FEPS-SIF 2019

Joint Meeting of the

Federation of European Physiological Societies (FEPS)
and the **Italian Physiological Society (SIF)**

A Joint International Meeting Celebrating the 70th Anniversary of the
Italian Physiological Society

Bologna (Italy) - September 10th-13th, 2019
UNIVERSITY OF BOLOGNA, BELMELORO BUILDINGS

FINAL PROGRAM

WWW.FEPS-SIF2019.COM

Avenue media®
Conference & Expo

General Information

Local Organizing Committee
Elena Fabbri, *chair*
Patrizia Fattori, *co-chair*
Giorgio Aicardi, *co-chair*
Roberto Amici, *co-chair*
Stefano Bastianini
Chiara Berteotti
Annalisa Bosco
Rossella Breveglieri
Matteo Cerri
Silvia Franzellitti
Michela Gamberini
Sandra Guidi
Barbara Monti
Milena Raffi
Alessandro Silvani
Enzo Spisni
Giovanna Zoccoli

International Scientific Committee
Society Representatives
FEPS: Markus Hecker, Bayram Yilmaz, William Louch, Susan Wray
SIF (Italy): Corrado Poggesi, Maria Marino, Antonio Colantuoni
Austria: Marjan Slak Rupnik, Margarethe Geiger
Croatia: Ines Mrakovcic-Sutic, Ines Drenhancevic
Czech Republic: Jaroslav Pokorný, Zuzana Červinková,
France: Luc Pénicaud, Georges Leftheriotis
Slovakia: Andrea Calkovska, Olga Pechanova
Slovenia: Nina Vardjan, Helena H. Chowdhury
Spain: Emilio Martínez de Victoria Muñoz, Vicente Martínez Perea
Switzerland: Zhihong Yang, Nicolas Demaurex
Turkey: Erdal Agar
Local Representatives
Elena Fabbri, Patrizia Fattori, Giorgio Aicardi, Roberto Amici

EYPS Organizing Committee
Markus Hecker (FEPS President, Heidelberg, Germany)
Burak Oymak (Denizli, Turkey)
Corrado Poggesi (SIF President, Florence, Italy)
Nina D. Ullrich (Heidelberg, Germany)

Abstract Reviewers
Erdal Agar (Samsun, Turkey); Stefano Bastianini (Bologna, Italy); Alberto Battezzati (Milan, Italy); Natale Belluardo (Palermo, Italy); Chiara Berteotti (Bologna, Italy); Annalisa Bosco (Bologna, Italy); Rossella Breveglieri (Bologna, Italy); Andrea Calkovska (Martin, Slovakia); Laura Canesi (Genoa, Italy); Helena Chowdhury (Ljubljana, Slovenia); Guido Ferretti (Brescia, Italy; Geneve, Switzerland); Michela Gamberini (Bologna, Italy); Margarethe Geiger (Vienna, Austria); Nandu Goswami (Graz, Austria); Sandra Guidi (Bologna, Italy); Markus Hecker (Heidelberg, Germany); Maria Marino (Rome, Italy); Vicente Martínez (Barcelona, Spain); Barbara Monti (Bologna, Italy); Burak Oymak (Denizli, Turkey); Luc Pénicaud (Toulouse, France); Corrado Poggesi (Florence, Italy); Milena Raffi (Bologna, Italy); Luana Ricci Paulesu (Siena, Italy); Marjan Slak Rupnik (Vienna, Austria); Alessandro Silvani (Bologna, Italy); Enzo Spisni (Bologna, Italy); Nina D. Ullrich (Heidelberg, Germany); Nina Vardjan (Ljubljana, Slovenia); Susan Wray (Liverpool, UK); Giovanna Zoccoli (Bologna, Italy)

Organizations
Federation of European Physiological Societies (FEPS)
www.feps.org
Italian Physiological Society (SIF)
https://fisiologiaitaliana.org
Alma Mater Studiorum - University of Bologna;
Departments of: Biological, Geological and Environmental Sciences;
Biomedical and Neuromotor Sciences;
Life Quality Studies;
Pharmacy and Biotechnology

Congress Venue
University of Bologna, Belmeloro Buildings,
Via Andreatta 8, 40100 Bologna, Italy

Organizing Secretariat
Avenue media®
Conference & Expo

Via Riva Reno 61 – 40122 Bologna – Italy
Tel + 39 051 6564300 – Fax + 39 051 6564334
congressi@avenuemedia.eu – www.avenuemedia.eu

General Information

Registration Desk

Opening hours

September 10, 2019:	08.30 – 18:30
September 11, 2019:	08:00 – 19:00
September 12, 2019:	08:00 – 19:00
September 13, 2019:	08:00 – 13:00

On-site Registration Fees

Feps & Sif Member all inclusive (social dinner included):	410.00 €
Feps & Sif Member (without social dinner):	380.00 €
Feps & Sif Member Students (without social dinner):	245.00 €
Non Member (without social dinner):	420.00 €
Non Member Students (without social dinner):	290.00 €
Congress Dinner:	60.00 €

Industrial Exhibition

Opening hours

September 10, 2019:	14.00 – 18:30
September 11, 2019:	08:00 – 19:00
September 12, 2019:	08:00 – 19:00
September 13, 2019:	08:00 – 13:00

Abstracts

The congress abstracts are be published in electronic form in a supplement of Acta Physiologica. A PDF version is available for download on the congress website.

