORKSHOP Bridging across methods in the biosciences (BeAMs): the opportunity of COVID-19 (organised with JRC) Chairs: Dr Annamaria Carusi & Dr Sofia Batista Leite 
13:00-14:00 TRAMUNTANA	LUNCH BREAK (PRE-CONFERENCE WORKSHOP PARTICIPANTS ONLY)
14:00-14:20 AUDITORIUM	OPENING OF ESTIV 2022 CONGRESS Chairs: Dr Helena Kandarova (CEM SAS, Bratislava, Slovakia – ESTIV President) & Dr João Barroso (JRC, Ispra Italy –ESTIV Vice-president)
14:20-15:10 AUDITORIUM	KEYNOTE LECTURE BY DR TIMOTHY ALLEN (University of Cambridge, Cambridge, UK / Ladder Therapeutics, Toronto, Canada) Use of Artificial Intelligence and Machine Learning in the Chemical Risk Assessment Chairs: Dr Helena Kandarova (CEM SAS, Bratislava, Slovakia – ESTIV President) & Dr João Barroso (JRC, Ispra Italy –ESTIV Vice-president)
15:10-15:15 AUDITORIUM	ESTIV EARLY SCIENTIFIC CAREER AWARD CEREMONY 2020/2022 Chairs: Dr Helena Kandarova (CEM SAS, Bratislava, Slovakia – ESTIV President) & Dr João Barroso (JRC, Ispra Italy –ESTIV Vice-president)
15:15-16:00 AUDITORIUM	BEMF AWARD CEREMONY AND BEMA LECTURE Chairs: Prof. Stina Oredsson (Björn Ekwall Memorial Foundation, Sweden)
16:00-16:30 TRAMUNTANA	COFFEE BREAK, VISITING EXHIBITION AREA & POSTER VIEWING
16:30-18:30 AUDITORIUM	SESSION 1 BIO-ENGINEERING, STEM CELLS AND DISEASE MODELS Chairs: Prof. Peter Loskill (University of Tübingen, Germany) & D. João Barroso (JRC, Ispra, Italy – ESTIV Vice-president)
19:00-20:30 TRAMUNTANA	WELCOME RECEPTION & POSTER SESSION SPONSORED BY THE AMERICAN SOCIETY FOR CELLULAR AND COMPUTATIONAL TOXICOLOGY (ASCCT) 

TUESDAY, NOVEMBER 22ND, 2022

8:30-10:30 AUDITORIUM	SESSION 2A MODELS, BIOMARKERS AND ASSAYS FOR ENDOCRINE DISRUPTION AND DEVELOPMENTAL TOXICITY Chairs: Dr Thomas Knudsen (US EPA, Durham, USA) & Prof. Arno Gutleb (LIST, Luxembourg, Luxembourg)	8:30-10:30 GARBI 1 + 2	SESSION 2B CHALLENGES IN COSMETICS SAFETY Chairs: Dr Nathalie Alépée (L'Oréal, Paris, France) & Dr Erwin Van Vliet (Houten, Utrecht, Netherlands) 
10:30-11:00 TRAMUNTANA	COFFEE BREAK, VISITING EXHIBITION AREA & POSTER VIEWING		
11:00-13:00 AUDITORIUM	SESSION 3A MODELS, BIOMARKERS AND ASSAYS FOR SYSTEMIC AND IMMUNE TOXICITY Chairs: Prof. Emanuela Corsini (Università degli Studi di Milano, Milan, Italy) & Dr Jochem Louisse (Wageningen University, Wageningen, The Netherlands)	11:00-13:00 GARBI 1 + 2	SESSION 3B ORGAN-ON-A-CHIP & MICROPHYSIOLOGY SYSTEMS Chairs: Dr Sofia Batista Leite (JRC, Ispra, Italy) & Dr Pau Sancho-Bru (Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain)
13:00-14:00 TRAMUNTANA	LUNCH BREAK, VISITING EXHIBITION AREA & POSTER VIEWING	13:00-14:00 TRAMUNTANA	ILSI/ESTIV- SPONSORED LUNCH SESSION: APPLICATION OF NON-ANIMAL METHODS AND CONCEPTS IN FOOD RISK ASSESSMENT Chairs: Dr Isabelle Guelinckx (ILSI Europe, Belgium) & Dr Helena Kandarova (CEM SAS, Bratislava, Slovakia) 
14:00-16:00 AUDITORIUM	SESSION 4A COMPUTATIONAL TOXICOLOGY – IN SILICO MODELLING, READ-ACROSS, ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING Chairs: Prof. Olivier Taboureau (University Paris Diderot, Paris, France) & Dr Tim Allen (Ladder Therapeutics, Toronto, Canada)	14:00-16:00 GARBI 1 + 2	SESSION 4B LOCAL TOXICITY TESTING (SAFETY AND EFFICACY) Chairs: Dr Montserrat Mitjans (Universitat de Barcelona, Barcelona, Spain) & Dr Helena Kandarova (CEM SAS, Bratislava, Slovakia)
16:00-16:30 TRAMUNTANA	COFFEE BREAK, VISITING EXHIBITION AREA & POSTER VIEWING		
16:30-17:30 AUDITORIUM	EARLY STAGE RESEARCHER SESSION 1 Chairs: Dr Erwin van Vliet (Houten, Utrecht, Netherlands) & Dr Pau Sancho-Bru (Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain)	16:30-17:30 GARBI 1 + 2	SPONSORED SESSION Chairs: Erin Hill (IIVS, Gaithersburg, MD, USA) & Dr Clive Roper (Roper Toxicology Consulting Limited, UK)
17:30-18:30 AUDITORIUM	EARLY STAGE RESEARCHER SESSION 2 Chairs: Dr Montserrat Mitjans (Universitat de Barcelona, Barcelona, Spain) & Dr. Marketa Dvořáková (NIPH Prague, Prague, Czech republic)		
18:30- 19:30 AUDITORIUM	CAREER DEVELOPMENT SESSION		
19:30-... TRAMUNTANA	WINE RECEPTION IN THE POSTER AREA SPONSORED BY THE UNIVERSITY OF BARCELONA  UNIVERSITAT DE BARCELONA		

