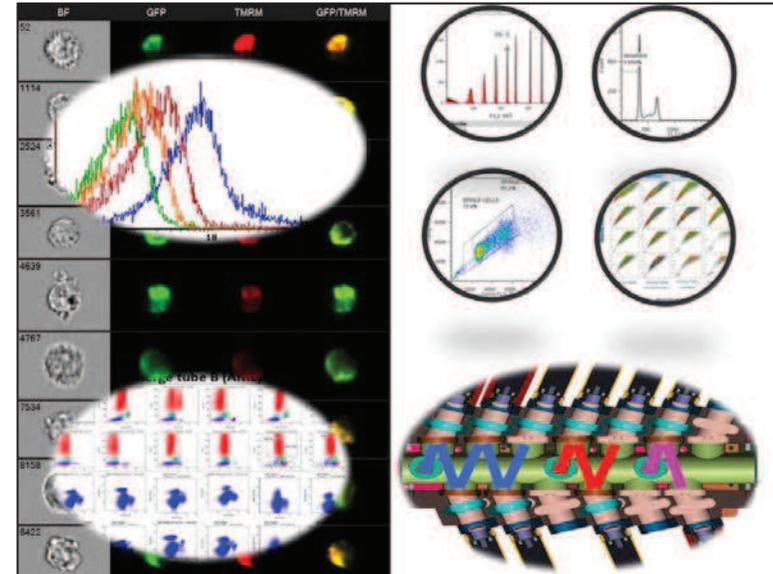


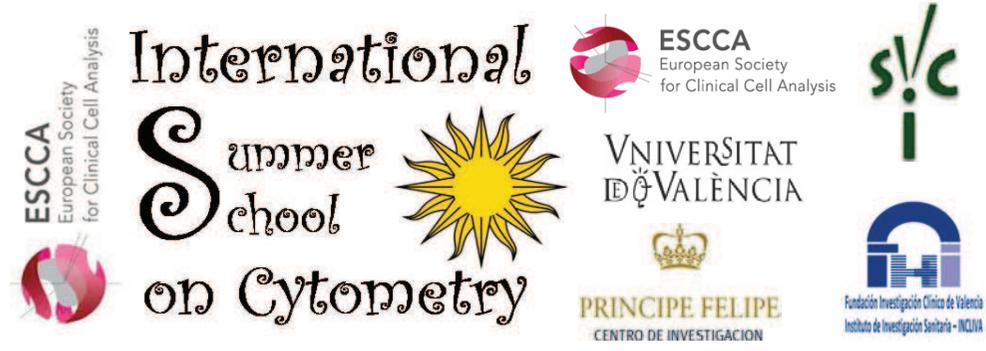
REGISTRATION FEES		
	ESCCA OR SIC MEMBERS* MEMBERS OF SPONSORING INSTITUTIONS*	OTHER ATTENDANTS†
FULL COURSE^o		
EARLY REGISTRATION (Before 31 May 2016)	500 €	600 €
LATE REGISTRATION (Until June 15, 2016)	600 €	700 €
†) Includes Course materials, lunches and coffees, Welcome Party and Course Dinner plus one-year full membership in ESCCA.		
^o) Registrants in two courses (week 1 and week 2) in Summer School will have 20% reduction in course fees.		
ACCOMMODATION[#]		
EARLY REGISTRATION	300 €	300 €
LATE REGISTRATION	350 €	350 €
#) Includes 6-night lodging (Sunday-Friday) at bed & breakfast rate at walking distance from venue. Additional nights may be requested to the organization.		
Students from emerging countries and from countries with no national Cytometry society may apply for an ESCCA Travel Fellowship covering the cost of accommodation (equivalent to 300 € value).		
Course Information: http://www.escca.eu/meetings/escca-schools		
Registration and Additional Information: jose.e.oconnor@uv.es		

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY



FUNCTIONAL CYTOMETRY: A PRACTICAL APPROACH 4th EDITION

27 June-1 July 2016
Cytometry Laboratories
Faculty of Medicine, Valencia University
VALENCIA (SPAIN)



BACKGROUND

- Flow cytometry and related Cytomic technologies have become a complex and powerful tool for cell analysis, essential in many aspects of interest for basic and applied research in Cellular and Molecular Biology, Biotechnology, Drug Discovery and Toxicology, among other. Knowledge of the basic principles of Flow Cytometry and Cytomics and the critical points of their practical use are essential in the basic and applied laboratories.