Badge

Congress badges need to be picked-up on-site at the registration desk upon arrival. All participants must wear the congress identification badge visibly at any time on-site at the venue. Please note that if an attendee loses, misplaces or forgets the name badge, a handling fee of 15.00 € will be charged for a new name badge.

Certificate of Attendance

Certificates of attendance will be sent to every participant by e-mail after the conference.

Conference Language

The official language of the conference is English. No simultaneous translation will be provided.

Internet Access

Wireless internet access will be available free of charge. Additionally, the Eduroam wireless network is available throughout the university campus.

Instructions for Speakers

Please go to your session room in due time (at least 30 minutes prior to the start of your session). We expect you to submit your presentation in due time directly at the session room - latest during the break before the respective session starts.

Instructions for Poster Presenters

According to the date of your poster presentation, you are expected to mount your poster 15 minutes before the morning session begins, and leave it in place for the full day. You are only required to be physically present at your poster during the session assigned (morning or afternoon).

Welcome Reception

Tuesday, September 10th, at 19:30 - We invite all Congress participants to join us for the Welcome Reception which will take place at Palazzo Grassi, via Marsala 12, Bologna. It will be a perfect opportunity to meet colleagues and friends or start new networks in a relaxed atmosphere. Palazzo Grassi is 12 minutes walking distance from the Conference Site.

Congress Dinner

Thursday, September 12th, at 20:30 - The Congress dinner will take place at Palazzo Isolani, via Santo Stefano 16, Bologna. Price on-site: € 60.00 (the Ticket can be bought no later than on 10th September following the availability). Palazzo Isolani is 10 minutes walking distance from the Conference Site.

Public transportation

Bus n. 32 stop "Porta San Vitale".
From the stop, go back for about 50 m. turn links on Via Belmeloro (Time schedule is available on the website www.tper.it)

Useful contacts

Airport "Guglielmo Marconi": + 39 051 6479647 – www.bologna-airport.it
Bus Transportation: www.tper.it
Taxi Service: + 39 051 372727 / + 39 051 4590
Tourist Service: Bologna Welcome + 39 051 6583111
Emergency: 112
Organizing Secretariat onsite: + 39 348 2487176

Acknowledgement

Under the Aegis of
ALMA MATER STUDIORUM University of Bologna
with the support of the Department of Biological, Geological and Environmental Sciences

A special thank for collaboration to

Regione Emilia-Romagna

Thanks to the financial contribution by

BIOPAC® Systems, Inc.

DMT

ION OPTIX

elements
enabling technologies for Life Science

edi·ermes

EdiSES

ELSEVIER

PICCIN

TECNIPLAST
innovation through passion℠

Welcome

We are pleased to welcome you to the Joint Meeting of the Federation of European Physiological Societies (FEPS) and the Italian Physiological Society (SIF), here in Bologna.
This is the first International meeting organized by SIF with other Physiological Societies, namely the Austrian, Croatian, Czech, French, Slovak, Slovenian, Spanish, Swiss and Turkish Societies. In occasion of the 70th Anniversary of SIF, the Society and all Italian physiologists are proud to host all of you in Italy. We are offering a stimulating scientific program including outstanding lectures, oral (16 symposia and 6 workshops) and poster presentations, for a total of about 450 contributions. The European Young Physiologists' Symposium (EYPS) on Wednesday Sept 11th will emphasize the quality of pioneering research findings by young European physiologists. On the same day, the Teaching Symposium will accompany us from the traditional lectures into interactive classrooms and digital-based learning. Coffee breaks, lunches and events in the evening will offer fruitful opportunities for networking and discussions with colleagues, accompanied by food, wine and music in a charming historical background.

We have chosen a conference venue in the heart of the University district of Bologna. This will offer you an easy way to approach the historical part of Bologna, and a wonderful opportunity to visit University buildings, libraries and museums, walk through ancient arcades, see magnificent monuments and eat Italian traditional food in a vibrant atmosphere. Founded in 1088, the *Alma Mater Studiorum* University of Bologna is the most ancient University of the Western world. Since 1989 it has a multi-campus structure – the only one in the Italian University system - with campuses in Bologna, Cesena, Forlì, Ravenna and Rimini. Each campus has its own distinct scientific and educational identity, ensuring the opportunity to learn and promote stable research activities throughout the region. Bologna campus is the oldest and largest one; it is mainly located in the city centre and counts about 60,000 students.

We wish to thank the Board of SIF for the immense support, and the Board of FEPS for accepting our proposal to host the Congress in Bologna and providing continuous extended assistance. We thank all the lecturers, organizers of Symposia and contributors to the sessions for enlightening this event, and all the reviewers and local collaborators for their fundamental help. Finally, we address our sincere gratitude to the financial supporters of the Congress.

We wish all of you an exciting FEPS-SIF 2019!!