WEDNESDAY, NOVEMBER 23RD, 2022

8:30-10:30 AUDITORIUM	SESSION 5A TOXICOKINETICS AND IN VITRO-IN VIVO EXTRAPOLATION Chairs: Dr Nicole Kleinstreuer (NICEATM, Durham, USA) & Dr Jochem Louisse (Wageningen University, Wageningen, The Netherlands)	8:30-10:30 GARBI 1 + 2	SESSION 5B IN VITRO SYSTEMS TO ASSESS RESPIRATORY TOXICITY Chairs: Erin Hill (IIVS, Gaithersburg, MD, USA) & Dr Clive Roper (Roper Toxicology Consulting Limited, UK)
10:30-11:00 TRAMUNTANA	COFFEE BREAK, VISITING EXHIBITION AREA & POSTER VIEWING		
11:00-13:00 AUDITORIUM	SESSION 6A IN VITRO METHODS FOR SAFETY TESTING OF BIOPHARMACEUTICALS/BIOTHERAPIES/ VACCINES Chairs: Dr Michael Rothe (Hannover Medical School, Hannover, Germany) & Prof. Anne Marie Vinggaard (Technical University of Denmark, Denmark)	11:00-13:00 GARBI 1 + 2	SESSION 6B KNOWLEDGE SHARING AND EDUCATION Chairs: Prof. Pilar Vinardell (Universitat Barcelona, Barcelona, Spain) & Erin Hill (IIVS, Gaithersburg, MD, USA)
13:00-14:00 TRAMUNTANA	LUNCH BREAK, VISITING EXHIBITION AREA & POSTER VIEWING	13:00-14:00 GARBI 1 + 2	JSAAE – SPONSORED SESSION – ASIAN PROGRESS IN 3RS: 3RD ASIAN CONGRESS AND KSAAE UPDATES Chairs: Dr Yasunari Kanda (National Institute of Health Sciences, Japan) & Dr Kwang-Mahn Kim (Yonsei University, South Korea) 
14:00-15:00 AUDITORIUM	DEBATE SESSION (FOR AND AGAINST) USE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN CHEMICAL RISK ASSESSMENT Chair: Dr Joao Barroso (JRC, Ispra, Italy)		
15:00-16:00 AUDITORIUM	POSTER TEASER SESSION FLASH PRESENTATIONS OF SELECTED POSTERS		
16:00-16:30 TRAMUNTANA	COFFEE BREAK, VISITING EXHIBITION AREA & POSTER VIEWING		
16:30-18:30 GARBI 1 + 2	ESTIV GENERAL ASSEMBLY (ESTIV members)		
19:30-... FINCAS MAS SOLERS	CONGRESS GALA DINNER & SOCIAL EVENING		

THURSDAY, NOVEMBER 24TH, 2022

8:30-10:30 AUDITORIUM	SESSION 7A DEVELOPMENTAL NEUROTOXICITY (DNT) Chairs: Dr. Ellen Fritsche & Clive Roper (Roper Toxicology Consulting Limited, UK)	8:30-10:30 GARBI 1 + 2	SESSION 7B IMPLEMENTATION OF NAMS INTO REGULATORY FRAMEWORKS – ESTABLISHING SCIENTIFIC CONFIDENCE, DEVELOPMENT OF STANDARDS AND GOOD PRACTICES Chairs: Dr. Marketa Dvořáková (NIPH Prague, Prague, Czech republic) & Dr. Jochem Louisse (Wageningen University, Wageningen, The Netherlands)
10:30-11:00 TRAMUNTANA	COFFEE BREAK, VISITING EXHIBITION AREA & POSTER VIEWING		
11:00-12:40 AUDITORIUM	SESSION 8A IN VITRO METHODS FOR SAFETY ASSESSMENT OF MEDICAL DEVICES Chairs: Dr. Christian Pellevoisin (MatTek Life Sciences, France) & Dr. Helena Kandarova (CEM SAS, Bratislava, Slovakia)	11:00-12:40 GARBI 1 + 2	SESSION 8B IN VITRO COVID-19 RESEARCH / LUNG AND CARDIOVASCULAR MODELS Chairs: Prof. Arno Gutleb (LIST, Luxembourg, Luxembourg) & Dr. Yasunari Kanda (National Institute of Health Sciences, Japan)
12:40-13:30 AUDITORIUM	CONGRESS CLOSING CEREMONY Chairs: Dr. Helena Kandarova (CEM SAS, Bratislava, Slovakia) & Dr. João Barroso (JRC, Ispra Italy)		
14:00-19:00 LLEVANT	POST-CONFERENCE WORKSHOP EPIKIN ACADEMY	14:00-19:00 GARBI 1 + 2	ASPIS OPEN SYMPOSIUM

FRIDAY, NOVEMBER 25TH, 2022

8:30-16:00 LLEVANT	POST-CONFERENCE WORKSHOP EPIKIN ACADEMY	8:30-16:00 GARBI 1 + 2	ASPIS OPEN SYMPOSIUM
-----------------------	--	---------------------------	-----------------------------

KEYNOTE AND INVITED SPEAKERS

KEYNOTE SPEAKER

Monday, November 21st 2022
14:20 - 15:10

Session: 4a. Computational toxicology – in silico modelling, read-across, artificial intelligence and machine learning

Use of Artificial Intelligence and Machine Learning in Chemical Risk Assessment

Timothy Allen



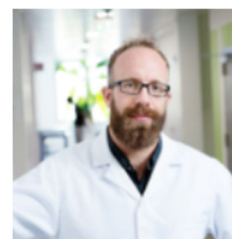
INVITED SPEAKERS

Monday, November 21st 2022
16:30 - 18:30

Session: 1. Bio-engineering, stem cells and disease models

Recapitulating Complex Human Tissues using Organ-on-chip and Organoid Technologies

Peter Loskill



Tuesday, November 22nd 2022
08:30 - 10:30

Session: 2a. Models, biomarkers and assays for endocrine disruption and developmental toxicity

Computational systems models for human-predictive developmental toxicity

Thomas Knudsen



Tuesday, November 22nd 2022
11:00 - 13:00

Session: 3a. Models, biomarkers and assays for systemic and immune toxicity

New approach methodologies in immunotoxicology with a focus on immunosuppression

Emanuela Corsini

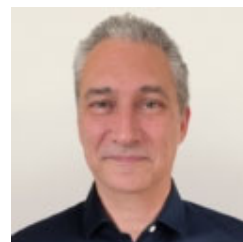


Tuesday, November 22nd 2022
14:00 - 16:00

Session: 4a. Computational toxicology – in silico modelling, read-across, artificial intelligence and machine learning

Bioinformatics and Network science applied in toxicology

Olivier Taboureau



Tuesday, November 22nd 2022
14:00 - 16:00

Session: 4a. Computational toxicology – in silico modelling, read-across, artificial intelligence and machine learning

The key role of computational toxicology for Toxicology for the 21st Century 2.0

Thomas Hartung

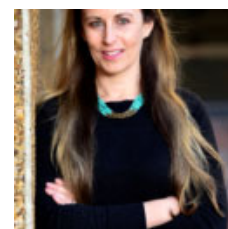


Wednesday, November 23rd 2022
08:30 - 10:30

Session: 5a. Toxicokinetics and in vitro – in vivo extrapolation

An Open, Accessible Interface for Contextualizing Chemical Effects

Nicole C. Kleinstreuer



Wednesday, November 23rd 2022
11:00 - 13:00

Session: 6a. In vitro methods for safety testing of biopharmaceuticals/biotherapies/vaccines

In vitro assays to predict retroviral vector-induced genotoxicity

Michael Rothe



Thursday, November 24th 2022
11:00 - 12:40

Session: 8a. In vitro methods for safety assessment of medical devices

ISO 10993 SERIES: ADDED VALUES OF 3D MODELS FOR BIOCOMPATIBILITY MEDICAL DEVICES

Christian Pellevoisin



*cell*QART®

made by SABEU

Cell Culture Inserts and pre-loaded Well Plates



cellQART.com



PrediScreen assay

For a complete study of DNA damages with a sensitive and predictive assay, using the two biomarkers γ H2AX and pH3. Performed on Human cell lines, the PrediScreen assay studies different effects of the compound tested, such as the genotoxic and/or cytotoxic potential, the mode of action involved (clastogenic or aneugenic) and the need of metabolic bioactivation.

Our analysis



No animal testing



Human cell lines



High throughput screening



Low and/or high doses



Short and/or long exhibitions



Biological triplicates



Complete report within 15 days

Our assay

Assay	Sensitivity (%)	Specificity (%)
PrediScreen	95	87
Ames (bacterial reversion)	60	77
Micronucleus test	79	54
Chromosome aberrations	79	55
Mammalian mutation	81	48

Kopp *et al.*, Archives of Toxicology 2019

What else

PrediProtect assay

Study the antioxidant effect of a compound to determine its anti-aging potential.