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY (EISC)

- EISC is a program of integrated educational and training initiatives oriented to confer to new skills and tools to design and optimize and manage cytometric experiments and interpret the results obtained. EISC consists of a series of parallel 5-day courses **limited to 20 students per course**. Previous editions of EISC have brought together each year more than 50 students from 25 world countries, and more than 30 teachers from 16 countries.

FUNCTIONAL CYTOMETRY: A PRACTICAL APPROACH

- This is a **Basic Course** that will address the most relevant applications of Flow Cytometry in Cellular and Molecular Biology in academic and industrial settings. In this course, the technical bases of Flow Cytometry and Cytomics and the most relevant methodologies will be addressed through theoretical lessons and practical wet-lab sessions
- Emphasis will be placed on the technical principles of flow cytometry and management tools, the fundamentals of the main applications, the essential aspects of data analysis and interpretation of the results and the procedures of quality control. Different brands of cytometers, reagents and third-part software will be available for **wet-lab practicals and computer-based exercises**.

THE ESCCA CYTOMETRY SCHOOLS AND ACREDITATION

- This course is part of the **ESCCA Program for Continuous Education (CE)** in Cytometry that will lead to the European Certification in Cytometry. ESCCA is already an approved CE provider of the **International Cytometry Certification Examination (ICCE)**. For more details, please visit www.escca.eu

COURSE CONTENTS

LECTURES AND TECHNICAL SEMINARS ON:

- Overview of Cytometry and Cytomic technologies.
- Preanalytical phase: Sample preparation, cytometer operation and standardization.
- Analytical phase: Protocol design and optimization
- Data analysis and interpretation.
- Cytometry resources in the Internet.
- Detailed review of specific applications of functional Cytometry.

WET LAB AND COMPUTER PRACTICALS ON:

- Fluorescent reporter proteins and FRET techniques
- Nucleic acid content and expression
- Cell cycle and cell proliferation
- Apoptosis, necrosis and autophagy
- Polychromatic surface- and intracellular immunophenotype
- Real-Time Cytometry
- Cell signaling, cell activation and cell communication
- Cell metabolism, mitochondrial function and oxidative stress
- Drug Metabolism and In vitro toxicity testing
- Functional analysis of Immune responses:
- Functional analysis of Stem Cells
- Analysis of microorganisms and microparticles

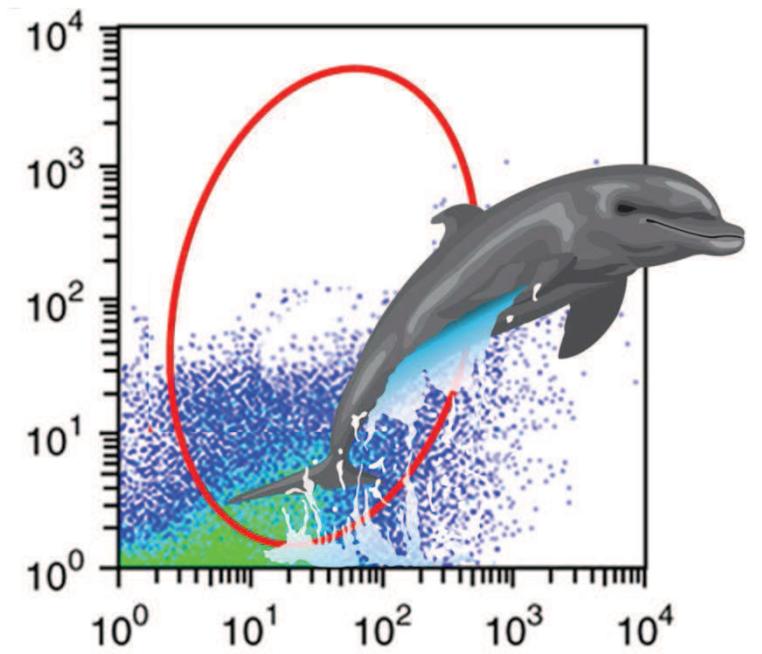
FACULTY OF INTERNATIONAL TEACHERS

Alberto Alvarez (Badajoz, ES), **Alfonso Blanco** (Dublin, EI), **Andrea Cossarizza** (Modena, IT), **Sara De Biasi** (Modena, IT), **Guadalupe Herrera** (Valencia, ES), **Alicia Martínez** (Valencia, ES) **José-Enrique O'Connor** (Valencia, ES), **Graham Pockley** (Sheffield, UK), **Francisco Sala** (Lausanne, CH), **Anabelle Sequeira** (Dijon, FR)