Elena Fabbri, Patrizia Fattori, Giorgio Aicardi, Roberto Amici
Chairs

Welcome

Dear Attendants of the 14th FEPS Congress,

Welcome to Bologna, and welcome to four days of scientific presentations and discussions dedicated to the broad spectrum of topics that together make up the fascinating research field of physiology. This is FEPS's first congress in Italy, and it couldn't take place at a better qualified location. With its outstanding history of academic teaching and its reputation as one of Italy's premier institutions of higher learning, the 'Alma Mater' provides without a doubt an appropriate setting for this meeting. Scholars such as Paracelsus, Malpighi and Galvani, who helped to shape our understanding of how the body, his organs and cells function, were at some point in their education or career associated with this university. From a European perspective, and as such close to the heart of FEPS, the Bologna declaration was the starting point of the 'Bologna Process' with the goal to somewhat standardize higher education in Europe. Even though its implementation has raised some criticism, and arguably, rightfully so, making academic degrees more comparable should in the long run also make it easier for students of physiology to move from one country to another during their academic education. And finally, there is the city itself: with its stunning architecture and art, and as the capitol of the rightfully famous cuisine of the Emilia Romagna it provides a perfect opportunity to experience physiology, especially sensory physiology, 'in action'.

I therefore strongly encourage you to enjoy the science, sights and culinary delights Bologna has to offer during the four days to come.

Markus Hecker
President of FEPS

PS. This year's Congress is the last one I will attend as President of FEPS. It has been a great pleasure and privilege to serve the European community of physiologists in this function, and I look forward to two more years, then as Past-President, in the FEPS Executive Board headed by my esteemed colleague Susan Wray as new President of FEPS.

UNIVERSITY OF BOLOGNA, BELMELORO BUILDINGS A & B

Via Andreatta 8, 40100 Bologna, Italy

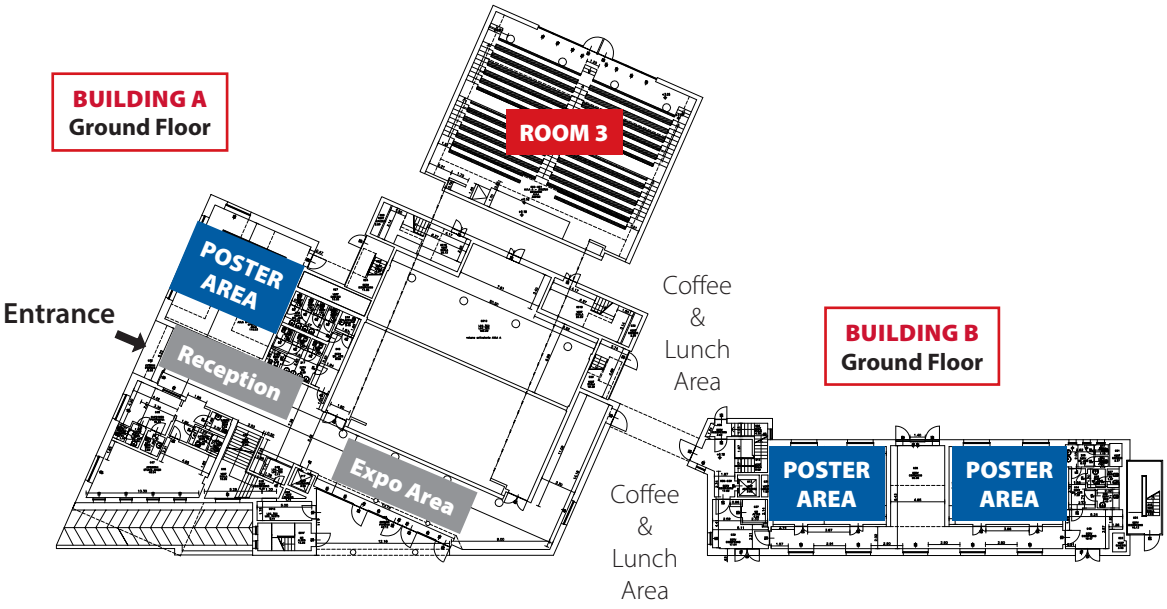
CONFERENCE ROOMS
Building A
Ground Floor
1st Floor
2nd Floor