PrediRepair assay

Study the protective effect of the DNA of a compound against any type of damage.

DETAILED PROGRAMME

Monday, November 21st, 2022

08:00-19:00

Room: Hall Auditorium

Congress registration

09:00-13:00

Room: Garbi 1+2



Pre-conference workshop – Bridging across methods in the biosciences (BeAMs): the opportunity of COVID-19 (organised with JRC)

Chairs: **Dr Annamaria Carusi & Dr Sofia Batista Leite**

Cross-disciplinarity in all its forms remains very difficult to put into practice, even though it is widely acknowledged as an important way of meeting scientific challenges. In this workshop we offer tools to assist in putting into practice meaningful cross-disciplinarity, that can be a game changer in the broad arena of toxicology. Rather than a series of talks, our workshop is a series of hands-on activities in which participants explore their own and others' attitudes towards cross-disciplinarity, and the challenges to accomplishing it. Together we look at strategies for overcoming challenges, and tools for bridging across different approaches to common research topics.

The example the CIAO project will be used as a springboard for a close look at how bridging can be achieved. This is a cross-disciplinary collaborative effort to make sense of the tsunami of data being generated on the pathways of Covid19, using the Adverse Outcome Pathways Framework as a tool for knowledge management. Bringing together scientists and practitioners from multiple backgrounds and disciplines, the project has been as interesting for the insights it has brought into the disease pathways of Covid19, as for the way in which it has been an opportunity to see bridging across methods in action. The aim of the workshop is to provide participants with a toolkit for analysing challenges to cross-disciplinarity that they encounter in their research contexts, and for achieving forms of cross-disciplinarity that genuinely enrich their practice.

The team who will facilitate the workshop includes scientists, socio-philosopher of science, and a creative facilitator. Below you can find their short bios.

13:00-20:30

Room: Tramuntana

Exhibition

13:00-14:00

Room: Tramuntana

Lunch break

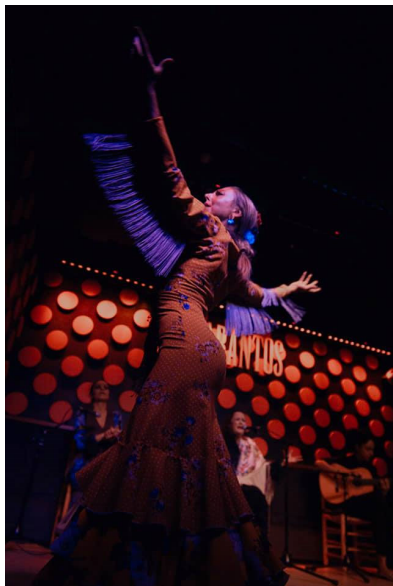
14:00-14:20

Room: Auditorium

Opening of ESTIV 2022 Congress

Chairs: **Dr Helena Kandarova** (CEM SAS, Bratislava, Slovakia – ESTIV President) & **Dr João Barroso** (JRC, Ispra Italy -ESTIV Vice-president)

With special opening performance of: **Flamenco Metropolitan**



14:20-15:10

Room: Auditorium

Keynote lecture

Use of Artificial Intelligence and Machine Learning in the Chemical Risk Assessment

Dr Timothy Allen^{1,2}

¹University of Cambridge, Cambridge, UK

²Ladder Therapeutics, Toronto, Canada

Chairs: **Dr Helena Kandarova** (CEM SAS, Bratislava, Slovakia – ESTIV President) & **Dr João Barroso** (JRC, Ispra Italy -ESTIV Vice-president)

15:10-15:15

Room: Auditorium

ESTIV Early Scientific Career Award ceremony 2020/2022

Chairs: **Dr Helena Kandarova** (CEM SAS, Bratislava, Slovakia – ESTIV President) & **Dr João Barroso** (JRC, Ispra Italy -ESTIV Vice-president)

15:15-16:00

Room: Auditorium

BEMF Award ceremony and BEMA Lecture

Chairs: **Prof. Stina Oredsson** (Björn Ekwall Memorial Foundation, Sweden)

16:00-16:30

Room: Tramuntana

Coffee break, visiting exhibition area & poster viewing

16:30-18:30

Room: Auditorium

Session 1 – Bio-engineering, stem cells and disease models

Chairs: **Prof. Peter Loskill** (University of Tübingen, Germany) & **Dr João Barroso** (JRC, Ispra, Italy – ESTIV Vice-president)

O-1-1 (INVITED)

Recapitulating Complex Human Tissues using Organ-on-chip and Organoid Technologies

Peter Loskill^{1,2,3}

¹Eberhard Karls University Tübingen

²Natural and Medical Sciences Institute (NMI)

³European-Organ-on-Chip-Society (EUROoCS)

O-1-2

iPSC-derived Brain Organoids as versatile research tool for Developmental Neurotoxicity and Neurological disorders

Lena Smirnova¹

¹Johns Hopkins University

O-1-3

Evaluation of 3D-Bioprinted Human Skin Equivalents for In Vitro Permeation Testing

Alec T. Salminen¹

¹National Center for Toxicological Research, U.S. Food and Drug Administration, Jefferson, AR, USA

O-1-4

iPSC-derived hepatic stellate cells for in vitro fibrosis modelling

Raquel A. Martinez Garcia de la Torre¹,

¹Insititut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain

O-1-5

Transport of per- and polyfluoroalkyl substances (PFAS) across human induced pluripotent stem cell (hiPSC) derived intestinal epithelial cells in comparison with human primary intestinal epithelial cells and Caco-2 cells

Aafke Janssen¹

¹Wageningen Food Safety Research

19:00-20:30

Room: Tramuntana, Hall Tramuntana and Hall Auditorium

Welcome Reception and Poster Session

The Welcome Reception and Poster Session is supported by The American Society for Cellular and Computational Toxicology (ASCCT).



Tuesday, November 22nd, 2022

08:00-19:00 Room: Hall Auditorium
Congress registration

08:30-10:30 Room: Auditorium

Session 2a – Models, biomarkers and assays for endocrine disruption and developmental toxicity

Chairs: **Dr Thomas Knudsen** (US EPA, Durham, USA) & **Prof. Arno Gutleb** (LIST, Luxembourg, Luxembourg)

O-2A-1 (INVITED) Computational systems models for human-predictive developmental toxicity

Thomas Knudsen¹
¹USEPA

O-2A-2 Upcoming validated mechanistic in vitro methods for the identification of thyroid disruptors.