REGISTRATION FEES		
	ESCCA OR SIC MEMBERS* MEMBERS OF SPONSORING INSTITUTIONS*	OTHER ATTENDANTS‡
FULL COURSE^o		
EARLY REGISTRATION (Before 31 May 2016)	500 €	600 €
LATE REGISTRATION (Until June 15, 2016)	600 €	700 €
‡) Includes Course materials, lunches and coffees, Welcome Party and Course Dinner plus one-year full membership in ESCCA.		
^o) Registrants in two courses (week 1 and week 2) in Summer School will have 20% reduction in course fees.		
ACCOMMODATION[#]		
EARLY REGISTRATION	300 €	300 €
LATE REGISTRATION	350 €	350 €
#) Includes 6-night lodging (Sunday-Friday) at bed & breakfast rate at walking distance from venue. Additional nights may be requested to the organization.		
Students from emerging countries and from countries with no national Cytometry society may apply for an ESCCA Travel Fellowship covering the cost of accommodation (equivalent to 300 € value).		
Course Information: http://www.escca.eu/meetings/escca-schools		
Registration and Additional Information: jose.e.oconnor@uv.es		



ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY



FLOW CYTOMETRY IN VETERINARY AND ANIMAL EXPERIMENTATION

27 June-1 July 2016
Principe Felipe Research Center and
The Oceanographic
VALENCIA (SPAIN)

BACKGROUND

- Flow Cytometry has become essential in human clinics for diagnosis, prognosis and therapy monitoring. Recently, the application of flow cytometry to evaluate animal health has received substantial attention, for both sanitary and economic reasons. Flow cytometry in veterinary sciences is applied in many areas, from infectious diseases to reproduction, and many animal categories, from companion animals to marine mammals.
- The traditional interest for Cytometry in basic and applied research in vitro, has been extended to cellular analysis in animal models. Cytometry in laboratory animals is currently applied in many research areas, especially relevant to Immunology, Oncology and Cardiovascular disease.

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY (EISC)

- EISC is a program of integrated educational and training initiatives oriented to confer to new skills and tools to design and optimize and manage cytometric experiments and interpret the results obtained. EISC consists of a series of parallel 5-day courses **limited to 20 students per course**. Previous editions of EISC brought together students from 25 world countries, and teachers from 16 countries.

FLOW CYTOMETRY IN VETERINARY AND ANIMAL SCIENCES

- This is a **Basic Course** addressing the most relevant applications of Flow Cytometry in clinical and industrial Veterinary. Emphasis will be placed on the technical principles of flow cytometry and management tools. Applications of cytometry in clinical and industrial Veterinary, and in emerging fields like studies in marine mammals.
- Theoretical and technical lectures will be delivered by international teachers in the field. The Course will include hands-on practicals on assay design and performance in wet-lab experiments. Different brands of cytometers, reagents and third-part software will be available for **wet-lab practicals and computer-based exercises**.

THE ESCCA CYTOMETRY SCHOOLS AND ACREDITATION

- This course is part of the **ESCCA Program for Continuous Education (CE)** in Cytometry that will lead to a future European Certification in Cytometry. ESCCA is also an approved CE provider of the **International Cytometry Certification Examination (ICCE)**. For more details, please visit www.escca.eu

COURSE CONTENTS

LECTURES AND PRACTICALS:

- Basic aspects and general applications of cytometry
- Applications of cytometry in Clinical Veterinary
- Applications of cytometry in Industrial Veterinary
- Applications of cytometry in Marine Mammals and Fish
- Applications of Cytometry in Animal Reproduction
- Functional analysis of innate immune responses
- Polychromatic immunophenotype: Immunology and Hematology
- Analysis of cell proliferation and cell death
- Functional analysis of hemostasia
- Functional analysis of cell health parameters
- Optimizing animal sample collection and preparation procedures.
- Data management: Acquisition, analysis, display and interpretation.
- Standardization, assay validation and Quality control.

PRACTICALS IN VETERINARY LAB AND COMPUTER ROOM:

- The course is organized by the Principe Felipe Research Center, the Oceanogràfic and the University of Valencia. The course will be held at the facilities of Principe Felipe Research Center and of Oceanogràfic.