RECEPTION & AREA EXPO
Building A
Ground Floor

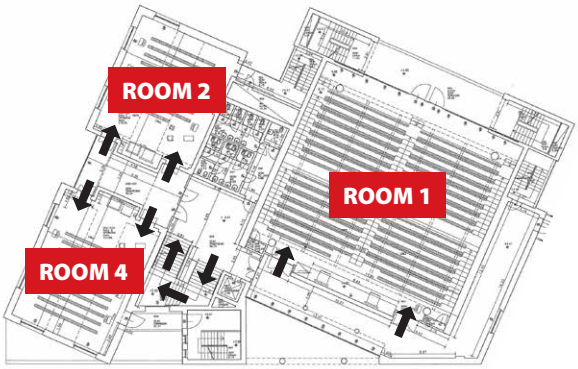
POSTER AREA
Building A & B
Ground Floor

COFFEE BREAK & LUNCH AREA
Building A
Ground Floor
External Area

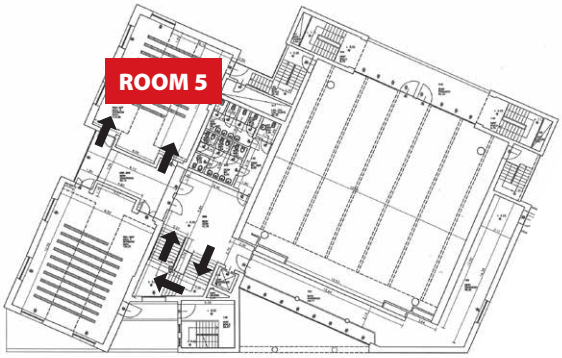
BUILDING A
Ground Floor



BUILDING A
First Floor



BUILDING A
Second Floor



Program Overview

DAY 1 - TUESDAY, 10 SEPTEMBER 2019

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
09.00					Satellite event **Barth Syndrome: meeting of Italian families**
11.00					
11.30					Satellite event **Role of cardiolipin in physiopathological states**
14.30	OPENING				
15.00	SYMPOSIUM *Respiratory Physiology (Supported by SIF)* **Breathing through the ages - Rhythm generation and modulatory mechanisms** *Organizer:* Donatella Mutolo (Firenze, Italy) *Speakers:* 15.00 Gregory D. Funk (Edmonton, Canada) 15.30 Ludovica Iovino (Firenze, Italy) 16.00 Jan-Marino Ramirez (Seattle, WA, USA) 16.30 Stefano Bastianini (Bologna, Italy) 16.45 Pavol Mikolka (Martin, Slovakia)	SYMPOSIUM *Cell Physiology 1* **Targeting metabolic modulation and mitochondrial dysfunction for cardioprotection** *Organizer:* Tatiana Ravingerová (Bratislava, Slovakia) *Speakers:* 15.00 Antigone Lazou (Thessaloniki, Greece) 15.30 Ana Planavila Porta (Barcelona, Spain) 16.00 Adam Szewczyk (Warsaw, Poland) 16.30 Annunziata G. Cicatiello (Napoli, Italy) 16.45 Lillà Lionetti (Salerno, Italy)	SYMPOSIUM *Neurophysiology 1* **Experimental Epilepsy Models** *Organizer:* Erdal Agar (Samsun, Turkey) *Speakers:* 15.00 Erdal Agar (Samsun, Turkey) 15.30 Carola Haas (Freiburg, Germany) 16.00 Robert Zorec (Ljubljana, Slovenia) 16.30 Kaya Mehmet (Istanbul, Turkey)	SYMPOSIUM *Blood Physiology* **Platelets beyond hemostasis** *Organizer:* Alice Assinger (Vienna, Austria) *Speakers:* 15.00 Harald Langer (Vienna, Austria) 15.30 Julie Rayes (Birmingham, UK) 16.00 Waltraud Schrottmaier (Vienna, Austria) 16.30 Marion Mussbacher (Vienna, Austria) 16.45 Manuel Salzmann (Vienna, Austria)	
17.00	*Coffee Break*				
17.30	**OPENING LECTURE by FEPS** **Jens Leipziger, University of Aharus (Denmark)**				
18.30					
19.00	*Welcome Cocktail* Palazzo Grassi				