Ingrid Langezaal

O-2A-3 Interlaboratory OECD Validation of the Rapid Androgen Disruption Adverse outcome Reporter (RADAR) assay

Andrew Tindall¹
¹Laboratoire WatchFrog, 1 rue Pierre Fontaine, 91000 Evry, France

O-2A-4 Validation of a New Approach Method (NAM) testing DIO1 inhibition using a human microsome based, colorimetric assay

Nina Hambruch¹
¹BASF SE, Experimental Toxicology and Ecology, Ludwigshafen, Germany

O-2A-5 Immunological implications of Endocrine Disrupting Chemicals (EDCs): RACK1 as a bridge between the endocrine and the immune systems

Erica Buoso¹²
¹Dept. of Drug Sciences, University of Pavia, Italy
²Dept. of Pharmacology and Experimental Therapeutics, Boston University, School of Medicine, MA, USA

O-2A-6 Beyond AOPs: A mechanistic evaluation of OF NAMs in dart testing

Predrag Kukic¹
¹Unilever

08:30-10:30 Room: Garbi 1+2

Session: 2b. Challenges in cosmetics safety

Chairs: **Nathalie Alépée** (L'Oréal, Paris, France) & **Erwin van Vliet** (Houten, Utrecht, Netherlands)



O-2B-1 Global Regulatory Landscape for Cosmetics - Challenges and Opportunities in Utilising NAMs

Jay Ingram¹²

¹*Delphic HSE Solutions Ltd.*

²*Humane Society International Animal Free Safety Assessment Collaboration*

O-2B-2 Overview of New Approach Methodologies for eye hazard identification according to UN GHS

Els Adriaens¹

¹*Adriaens Consulting, Belgium*

O-2B-3 Application of an updated Next Generation Risk Assessment (NGRA) framework for skin allergy: a case study for Diethanolamine

Nathalie Alépée¹

¹*L'Oréal, Research & Innovation, Aulnay-sous-Bois, Clichy, France*

O-2B-4 New challenges for environmental safety of cosmetics

Véronique POULSEN¹

¹*L'Oréal, Research & Innovation, Aulnay-sous-Bois, Clichy, France*

10:30-11:00

Room: Tramuntana

Coffee break, visiting exhibition area & poster viewing

11:00-13:00

Room: Auditorium

Session: 3a. Models, biomarkers and assays for systemic and immune toxicity

Chairs: **Emanuela Corsini** (Università degli Studi di Milano, Milan, Italy) & **Jochem Louisse** (Wageningen University, Wageningen, The Netherlands)

O-3A-1 (INVITED) New approach methodologies in immunotoxicology with a focus on immunosuppression

Emanuela Corsini¹²³

¹*Laboratory of Toxicology*

²*Department of Pharmacological and Biomolecular Sciences*

³*Università degli Studi di Milano, Milan, Italy*

O-3A-2 In vitro evaluation of both skin irritation and sensitization hazard of mixtures and finished products using the SENS-IS assay.

Françoise Cottrez¹

¹*ImmunoSearch, Grasse, France*

O-3A-3 Multicellular, liver microtissues reliably depict key events of the liver fibrosis AOP

Laura Suter-Dick¹²

¹*School of Life Sciences (FHNW), Switzerland*

²*Swiss Centre for Applied Human Toxicology (SCAHT), Switzerland*

- O-3A-4** **Immunotoxicity of crystalline silica particles: in vitro screening models and use of high- dimensional immune cell profiling**
Birgitte Lindeman¹
¹Norwegian Institute of Public Health, Division of Climate and Environmental Health, Oslo, Norway
- O-3A-5** **A 3D Alveolar In Vitro Test System for the Prediction of Chemical Respiratory Sensitizers**
Sabina Burla¹
¹Luxembourg Institute of Science and Technology
- O-3A-6** **In vitro assessment of skin sensitizing potential of process-related impurities in polymeric materials during product development.**
Andy Forreryd¹
¹SenzaGen AB
-

11:00-13:00

Room: Garbi 1+2

Session: 3b. Organ-on-a-chip & Microphysiological Systems

Chairs: **Sofia Batista Leite** (JRC, Ispra, Italy) & **Pau Sancho-Bru** (Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain)

- O-3B-1** **A new immunocompetent OOC platform for culturing 3D human tissues with capillary flow-driven immune cells and investigating their cross-talk**
Silvia Scaglione¹
¹React4life
- O-3B-2** **INTEGRATION OF HUMAN-STEM-CELL-BASED EMBRYOID BODIES INTO A MICROFLUIDIC MULTI-TISSUE PLATFORM FOR SYSTEMIC EMBRYOTOXICITY TESTING**
Julia Boos¹
¹ETH Zürich
- O-3B-3** **Multi-Organ-Chip Technologies: The effect of application route on the metabolism**
Ilka Maschmeyer¹
¹TissUse GmbH
- O-3B-4** **A BREATHING LUNG-ON-CHIP MODEL: AN ADVANCED IN-VITRO TOOL FOR DRUG TESTING AND TOXICOLOGY**
Aude Rapet¹
¹Alveolix AG, Swiss Organs-on-Chip Innovation, Bern, Switzerland
- O-3B-5** **A microfluidic bone marrow chip for the safety profiling of complex large molecules in pre-clinical drug development**
Leopold Koenig¹
¹TissUse GmbH, Berlin, Germany

O-3B-6 A human beating heart on chip for on-line screening of drug cardiotoxicity

Roberta Visone¹²
¹*BiomimX Srl*
²*Politecnico di Milano*

13:00-14:00

Room: Tramuntana

Lunch break, visiting exhibition area & poster viewing

13:00-14:00

Room: Garbi 1+2



ILSI/ESTIV- sponsored lunch session: Application of non-animal methods and concepts in food risk assessment

Chairs: **Dr Isabelle Guelinckx** (ILSI Europe, Belgium) & **Dr Helena Kandarova** (CEM SAS, Bratislava, Slovakia)

***ESTIV provides 50 lunch boxes at the entrance of the meeting room (first come first served)**

14:00-16:00

Room: Auditorium

Session: 4a. Computational toxicology – in silico modelling, read-across, artificial intelligence and machine learning

Chairs: **Olivier Taboureau** (University Paris Diderot, Paris, France) & **Tim Allen** (Ladder Therapeutics, Toronto, Canada)

O-4A-1 (INVITED) Bioinformatics and Network science applied in toxicology

Olivier Taboureau¹
¹*Université Paris Cité*

O-4A-2 (INVITED) The key role of computational toxicology for Toxicology for the 21st Century 2.0

Thomas Hartung¹
¹*Johns Hopkins University*

O-4A-3 Turning AOPs into testable hypotheses with natural language processing and tissue-specific knowledge graphs

Ignacio Tripodi¹
¹*Sciome, LLC*

O-4A-4 Integrating in vitro and in silico data for screening and characterization of tattoo pigments for human health risk assessment

Prachi Pradeep¹

¹*German Federal Institute for Risk Assessment (BfR), Department of Chemical and Product Safety, Berlin, Germany*

O-4A-5 **Modelling in vitro time-concentration response of gene expression to chemical exposure**

Donatella Carpi¹

¹*EC - Joint Research Centre; Chemical Safety and Alternative Methods Unit*

14:00-16:00 **Room: Garbi 1+2**

Session: 4b. Local toxicity testing (safety and efficacy)

Chairs: **Montserrat Mitjans** (Universitat de Barcelona, Barcelona, Spain) & **Helena Kandarova** (CEM SAS, Bratislava, Slovakia)

O-4B-1 **A new OECD guideline based on Defined Approaches for Eye Hazard Assessment of non-surfactant liquids combining Physicochemical Properties and OECD-approved Test Methods**

Els Adriaens

¹*Adriaens Consulting, Belgium*

O-4B-2 **MODELING SKIN INFLAMMATION USING 2D AND 3D IN VITRO MODELS**

Manon Barthe¹

¹*PKDERM Laboratories*

O-4B-3 **In vitro investigation of aluminum bioavailability after exposure of oral care products**

Elena Grasselli¹

¹*ComplianceLab, Dipartimento Scienze della Terra dell'Ambiente e della DISTAV,*

O-4B-4 **Integrative evaluation strategy for skin sensitization : the mixtures challenge**

Eric Andres¹

¹*Oroxcell*

O-4B-5 **Application of a next generation risk assessment framework for skin sensitisation using new approach methodologies (NAMs): geraniol case study**