FACULTY OF INTERNATIONAL TEACHERS

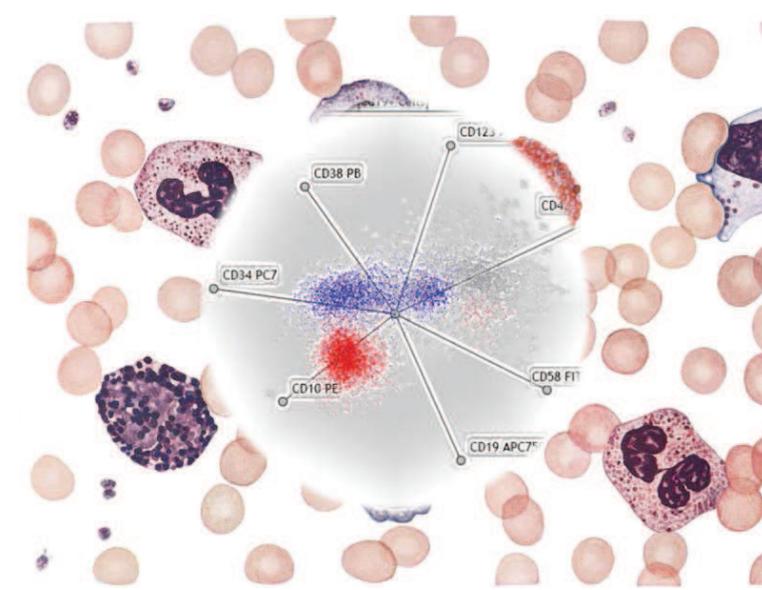
Alberto Alvarez (Badajoz, ES), **Guadalupe Herrera** (Valencia, ES), **Alicia Martínez-Romero** (Valencia, ES), **Peter O'Brien** (Dublin, IR), **José-Enrique O'Connor** (Valencia, ES), **Fernando de la Peña** (Cáceres, ES), Teachers from Oceanografic and Veterinary Hospital Valencia Sur.

REGISTRATION FEES		
	ESCCA OR SIC MEMBERS* MEMBERS OF SPONSORING INSTITUTIONS*	OTHER ATTENDANTS‡
FULL COURSE^o		
EARLY REGISTRATION (Before 31 May 2016)	500 €	600 €
LATE REGISTRATION (Until June 15, 2016)	600 €	700 €
‡) Includes Course materials, lunches and coffees, Welcome Party and Course Dinner plus one-year full membership in ESCCA.		
^o) Registrants in two courses (week 1 and week 2) in Summer School will have 20% reduction in course fees.		
ACCOMMODATION#		
EARLY REGISTRATION	300 €	300 €
LATE REGISTRATION	350 €	350 €
#) Includes 6-night lodging (Sunday-Friday) at bed & breakfast rate at walking distance from venue. Additional nights may be requested to the organization.		
Students from emerging countries and from countries with no national Cytometry society may apply for an ESCCA Travel Fellowship covering the cost of accommodation (equivalent to 300 € value).		
Course Information: http://www.escca.eu/meetings/escca-schools		
Registration and Additional Information: jose.e.oconnor@uv.es		

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY

ESCCA
European Society
for Clinical Cell Analysis





FLOW CYTOMETRY IN HEMATOLOGY: A TECHNICAL APPROACH

4-8 July 2016
Faculty of Medicine and
Principe Felipe Research Center
VALENCIA (SPAIN)



**International
Summer
School
on Cytometry**





ESCCA
European Society
for Clinical Cell Analysis





PRINCIPE FELIPE
CENTRO DE INVESTIGACION



VNIVERSITAT
ID VALÈNCIA



Fundación Investigación Clínico de Valencia
Instituto de Investigación Sanitaria - INCLIVA

BACKGROUND

- Flow Cytometry has become a complex and powerful tool for cell analysis, essential in many clinical applications for diagnosis, prognosis and therapy monitoring. Knowledge of the basic principles of Flow Cytometry and the critical points of its practical implementation are essential for proper use of cytometry in the basic and clinical context.

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY (EISC)

- EISC is a program of integrated educational and training initiatives oriented to confer to new skills and tools to design and optimize and manage cytometric experiments and interpret the results obtained. EISC consists of a series of parallel 5-day courses **limited to 20 students per course**. Previous editions of EISC brought together each year more than 50 students from 25 world countries, and more than 30 teachers from 16 countries.