Program Overview

DAY 2 - WEDNESDAY, 11 SEPTEMBER 2019

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
8.30	SYMPOSIUM *Cell Physiology 2 (Supported by SIF)* **Physiopathology of signaling transmission and membrane transport** *Organizer:* Giovanna Valenti (Bari, Italy) *Speakers:* 8.30 Jeff M. Sands (Atlanta, GA, USA) 9.00 Daniela Riccardi (Cardiff, UK) 9.30 Giuseppe Calamita (Bari, Italy) 10.00 Simona Martinotti (Vercelli, Italy) 10.15 Carmen Murano (Milano, Italy)	SYMPOSIUM *Cardiovascular Physiology 1* **The role of intrinsic and environmental factors in microvascular regulation: impact of nutrients and life style** *Organizer:* Helena Lenasi (Ljubljana, Slovenia) *Speakers:* 8.30 Ines Drenjančević (Osijek, Croatia) 9.00 Markos Klonizakis (Sheffield, UK) 9.30 Akos Koller (Valhalla, NY, USA) 10.00 Francesco Moccia (Pavia, Italy) 10.15 Eleonora Solari (Varese, Italy)	SYMPOSIUM *Physiology of Metabolism 1* **Glucose metabolism in neurodegeneration** *Organizer:* Helena Chowdhury (Ljubljana, Slovenia) *Speakers:* 8.30 Jorgen Jensen (Oslo, Norway) 8.55 Mitsuhiro Morita (Kobe, Japan) 9.20 Marko Kreft (Ljubljana, Slovenia) 9.40 Nina Vardjan (Ljubljana, Slovenia) 10.00 Rosalba Senese (Napoli, Italy) 10.15 Antonella Amato (Palermo, Italy)	WORKSHOP 1 **Integrative Neurophysiology** *Chairs:* Leonardo Chelazzi (Verona, Italy) Patrizia Fattori (Bologna, Italy) *Speakers:* 8.30 Michela Gamberini (Bologna, Italy) 8.45 Alessandro Benedetto (Pisa, Italy) 9.00 Konstantinos Chatzidimitrakis (Bologna, Italy) 9.15 Alessandro Piras (Bologna, Italy) 9.30 Daniele Borzelli (Messina, Italy) 9.45 Sergio Delle Monache (Roma, Italy) 10.00 Marco Lanzilotto (Parma, Italy) 10.15 Franco Giarrocco (Roma, Italy)	WORKSHOP 2 **Joint Workshop Austria/ Africa** *Organizer:* Nandu Goswami (Graz, Austria) *Speakers:* 8.30 Faadiel Essop (Stellenbosch, RSA) 8.50 Nandu Goswami (Graz, Austria) 9.10 Jennifer Mellin (Graz, Austria) 9.30 Hannibal T. Musarurwa (Mthatha, RSA) 9.50 Hans Strijdom (Stellenbosch, RSA)
			(10:45-11:45) **FEPS ExCo meeting**		
10.30	*Coffee Break* (10:30-11:00) **POSTER SESSION I** (10:30-12:00, POSTER AREA) **Neurophysiology - Integrative Neurophysiology - Neurophysiology - Miscellaneous**				
12.00	**RISING STAR AWARD LECTURE by ACTA PHISIOLOGICA** **Thomas Jepps, University of Copenhagen (Denmark)**				
13.00	*Lunch*				
14.00	**European Young Physiologists Symposium** (see specific page)	***ONLY FOR ITALIANS:*** *Collegio Prof. Ordinari di Fisiologia*	**TEACHING SYMPOSIUM (supported by FEPS)** *Organizer:* Bayram Yilmaz (Istanbul, Turkey) *Speakers:* 14.00 Dee Silverthorn (Austin, TX, USA) 14.30 Helen Wallace (Liverpool, UK) 15.00 Stefan Britsch (Ulm, Germany) 15.30 Merve Evren (Izmir, Turkey)		
16.00					
16.30		*Coffee Break* (16:30-17:00) **POSTER SESSION II** (16:30-18:00, POSTER AREA) **European Young Physiologists Symposium - Animal and Environmental Physiology - Endocrine Physiology - Nutrition, Gut Microbiota, and Health - Physiology of Metabolism - Renal Physiology - Reproductive Physiology**			
18.00	**PLENARY LECTURE by SIF** **Ole Kiehn, University of Copenhagen (Denmark) and Karolinska Institute (Sweden)** Spinal and Brain Circuits for Movement				
19.00	FREE EVENING				