Renato Ivan de Ávila¹

¹*Unilever Safety and Environmental Assurance Centre (SEAC)*

16:00-16:30 **Room: Tramuntana**

Coffee break, visiting exhibition area & poster viewing

16:30-17:30 **Room: Auditorium**

Early Stage Researcher Session 1

Chairs: **Dr Erwin van Vliet** (Houten, Utrecht, Netherlands) & **Dr Pau Sancho-Bru** (Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain)

O-ESCS1-1 **A single procedure to generate functional hiPSCs-derived liver organoids - Towards an innovative tools suitable for drug screening**

Méryl Roudaut¹²

¹*HCS Pharma, Lille, France*

²*Institut du thorax, INSERM U1087, CNRS 6291, IRS-UN, CHU-Nantes, Nantes, France*

O-ESCS1-2 **In vitro screening for developmental neurotoxicity of flame retardants using a 3D human primary neural progenitor cell assay: a case study**

Jördis Klose¹

¹*IUF-Leibniz Research Institute for Environmental Medicine, Auf'm Hennekamp 50, 40225 Dusseldorf, NRW, Germany*

O-ESCS1-3 **Predicting developmental toxicity of pyrethroid insecticides in vitro using human induced pluripotent stem cells**

Yanying Ma¹

¹*National Food Institute, Technical University of Denmark*

O-ESCS1-4 **CHARACTERIZATION OF EXTRACELLULAR VESICLES RELEASED BY PERIPHERAL BLOOD MONONUCLEAR CELLS EXPOSED TO POLYCYCLIC AROMATIC HYDROCARBONS AND STUDY OF THEIR INTERACTION WITH ENDOTHELIAL CELLS**

Rima Souki¹,

¹*Univ Rennes, Inserm, EHESP, Irset (Institut de recherche en santé, environnement et travail), UMR_S 1085, F-35000 Rennes, France*

O-ESCS1-5 **Towards a personalized kidney-on-a-chip derived from induced pluripotent stem cells**

Michelle Jäschke¹

¹*TissUse GmbH*

16:30-18:30

Room: Garbi 1+2

Sponsored sessions

Chairs: **Erin Hill** (IIVS, Gaithersburg, MD, USA) & **Dr Clive Roper** (Roper Toxicology Consulting Limited, UK)



Research support to replace animal models: the Alternatives Research & Development Foundation (ARDF) Annual Open grant program

Angela Hvitved¹

¹*Alternatives Research & Development Foundation*



Organoids and their application in toxicity studies

Salvatore Simmini¹
¹STEMCELL Technologies

Bioprinting - a paradigm shift in the field of toxicology testing

Caio Valeriano¹
¹REGENHU

REGENHU

17:30-18:30

Room: Auditorium

Early Stage Researcher Session 2

Chairs: Dr Montserrat Mitjans (Universitat de Barcelona, Barcelona, Spain) & Dr. Marketa Dvořáková (NIPH Prague, Prague, Czech republic)

O-ESCS2-1

The Electro-Mitochondrial Coupling of a Microphysiological Human Heart

Avner Ehrlich¹
¹Alexander Grass Center for Bioengineering, The Hebrew University of Jerusalem, Jerusalem, Israel.

O-ESCS2-2

Affinity prediction between cosmetic ingredients and CD54/CD86 receptors by molecular docking: A novel approach to predict skin sensitisation potential

Ahmet Kati¹
¹Experimental Medicine Research and Application Center, University of Health Sciences Turkey, 34662, Uskudar, Istanbul, Turkey,

O-ESCS2-3

ELECTROSPUN SCAFFOLD-BASED APPROACHES FOR TOXICOLOGICAL SCREENING IN SKIN, PULMONARY, AND INTESTINAL EPITHELIAL TISSUE

Filipa Leal¹
¹BIOFABICS, Rua Alfredo Allen 455, 4200-135 Porto, Portugal

O-ESCS2-4

Developing a method to incorporate laminar flow into scaffold-based 3D cell cultures for more physiologically relevant nutrient and drug delivery.

Zachary Sitte¹, Matthew Lockett¹
¹University of North Carolina

O-ESCS2-5

Kidney organoids for toxicology: application to the development of Adverse Outcome Pathway (AOP) study of nephrotoxicity induced by uranium

Marie Frerejacques¹
¹Institut de Radioprotection et de Sûreté Nucléaire (IRSN), PSE-SANTE, SESANE, LRSI, Fontenay-aux-Roses, F-92262 France

18:30-19:30

Room: Auditorium

Career development session

19:30-20:30

Room: Tramuntana + Hall Auditorium

Wine reception in the poster area (sponsored by the University of Barcelona)

The Wine Reception is supported by University of Barcelona



UNIVERSITAT DE
BARCELONA

Wednesday, November 23rd, 2022

08:00-19:00

Room: Hall Auditorium

Congress registration

08:30-10:30

Room: Auditorium

Session: 5a. Toxicokinetics and in vitro – in vivo extrapolation

Chairs: **Nicole Kleinstreuer** (NICEATM, Durham, USA) & **Jochem Louisse** (Wageningen University, Wageningen, The Netherlands)

O-5A-1 (INVITED)

An Open, Accessible Interface for Contextualizing Chemical Effects

Nicole Kleinstreuer¹
¹NICEATM

O-5A-2

Crucial role of Toxicokinetics and ADME methods in application of Next generation Risk Assessment

Andreas Schepky¹
¹Beiersdorf AG, Global toxicology

O-5A-3

Generic PBK models based on in vitro and in silico input data: How to gain trust in the results?

Ans Punt¹
¹Wageningen Food Safety Research (WFSR), part of Wageningen University and Research, Wageningen, the Netherlands

O-5A-4

USE OF A 3D-IN VITRO MODEL FOR THE ASSESSMENT OF LIVER METABOLISM RELATED TO NEUROTOXICITY OF OCCUPATIONALLY RELEVANT CHEMICALS

Sophie Werner¹²³
¹University of Applied Sciences and Arts Northwestern Switzerland, School of Life Sciences, Muttenz, Switzerland
²Department of Pharmaceutical Sciences, University of Basel, Switzerland
³Swiss Centre for Applied Human Toxicology (SCAHT), Basel, Switzerland

O-5A-5 **Design and Application of a Physiologically Based Kinetic (PBK) Model for Uptake of Gases and Vapours**

Norman Nowak
¹ *Fraunhofer ITEM, Hannover, Germany*

O-5A-6 **High-Throughput Assessment of the Abiotic Stability of Test Chemicals in In Vitro Bioassays**

Julia Huchthausen¹
¹ *Helmholtz Centre for Environmental Research – UFZ, Department of Cell Toxicology, Permoserstr. 15, 04318 Leipzig, Germany*

08:30-10:30

Room: Garbi 1+2

Session: 5b. In vitro systems to assess respiratory toxicity

Chairs: **Erin Hill** (IIVS, Gaithersburg, MD, USA) & **Clive Roper** (Roper Toxicology Consulting Limited, UK)

O-5B-1 **Evaluating human cell-based in vitro systems to assess respiratory toxicity – is more complex better?**

Andreas Stucki¹
¹ *PETA Science Consortium International e.V.*

O-5B-2 **Development and characterization of a decellularized bronchial scaffold for application in physiologically relevant 3D airway models reconstruction**

Artur Christian Garcia da Silva¹
¹ *Laboratory of Research and Education in In vitro Toxicology (Tox In) – Faculty of Pharmacy – Federal University of Goiás (UFG)*

O-5B-3 **The application of alveolar macrophage responses for respiratory safety assessment**