FLOW CYTOMETRY IN HEMATOLOGY: A TECHNICAL APPROACH

- This is a **Basic Course** that will address the most relevant applications of Flow Cytometry in Hematology. Emphasis is placed on the technical principles of flow cytometry applications in Hematology, the essential aspects of data analysis and interpretation of the results and the procedures of quality control.
- Theoretical and technical lectures will be delivered by international teachers in the field. The Course will include hands-on practicals on panel design and performance in wet-lab experiments. Case-oriented, interactive exercises on analysis and interpretation of real data files will be led by the experts. Different cytometers, reagents and third-part software will be available.

THE ESCCA CYTOMETRY SCHOOLS AND ACREDITATION

- This course is part of the **ESCCA Program for Continuous Education (CE)** in Cytometry that will lead to a future European Certification in Cytometry. ESCCA is also an approved CE provider of the **International Cytometry Certification Examination (ICCE)**. For more details, please visit www.escca.eu

COURSE CONTENTS

LECTURES AND SEMINARS:

- Overview of applications of cytometry in Hematology.
- Sample collection and preparation procedures: Blood, bone marrow, lymph nodes and special samples.
- Polychromatic immunophenotype: Compensations and gating strategies.
- Data management: Acquisition, analysis, display and interpretation.
- Assay standardization and validation.
- Quality control.

CASE-ORIENTED STUDIES IN WET LAB AND COMPUTER ROOM:

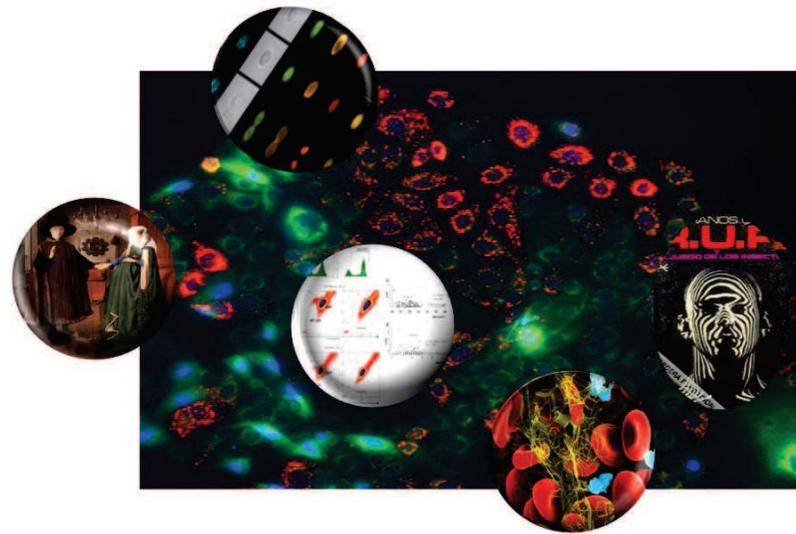
- Normal Hematopoiesis
- Erythrocytes and erythroid cells
- Acute and chronic leukemias
- Lymphomas
- Myelodysplastic syndromes
- Minimal residual disease
- Paroxysmal Nocturnal Haemoglobinuria
- Platelets and microvesicles
- Preparation and analysis of usual and special samples
- Use of specific flow cytometry software.

FACULTY OF INTERNATIONAL TEACHERS

Maria Arroz (Lisbon, PT), **Bruno Brando** (Legnano, IT), **Paula Fernández** (Aarau, CH), **Irene Luna** (Valencia, ES), **Josep Nomdedeu** (Barcelona, ES), **José-Enrique O'Connor** (Valencia, ES), **Claudio Ortolani** (Venice, IT), **Martín Pérez-Andrés** (Salamanca, ES), **Graham Pockley** (Sheffield, UK), **Frank Preijers** (Nijmegen, NL), **Andrew Rawstron** (Leeds, UK)

REGISTRATION FEES		
	ESCCA OR SIC MEMBERS* MEMBERS OF SPONSORING INSTITUTIONS*	OTHER ATTENDANTS‡
FULL COURSE^o		
EARLY REGISTRATION (Before 31 May 2016)	500 €	600 €
LATE REGISTRATION (Until June 15, 2016)	600 €	700 €
‡) Includes Course materials, lunches and coffees, Welcome Party and Course Dinner plus one-year full membership in ESCCA.		
^o) Registrants in two courses (week 1 and week 2) in Summer School will have 20% reduction in course fees.		
ACCOMMODATION#		
EARLY REGISTRATION	300 €	300 €
LATE REGISTRATION	350 €	350 €
#) Includes 6-night lodging (Sunday-Friday) at bed & breakfast rate at walking distance from venue. Additional nights may be requested to the organization.		
Students from emerging countries and from countries with no national Cytometry society may apply for an ESCCA Travel Fellowship covering the cost of accommodation (equivalent to 300 € value).		
Course Information: http://www.escca.eu/meetings/escca-schools		
Registration and Additional Information: jose.e.oconnor@uv.es		