Program Overview

DAY 3 - THURSDAY, 12 SEPTEMBER 2019

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
8.30	SYMPOSIUM *Cardiovascular Physiology 2 (Supported by SIF)* **Genetic and epigenetic control of cardiac rhythm** *Organizer:* Dario Di Francesco (Milano, Italy) *Speakers:* 8.30 Mark Boyett (Manchester, UK) 9.00 Giulia Campostrini (Leiden, The Netherlands) 9.30 Marzia De Bortoli (Bolzano, Italy) 10.00 Andrea Barbuti (Milano, Italy) 10.15 Luis Such (València, Spain)	SYMPOSIUM *Physiology of Metabolism 2* **Brain regulation of metabolism: new insights in physiopathology** *Organizer:* Luc Penicaud (Paris, France) *Speakers:* 8.30 Xavier Fioramonti (Bordeaux, France) 9.00 Cristina Garcia-Caceres (München, Germany) 9.30 Susanne La Fleur (Amsterdam, The Netherlands) 10.00 Tina Smolic (Ljubljana, Slovenia) 10.15 Domenico Tupone (Bologna, Italy)	SYMPOSIUM *Renal Physiology* **Hot topics in chronic kidney disease** *Organizer:* Timo Rieg (Tampa, FL, USA) *Speakers:* 8.30 Timo Rieg (Tampa, FL, USA) 9.00 Giuseppe Procino (Bari, Italy) 9.30 Alexander Staruschenko (Milwaukee, WI, USA) 10.00 Frank Bienaimé (Paris, France)	WORKSHOP 3 **Cellular Physiology and Neurophysiology** *Chairs:* Natale Belluardo (Palermo, Italy) Marco Linari (Firenze, Italy) *Speakers:* 8.30 Massimo Dal Monte (Pisa, Italy) 8.45 Marco Fiocchetti (Roma, Italy) 9.00 Orkide Palabiyik (Edirne, Turkey) 9.15 Carla Perego (Milano, Italy) 9.30 Mattia Lorenzo Di Francesco (Genova, Italy) 9.45 Sergei V. Fedorovich (Minsk, Belarus) 10.00 Michele Maffia (Lecce, Italy) 10.15 Francesca Prestori (Pavia, Italy)	WORKSHOP 4 **Nutrition, Gut Microbiota, and Health** *Chairs:* Alberto Battezzati (Milano, Italy) Antonio Colantuoni (Napoli, Italy) *Speakers:* 8.30 Gianfranca Carta (Cagliari, Italy) 8.45 Luisa Cigliano (Napoli, Italy) 9.00 Ramona de Amicis (Milano, Italy) 9.15 Lucantonio Debellis (Bari, Italy) 9.30 Martina di Maro (Napoli, Italy) 9.45 Liudimila Lysenko (Petrozavodsk, Russia) 10.00 Vicente Martinez (Barcelona, Spain) 10.15 Mustafa Sevim (Istanbul, Turkey)
10.30	*Coffee Break* (10:30-11:00) **POSTER SESSION III** (10:30-12:00, POSTER AREA) **Neurophysiology - Synaptic transmission - Neurophysiology - Memory formation, storage and recall - Cellular Physiology**				
11.00	**BIOPAC Presentation:** Slav Dimov (Verna, Bulgaria)		**FEPS GC meeting**		
12.00	**PLENARY LECTURE "FABIO RUZZIER" by SIF** **David Eisner, University of Manchester (UK)** Control of calcium in the heart: free and beyond				
13.00	*Lunch*				
14.00	SYMPOSIUM *Neurophysiology 2 (Supported by SIF)* **Shaping integrative physiology during wakefulness and sleep by the hypocretin/orexin neurons** *Organizer:* Giovanna Zoccoli (Bologna, Italy) *Speakers:* 14.00 Markus Schmidt (Bern, Switzerland) 14.30 Alessandro Silvani (Bologna, Italy) 15.00 Anne Vassalli (Lausanne, Switzerland) 15.30 Giulia Colombo (Milano, Italy) 15.45 Giovanni Messina (Foggia, Italy)	SYMPOSIUM *Endocrine Physiology* **Oxytocin, vasopressin and related peptides: Novel functions and therapeutic potentials** *Organizers:* Sarah Arrowsmith & Susan Wray (Liverpool, UK) *Speakers:* 14.00 Sarah Arrowsmith (Liverpool, UK) 14.30 Charlet Alexander (Strasbourg, France) 15.00 Rohit Menon (Regensburg, Germany) 15.30 Giovanna Valenti (Bari, Italy) 15.45 Yamina Zatra (Blida, Algeria)	WORKSHOP 5 **Exercise and Cardiovascular Physiology** *Chairs:* Guido Ferretti (Brescia, Italy) William E. Louch (Oslo, Norway) *Speakers:* 14.00 Michal Javorka (Martin, Slovakia) 14.15 Francesco Lodola (Genova, Italy) 14.30 Corrado Poggesi (Florence, Italy) 14.45 Márta Sárközy (Szeged, Hungary) 15.00 Paolo Bruseghini (Brescia,Italy) 15.15 Rozerin Göze Yüksel (Istanbul, Turkey) 15.30 Jorge Storniolo (Milano, Italy) 15.45 Liga Ozolina-Moll (Riga, Latvia)	WORKSHOP 6 **Animal and Environmental Physiology** *Chairs:* Laura Canesi (Genova, Italy) Maria Carmela Cerra (Cosenza, Italy) *Speakers:* 14.00 Laura Canesi (Genova, Italy) 14.15 Elena Bossi (Varese, Italy) 14.30 Sandra Imbrogno (Cosenza, Italy) 14.45 Giulia Lionetto (Lecce, Italy) 15.00 Claudia Mieiro (Aveiro, Portugal) 15.15 Grazia Tamma (Bari, Italy) 15.30 Tiziano Verri (Lecce, Italy)	

Program Overview

DAY 3 - THURSDAY, 12 SEPTEMBER 2019

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
16.00		*Coffee Break* (16:00-16:30)			
17.00	***ONLY FOR THE MEMBERS OF THE ITALIAN PHYSIOLOGICAL SOCIETY:*** *General Assembly of the Italian Physiological Society*	**POSTER SESSION IV** (16:00-18:00, POSTER AREA) **Cardiovascular Physiology - Excercise Physiology - Respiratory Physiology - Blood Physiology**			
19.00					
20.30	*Social Dinner* Palazzo Isolani				