Victoria Hutter¹
¹ *ImmuONE Ltd*

O-5B-4 **Prediction of acute respiratory toxicity of volatile liquids using physiologically relevant in vitro inhalation model**

Jan Markus¹
¹ *MatTek In Vitro Life Science Laboratories, Bratislava, Slovakia*

O-5B-5 **IMPACT OF AIRBORNE PARTICULATE MATTER FROM PORT, INDUSTRIAL AND URBAN AREAS ON OXIDATIVE AND INFLAMMATORY RESPONSES ON LUNG CELLS.**

Margaux Cochard¹
¹ *Unité de Chimie Environnementale et Interactions sur le Vivant, UCEiV UR4492, SFR Condorcet FR CNRS-3417, Université du Littoral Côte d'Opale (ULCO), Dunkerque, France*

10:30-11:00

Room: Tramuntana

Coffee break, visiting exhibition area & poster viewing

11:00-12:30

Room: Auditorium

Session: 6a. In vitro methods for safety testing of biopharmaceuticals/biotherapies/vaccines

Chairs: **Michael Rothe** (Hannover Medical School, Hannover, Germany) & **Anne Marie Vinggaard** (Technical University of Denmark, Denmark)

O-6A-1 (INVITED) In vitro assays to predict retroviral vector-induced genotoxicity

Michael Rothe¹

¹*Hannover Medical School, Hannover, Germany*

O-6A-2 State-of-the-Art in Secondary Pharmacology and its Impact on the Safety of New Medicines

Jean-Pierre Valentin¹

¹*UCB Biopharma, Development Science, Braine l'Alleud, Belgium*

O-6A-3 Exploiting Real-Time Assays to Multiplex Orthogonal Methods and Determine Mechanism of Action During In Vitro Safety Testing

Terry Riss¹

¹*Promega Corporation*

O-6A-4 Botulinum neurotoxin potency testing in vitro – Motor neurons differentiated from human induced pluripotent stem cells serve as highly suitable target cells

Bettina Seeger¹

¹*Institute for Food Quality and Safety, Research Group Food Toxicology and Alternative/Complementary Methods to Animal Experiments, University of Veterinary Medicine Hannover, Foundation, Hannover, Germany*

O-6A-5 Supported Gel Slabs: Decreasing the barrier of entry for use of 3D cell cultures in the drug discovery workflow

Zachary Sitte¹

¹*University of North Carolina*

O-6A-6 Mechanistic investigations and early de-risking of QRS complex widening to improve cardiac safety profile of novel anti-malarials

Jean-Pierre Valentin¹

¹*UCB Biopharma*

11:00-12:30

Room: Garbi 1+2

Session: 6b. Knowledge sharing and education

Chairs: **Pilar Vinardell** (Universitat Barcelona, Barcelona, Spain) & **Erin Hill** (IIVS, Gaithersburg, MD, USA)

O-6B-1 The science of sharing knowledge about models and methods

Pierre Deceuninck¹

¹*European Commission, Joint Research Centre (JRC)*

O-6B-3 Scientific Validity of Non-Animal-Derived Antibodies

João Barroso¹

¹European Commission, Joint Research Centre

O-6B-4 Animals in the (Petri) Dish: Towards a Truly Animal-free Laboratory

Tilo Weber¹

¹Animal Welfare Academy of the German Animal Welfare Federation, Neubiberg, Germany

O-6B-5 OUTCOMES OF A WORKSHOP TO ADDRESS ANIMAL METHODS BIAS IN SCIENTIFIC PUBLISHING

Catharine Krebs¹

¹Physicians Committee for Responsible Medicine

O-6B-6 A Course on Animal-Free Risk Assessment of Cosmetics and Cosmetic Ingredients

Renato de-Avila¹

¹Unilever

13:00-14:00

Room: Tramuntana

Lunch break, visiting exhibition area & poster viewing

13:00-14:00

Room: Garbi 1+2



**JSAAE – sponsored session – Asian progress in 3Rs:
3rd Asian congress and KSAAE updates**

Chairs: **Dr Yasunari Kanda** (National Institute of Health Sciences, Japan) & **Dr Kwang-Mahn Kim** (Yonsei University, South Korea)

***ESTIV provides 50 lunch boxes at the entrance of the meeting room (first come first served)**

14:00-15:00

Room: Auditorium

Programme Change: Presentation and Panel Discussion

Building scientific confidence in NAMs Toward Regulatory Acceptance.

Chair: **Erin Hill** (IIVS)

Dr. Robert Landsiedel, BASF SE, **Dr. Nicole Kleinstreuer**, NICEATM, USA, **Dr. João Barroso**, JRC, Italy

15:00-16:00

Room: Auditorium

Poster teaser session: Flash presentations of selected posters

16:00-16:30 **Room: Tramuntana**
Coffee break, visiting exhibition area & poster viewing

16:30-18:30 **Room: Garbi 1+2**
ESTIV General Assembly (ESTIV members)

19:30-22:30 **Room: Fincas Mas Solers**
Congress gala dinner (19:30-22:30) & social evening (22:30 – 01:00)

Thursday, November, 24th, 2022

08:00-19:00 **Room: Hall Auditorium**
Congress registration

08:30-10:30 **Room: Auditorium**
Session: 7a. Developmental Neurotoxicity (DNT)

Chairs: **Ellen Fritsche** (IUF – Leibniz Research Institute for Environmental Medicine, Düsseldorf, Germany) & **Clive Roper** (Roper Toxicology Consulting Limited, UK)

O-7A-1 **Developmental neurotoxicity (DNT) as a case study on how to assemble a an in vitro testing battery for a complex regulatory in vivo endpoint**

Ellen Fritsche¹

¹IUF - Leibniz Research Institute for Environmental Medicine

O-7A-2 **FIRST STEPS FOR CREATING AN ONTOLOGY FOR COGNITIVE FUNCTION DEFECTS FOR REGULATORY APPLICATION**

Eliska Kuchovska¹

¹IUF - Leibniz Research Institute for Environmental Medicine, Düsseldorf, Germany

O-7A-3 **Evaluation of a human iPSC-derived BBB model for repeated dose toxicity testing**

Maxime Culot¹

¹University of Artois - BBB Lab

O-7A-4 **Comparative developmental neurotoxicity of NSAIDs in the zebrafish**

Elisabet Teixido¹

¹GRET-Toxicology Unit, Department of Pharmacology, Toxicology and Therapeutic Chemistry, Faculty of Pharmacy and Food Sciences, University of Barcelona, 08028, Barcelona, Spain.

O-7A-5 AN ADVERSE OUTCOME PATHWAY (AOP) BASED APPROACH TO IDENTIFY CHANGES IN PRENATAL BRAIN PROGRAMMING

Marta Barenys¹

¹Toxicology Unit of the Department of Pharmacology, Toxicology and Therapeutic Chemistry, Faculty of Pharmacy and Food Sciences, University of Barcelona, Spain.

O-7A-6 EFFECTS OF SPIKE PROTEIN AND TOXIN-LIKE PEPTIDES FOUND IN COVID-19 PATIENTS ON HUMAN 3D NEURONAL/GLIAL MODEL UNDERGOING DIFFERENTIATION: POSSIBLE SARS-COV-2 IMPLICATIONS FOR BRAIN DEVELOPMENT.