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY



CYTOMETRY OF STEM CELLS: A PRACTICAL APPROACH 4th EDITION

4-8 July 2016
Faculty of Medicine and
Principe Felipe Research Center
VALENCIA (SPAIN)



BACKGROUND

- Flow cytometry and related Cytomic technologies have become a complex and powerful tool for cell analysis, essential in many aspects of interest for basic and applied research in Cellular and Molecular Biology, Biotechnology, Drug Discovery and Toxicology, among other.
- For many years now, flow cytometry has been successfully used in the study of hematopoietic stem cells and their pathologies. Nowadays, the new challenges of Regenerative Medicine and Cell Therapy have extended the applications of flow cytometry and cytomics to many other stem cell types and lineages.
- Knowledge of the principles of Flow Cytometry and Cytomics and the critical points of their practical use are essential for laboratories performing basic or clinical studies related to stem cell biology and application.

ESCCA INTERNATIONAL SCHOOL ON CYTOMETRY (EISC)

- EISC is a program of integrated educational and training initiatives oriented to confer to new skills and tools to design and optimize and manage cytometric experiments and interpret the results obtained. EISC consists of a series of parallel 5-day courses **limited to 20 students per course**. Previous editions of EISC have brought together each year more than 50 students from 25 world countries, and more than 30 teachers from 16 countries.

CYTOMETRY OF STEM CELLS: A PRACTICAL APPROACH

- The course will approach methods and applications of Cytometry and Cytomics in basic, translational and clinical fields of Stem Cell research, and will include practical aspects of assay design and performance, data analysis and interpretation. Theoretical and technical lectures delivered by international experts will alternate with practical exercises in wet labs and computer rooms.
- Emphasis will be placed on the technical principles of flow cytometry and management tools, the fundamentals of the applications, the essential aspects of data analysis and interpretation of the results and the procedures of quality control. Different brands of cytometers, reagents and third-part software will be available for **wet-lab practicals and computer-based exercises**.

THE ESCCA CYTOMETRY SCHOOLS AND ACREDITATION

- This course is part of the **ESCCA Program for Continuous Education (CE)** in Cytometry that will lead to the European Certification in Cytometry. ESCCA is already an approved CE provider of the **International Cytometry Certification Examination (ICCE)**. For more details, please visit www.escca.eu

COURSE CONTENTS

LECTURES AND TECHNICAL SEMINARS ON:

- Overview of the basic aspects of Stem Cells.
- Overview of the clinical relevance of Stem Cells.
- Overview of the technical aspects of Cytometry and Cytomics.
- Basic applications of Cytometry in Stem Cell Research
- Clinical applications of Cytometry in Stem Cell Therapy.
- Working with Stem Cells.
- Basics of data analysis and interpretation.

WET LAB AND COMPUTER PRACTICALS ON:

- Basics of cytometer operation, sample preparation and data acquisition.
- Identification, phenotypic and functional characterization of human and murine stem cells.
- Isolation of Stem Cells by FACS and MACS.
- Enumeration and isolation of circulating hematopoietic and endothelial stem cells.
- Assessment of cell therapeutic products.

FACULTY OF INTERNATIONAL TEACHERS

Deborah J. Burks (Valencia, ES), **Irene Cervelló** (Valencia, ES), **Silvia Della Bella** (Milano, ES), **Iyadh Douagi** (Stockholm, SE), **Guadalupe Herrera** (Valencia, ES), **Alicia Martínez-Romero** (Valencia, ES), **José-Luis Mateos** (Madrid, ES), **Inmaculada Moreno** (Valencia, ES), **Luke Noon** (Valencia, ES), **José-Enrique O'Connor** (Valencia, ES), **Jordi Pétriz** (Barcelona, ES), **Katherina Psarra** (Athens, GR), **Francisco Sala** (Lausanne, CH), **Pilar Sepúlveda** (Valencia, ES), **José-Carlos Segovia** (Madrid, ES)