DAY 4 - FRIDAY, 13 SEPTEMBER 2019

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
9.00	SYMPOSIUM *Neurophysiology 3 (Supported by SIF)* **From whole-cell to single synapse engrams - Breaking the code for memory formation, storage and recall** *Organizer:* Marco Mainardi (Pisa, Italy) *Speakers:* 9.00 Mariana Alonso (Paris, France) 9.30 Thomas Hainmüller (Freiburg, Germany) 10.00 Panayiota Poirazi (Heraklion, Greece) 10.30 Maria Rosaria Tropea (Catania, Italy) 10.45 Discussion	SYMPOSIUM *Cardiovascular Physiology 3* **Walking the last mile: current strategies and challenges in the maturation of novel cardiomyocytes for myocardial repair** *Organizer:* Nina Ullrich (Heidelberg, Germany) *Speakers:* 9.00 Nicola Elvassore (Padova,Italy) 9.30 Christine Mummery (Leiden, The Netherlands) 10.00 Malte Tiburcy (Göttingen, Germany) 10.30 Andrea Gerbino (Bari, Italy) 10.45 Manuel Pioner (Firenze, Italy)	SYMPOSIUM *Excercise Physiology* **The pathophysiology of exertional dyspnoea: from physiology to clinical applications** *Organizers:* Pierantonio Laveneziana (Paris, France) & Georges Leftheriotis (Nice, France) *Speakers:* 9.00 Pierantonio Laveneziana (Paris, France) 9.30 Capucine Morelot Panzini (Paris, France) 10.00 Francesco Felici (Roma, Italy) 10.30 Viacheslav Matytsin (St. Petersburg, Russia) 10.45 Giovanni Vinetti (Brescia, Italy)	WORKSHOP 7 **Reproductive Physiology** *Chairs:* Luana Ricci Paulesu (Siena, Italy) Susanna Wray (Liverpool, UK) *Speakers:* 9.00 Annamaria Aloisi (Siena, Italy) 9.15 Linda Benincasa (Siena, Italy) 9.30 Meric Demeli (Ankara, Turkey) 9.45 Serena Farruggio (Vercelli, Italy) 10.00 Francesca Ietta (Siena, Italy) 10.15 Raviye Ozen Koca (Meram, Turkey) 10.30 Maurizio Mandalà (Cosenza, Italy) 10.45 Valentina Pallottini (Roma, Italy)	
11.00	*Coffee Break*				
11.30	**CLOSING LECTURE by SIF** **Egidio D'Angelo. University of Pavia (Italy)** The Human Brain Project: insight into brain physiology				
12.30 13.00	**CLOSING CEREMONY** FEPS PRIZES				

09.00 - 14.30 **REGISTRATION OF PARTICIPANTS**

Room 1 - Afternoon (14.30 - 15.00)

Opening of the Conference

Room 1 - Afternoon (15.00 - 17.00)

Symposium - Respiratory Physiology (Supported by SIF): Breathing through the ages - Rhythm generation and modulatory mechanisms

Organizer: **Donatella Mutolo (Firenze, Italy)**

Invited Speakers

15.00 **Glial and purinergic excitation of the preBötzinger complex shape the hypoxic ventilatory response**

Funk GD

Department of Physiology, University of Alberta, Canada

15.30 **Evolutionary aspects of neural mechanisms underlying respiratory rhythm generation in vertebrates**

Iovino L, Cinelli E, Bongianni F, Pantaleo T, Mutolo D

Department of Experimental and Clinical medicine, University of Florence, Italy

16.00 **Neuromodulation, reconfiguration and the neuronal control of breathing**

Ramirez JM

Center for Integrative Brain Research Seattle Children's Research Institute, Departments of Neurological Surgery and Pediatrics, University of Washington School of Medicine, USA

Oral Presentations

16.30 **New data on hypnic and breathing phenotype of a mouse model of down syndrome**

Bastianini S, Alvente S, Bartesaghi R, Bartolucci ML, Berteotti C, Guidi S, Lo Martire V, Silvani A, Stagni F, Zoccoli G

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy

16.45 **Respiratory and inflammatory alterations after therapy with surfactant based on recombinant sp-c analogue in rabbit model of acute respiratory distress syndrome**

Mikolka P[1,2], Zebialowicz J[1], Massaro F[3], Perchiazzi G[3], Basabe-Burgos O[1], Curstedt T[4], Feinstein R[5], Larsson A[6], Johansson J[1], Rising A[1,7]

[1]Department of Neurobiology, Karolinska Institutet, Sweden; [2]Biomedical Center Martin and Department of Physiology, , Comenius University, Slovakia; [3]Anesthesia and Intesive Care, Villa Anthea Hospital, Italy; [4]Department of Molecular Medicine and Surgery, Karolinska University Hospital, Sweden; [5]Department of Pathology, The Swedish National Veterinary Institute, Sweden; [6]Department of Surgical Sciences, Uppsala University, Sweden; [7]Department of Anatomy, Physiology and Biochemistry, Swedish University of Agricultural Sciences, Sweden

Room 2 - Afternoon (15.00 - 17.00)

Symposium - Cell Physiology 1: Targeting metabolic modulation and mitochondrial dysfunction for cardioprotection

Organizer: **Tatiana Ravingerová (Bratislava, Slovakia)**

Invited Speakers

15.00 **PPARβ/δ at the cross talk between cardiac metabolism and mitochondrial function**
Lazou A
School of Biology, Aristotle University of Thessaloniki, Greece

15.30 **New cardiokines involved in the control of cardiac metabolism**
Planavila A, Rupérez C, Ferrer-Curriu G, Villarroya F
Departament de Bioquímica i Biologia Molecular, Universitat de Barcelona and CIBER Fisiopatología de la Obesidad y Nutrición (CIBEROBN), Spain

16.00 **Mitochondrial potassium channels and cardioprotection**
Szewczyk A
Laboratory of Intracellular Ion Channels, Nencki Institute of Experimental Biology, Poland