Laure-Alix Clerbaux¹

¹European Commission, Joint Research Centre (JRC), Ispra, Italy

08:30-10:30

Room: Garbi 1+2

Session: 7b. Implementation of NAMs into regulatory frameworks – establishing scientific confidence, development of standards and good practices

Chairs: **Marketa Dvořáková** (NIPH Prague, Prague, Czech republic) & **Jochem Lousse** (Wageningen University, Wageningen, The Netherlands)

O-7B-1 Method developers are key players ensuring in-house reproducibility and relevance of in vitro methods paving the way for regulatory acceptance

Sandra Coecke¹

¹European Commission Joint Research Centre, Ispra, Italy

O-7B-2 Good In Vitro Method Practices Certification: A Roadmap for Implementation and Harmonization

Amanda Ulrey¹

¹IIVS

O-7B-3 TOWARDS STANDARDIZATION OF TESTING METHODS FOR COMPARATIVE IN VITRO METABOLISM (CIVM) STUDIES

Annelies Noorlander¹

¹Wageningen Food Safety Research (WFSR), part of Wageningen University and Research, Wageningen, the Netherlands

O-7B-4 IMPACT OF CURRENT REGULATORY CHANGES ON TOXICOLOGY TESTING REQUIREMENTS FOR CHEMICALS IN EUROPE

Manon Beekhuijzen¹

¹Charles River Laboratories

10:30-11:00

Room: Tramuntana

Coffee break, visiting exhibition area & poster viewing

11:00-12:40

Room: Auditorium

Session: 8a. In vitro methods for safety assessment of medical devices

Chairs: **Christian Pellevoisin** (MatTek Life Sciences, France) & **Helena Kandarova** (CEM SAS, Bratislava, Slovakia)

- O-8A-1 (INVITED) ISO 10993 SERIES: ADDED VALUES OF 3D MODELS FOR BIOCOMPATIBILITY MEDICAL DEVICES**
Christian Pellevoisin¹
¹*MatTek Europe, Bratislava, Slovakia*
- O-8A-2 Why in-vivo methods for the assessment of sensitization might be outdated in the near future**
Stefan Weissensteiner¹
¹*OFI – Austrian Research Institute for Chemistry and Technology*
- O-8A-3 HEMOCOMPATIBILITY OF BACTERIOPHOBIC COATED CATHETERS**
Robert Teixido Bartes²
¹*Facultat de Farmàcia i Ciències de l'Alimentació, Universitat de Barcelona (Spain)*
- O-8A-4 BIOCOMPATIBILITY OF MEDICAL DEVICES: EYE IRRITATION OF PRESERVED AND UNPRESERVED EYE DROPS ON HCE MODEL**
Marisa Meloni¹
¹*VitroScreen srl, Via Mosè Bianchi 103, 20149 Milan, Italy*
- O-8A-5 Measurement of metal sensitizer potency with the SENS-IS assay. Application to Medical devices**
Hervé Groux¹
¹*ImmunoSearch, Grasse, France*

11:00-12:40

Room: Garbi 1+2

Session: 8b. In vitro COVID-19 research / Lung and cardiovascular models

Chairs: **Arno Gutleb** (LIST, Luxembourg, Luxembourg) & **Yasunari Kanda** (National Institute of Health Sciences, Japan)

- O-8B-1 Knowledge from Human Relevant Cell, Tissue and Mathematics-based Methods as Key Tools for Understanding COVID-19 Dynamics, Kinetics, Symptoms, Risk Factors and Non-conventional Treatments**
Sandra Coecke¹
¹*European Commission Joint Research Centre, Ispra, Italy*
- O-8B-2 3D Human airway epithelial models to study SARS-CoV-2 pathogenesis and to discover antivirals**
Samuel Constant¹
¹*Epithelix*
- O-8B-3 Effects of drugs formerly repurposed for COVID-19 treatment on connexin43 hemichannels and pannexin1 channels**

Axelle Cooreman¹

¹*Entity of in vitro toxicology and dermato-cosmetology, Department of Pharmaceutical and Pharmacological Sciences, Vrije Universiteit Brussel*

O-8B-4

Use of a human bronchial epithelium model to assess the impact of PM2.5 exposure on the severity of viral infections

Chloé Chivé¹²

¹*Université Paris Cité, Functional and Adaptative Biology unit, UMR8251-CNRS, PARIS*

²*French Environment and Energy Management Agency 20, avenue du Grésillé – BP 90406 49004 ANGERS.*

O-8B-5

Metabolic Regulation of SARS-CoV-2 Infection

Avner Ehrlich¹

¹*Grass Center for Bioengineering, Benin School of Computer Science and Engineering, Jerusalem, Israel*

12:40-13:30

Room: Auditorium

Congress closing ceremony

Chairs: Dr. **Helena Kandarova** (CEM SAS, Bratislava, Slovakia) & Dr. **João Barroso** (JRC, Ispra Italy)



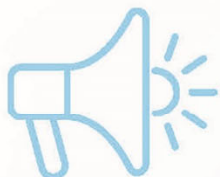
**ALTERNATIVES
RESEARCH & DEVELOPMENT
FOUNDATION**

Investing in New Approach Methods to Help Animals and People



FUND

Annual Open and AiR Challenge grant programs have made over \$4 million in research grants



PROMOTE

Sponsor and contribute to scientific meetings



REWARD

Recognize achievements in alternatives science through the William and Eleanor Cave Award



How Does Your Media Stack Up?

Maximize your iPSC cultures with a defined and optimized medium to support the robust expansion of human pluripotent stem cell lines under feeder-free conditions. Count on ExCellerate™ iPSC medium to deliver!

- **Ready-to-use:** Complete all-in-one formulation, no growth factor supplementation required
- **Robust:** Superior expansion and maintenance of undifferentiated iPSCs
- **Flexible:** Compatible with a variety of matrices and cell lines
- **Stable:** Maintains cell viability, genotype, and differentiation potential over long-term culture
- **Animal component-free:** Ideal for any downstream translational research



Discover ExCellerate | bio-techne.com

bio-techne®

R&D Systems™ Novus Biologicals™
Tocris Bioscience™ ProteinSimple™ ACD™

Contact Us



Trademarks and registered trademarks are the property of their respective owners.

STRY0253645_CGT_AD_iPSC_FR

POSTER PRESENTATIONS

3. Posters

Please scan the QR code below to go to the poster list and find the number of the presenting poster.

Poster presenters are requested to stand next to their posters for discussion during the poster sessions which will take place during the Welcome Reception, Wine Reception, breaks and lunches on all congress days.

All posters should be set up before the congress starts on the first day. Posters should be dismantled before the end of the congress. The organization will remove all posters after the congress. If the poster is not collected it will be discarded after the congress.



The Poster Sessions are supported by:



www.merckgroup.com

LABORATOIRE WATCHFROG

*First privately owned laboratory
exclusively dedicated to
endocrine disruptor assessment.*

Visit us booth 4

Watchfrog laboratory has provided testing services for **more than twelve years**. Our mission is to help you securing your ingredients and your products which are still in the development process or already on the market.

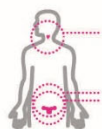
With our tests but also the help of our expert partners (toxicologists, regulatory affairs), we contribute to identifying your risks, your challenges, taking into account your specific context to provide you with the most adapted solutions.



In **twelve years**, we have **tested hundreds of substances** and **manufactured products**.



Our **tests** are based on **criteria** derived from **OECD guidelines** (TG 229, 230, 231, 234, and AFSS GD140)
XETA TG 248 / RADAR TG 251



We provide **tests on the main hormonal axes** targeted by regulatory criteria :
Thyroid, Androgen, Estrogen and also addressing **steroidogenic mechanisms**.



Tests are performed on **whole endocrine systems**.

Tests are compatible with all types of samples



Cosmetic and health care



Chemicals, biocide and plant protection products



Food industry



Food contact and packaging



Baby care



Water and environment

**PKDERM, a contract research company,
offers smart solutions for innovative *in vitro*
safety and efficacy testing**

Extensive expertise in dermatology

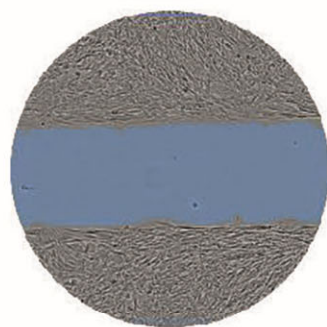
BIOLOGICAL MODELS

2D and 3D human lung models
hPCLS (on-going)
Excised human skin
2D and 3D human skin models
2D and 3D human hepatocytes
Caco-2 cells
Subcellular fractions (microsomes, S9)



TESTING PORTFOLIO

Lung fibrosis
Inflammation
Wound Healing
Dermal and intestinal absorption
Skin ageing and pigmentation
ADMET
Irritation (skin and eye)
Phototoxicity & Cytotoxicity



Sponsors and Exhibitors

Sponsors

ESTIV would like to extend its heartfelt thanks to all sponsors and exhibitors who help make this congress possible:

Silver Sponsor



Bronze Sponsors



**HUMANE SOCIETY
INTERNATIONAL**



**UNIVERSITAT DE
BARCELONA**

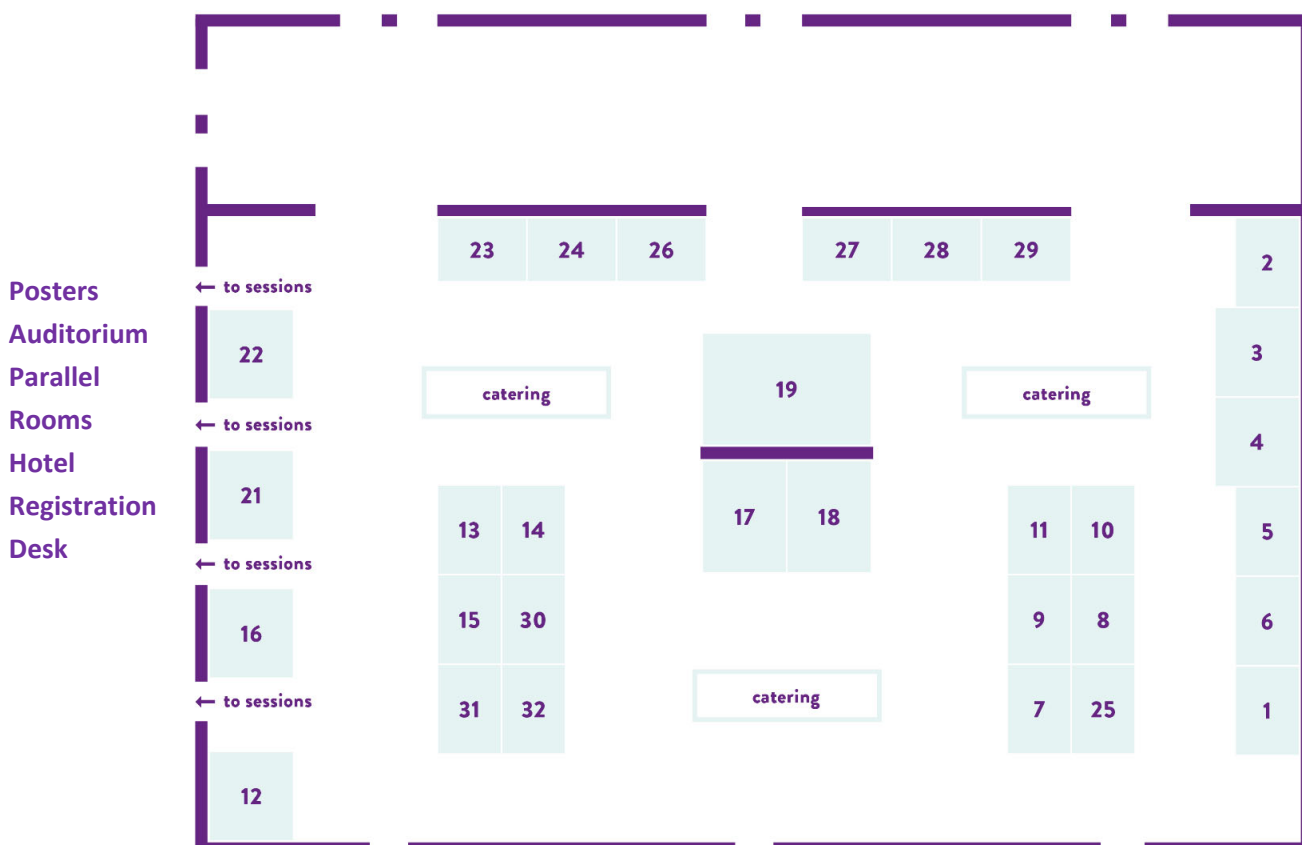
Exhibitors (A-Z)

Company

BOOTH

acCELLerate	10
Alttox – PrecisionTox	18
AlveoliX	8
BioDetection Systems	26
BioIVT	12
BioTechne	7
CelVivo	9
Creatio – University of Barcelona	28
Cytes Biotech	3
DNTOX	2
Episkin	17
Epithelix	25
European Commission JRC (EURL ECVAM)	19
Foresee Biosystems srl	6
Jai Research Foundation	29
ILSI Europe	13
ImmuONE	23

InSCREENeX GmbH	31
INVITROLIZE	30
MatTek	22
PHIO Scientific GmbH	32
PKDERM / Watchfrog	4
Primacyt Cell Culture Technology GmbH	21
ProtoQSAR SL	27
SABEU	14
Senzagen	5
Stemcell Technologies	16
Ten Bio	1
Tissuse	11
Toxys	24
VITROCELL Systems	15





HUMANE SOCIETY INTERNATIONAL

Together, the Humane Society family of organizations is the largest force for animal protection globally, active on the ground in over 50 countries across the Americas, Europe, Asia & Africa, protecting animals in the areas of agriculture, fashion, food, science, wildlife, among others.

The HSI Research & Toxicology team includes professionals in the areas of science, policy and public affairs. We work in cooperation with researchers, companies, governments and like-minded stakeholders to shift the paradigm in toxicology and health research to make human biology the gold standard.

Our team works through intergovernmental bodies to accelerate global adoption of modern non-animal methods (NAMs), and through our network of offices to have these approaches taken up through national regulations.

Contact: Troy Seidle
VP, Research and Toxicology
[linkedin.com/in/tseidle](https://www.linkedin.com/in/tseidle)

AFSA Cosmetics Education & Training Program

To complement legislative efforts to end cosmetic animal testing, we are developing training materials to build capacity in the application of animal-free risk assessment of cosmetics and ingredients.

This will support the development of new and safer products as well as robust safety decisions.



HSI spearheads the Animal-Free Safety Assessment Collaboration, which brings together corporate and non-profit leaders who share the goal of accelerating a modern, species-relevant approach to safety assessment and hasten the replacement of animal testing.

[afsacollaboration.org](https://www.afsacollaboration.org)

Contact: Catherine Willett
HSI Senior Director, Science & Regulatory Affairs
[linkedin.com/in/catherine-willett-75a7a85](https://www.linkedin.com/in/catherine-willett-75a7a85)