Oral Presentations

16.30 **The Thyroid Hormone activating enzyme, Type 2 deiodinase, increases myogenic differentiation by regulating mitochondrial metabolism and reducing oxidative stress**
Cicatiello AG[1], Sagliocchi S[1], Di Cicco E[1], Ambrosio R[2], Miro C[1], Nappi A[1], Mancino G[1], Raia M[3], Paladino S[4], Salvatore D[5], Dentice M[1]
[1]Department of Clinical Medicine and Surgery, University of Naples "Federico II", Italy; [2]IRCCS SDN, Italy; [3]CEINGE-Biotecnologie Avanzate Scarl, Italy; [4]Dipartimento di Medicina Molecolare e Biotecnologie Mediche, University Federico II, Italy; [5]Department of Biomedical Advanced Sciences, University of Naples "Federico II", Italy

16.45 **High fat diet and environmental pollutants exposure: mitochondrial uncoupling as protective mechanism toward hepatic injury in rats**
Migliaccio V[1,2], Di Gregorio I[1], Sica R[2], Scudiero R[2], Putti R[2], Lionetti L[1]
[1]Department of Chemistry and Biology, University of Salerno, Italy; [2]Department of Biology, University Federico II, Naples, Italy

Room 3 - Afternoon (15.00 - 17.00)

Symposium - Neurophysiology 1: Experimental Epilepsy Models

Organizer: **Erdal Agar (Samsun, Turkey)**

Invited Speakers

15.00 **Cannabinoid CB1 receptors in epilepsy**
Agar E
Department of Physiology, University of Ondokuz Mayis, Samsun, Turkey

15.30 **Structural and functional reorganization of the hippocampal network in epilepsy**

Haas CA

Experimental Epilepsy Research, Dept. of Neurosurgery, Medical Center, University of Freiburg, Germany

16.00 **Astrocytes and their role in epilepsy?**

Zorec R

Laboratory of Neuroendocrinology-Molecular Cell Physiology, Institute of Pathophysiology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; Celica BIOMEDICAL, Lab Cell Engineering, Ljubljana, Slovenia

16.30 **The strategies of drug targeting into the brain through the blood-brain barrier in drug-resistant epilepsy**

Uğur Yilmaz C[1,2], Temizyürek A[3], Emik S[4], Orhan N[5], Ahishali B[6], Akcan U[3], Atiş M[3], Arican N[7], Gürses C[8], Kaya M[3]

[1]Dept of Pharmaceutical Biosciences, Uppsala University, Sweden; [2]Dept of Laboratory Animals Science, Aziz Sancar Institute of Experimental Medicine, Istanbul University, Turkey; [3]Dept of Physiology, Koç University School of Medicine, Turkey; [4]Dept of Chemical Engineering, Faculty of Engineering, Istanbul University-Cerrahpaşa, Turkey; [5]Dept of Neuroscience, Aziz Sancar Institute of Experimental Medicine, Istanbul University, Turkey; [6]Dept of Histology and Embryology, Koç University School of Medicine, Turkey; [7]Dept of Forensic Science, Istanbul Faculty of Medicine, Istanbul University, Turkey; [8]Dept of Neurology, Koç University School of Medicine, Turkey

Room 4 - Afternoon (15.00 - 17.00)

Symposium - Blood Physiology: Platelets beyond hemostasis

Organizer: **Alice Assinger (Vienna, Austria)**

Invited Presentations

15.00 **Platelets mediate ischemia-induced revascularization through C5aR1-induced secretion of CXCL4**

Nording H[1], Emschermann F[1], Patzelt J[1], Knoep K[2], Mezger M[1], Borst O[4], Feil R[5], Chavakis E[6], von Hundelshausen P[7], Köhl J[8,9], Gawaz M[3], Langer HF[1,4]

[1]Section of Cardioimmunology, Medical Clinic II, University Heart Center Lübeck, Germany. [2]Department of Cardiology and Angiology, Hannover Medical School, Germany. [3]University Hospital, Department of Cardiovascular Medicine, Eberhard Karls University, Tuebingen, Germany. [4]University Hospital, Medical Clinic II, University Heart Center Lübeck, Germany. [5]Institute for Biochemistry, Eberhard Karls University, Tuebingen, Germany. [6]Department for Internal Medicine III/Cardiology, University Hospital of the Johann Wolfgang Goethe University, Frankfurt am Main, Germany. [7]Institute for Cardiovascular Prevention, Ludwig Maximilians University Munich, Germany. [8]Institute for Systemic Inflammation Research, University of Lübeck, Germany. [9]Division of Immunobiology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

15.30 **Platelet ITAM receptors: new regulators of inflammation and vascular integrity**

Rayes J

University of Birmingham, UK

16.00 **Platelets in inflammation and infection**

Schrottmaier WC
Centre of Physiology of Pharmacology, Medical University of Vienna, Austria

Oral Presentations

16.30 **Platelet-specific expression of the inflammatory NFkB activator IKK2 reduces atherosclerosis and protects mice from hepatosteatosis**

Mussbacher M[1], Salzmann M[1], Pereyra D[2], Schrottmaier WC[1], Kral-Pointner JB[1], Marak R[1], Basílio J[1], Kuttke M[1], Ketelhuth D[3], Starlinger P[2], Assinger A[1], Schmid JA[1]
[1]Department of Vascular Biology and Thrombosis Research, Medical University of Vienna, Austria; [2]Center of Molecular Medicine, Karolinska Institute, Sweden; [3]Department of Surgery, General Hospital of Vienna, Austria

16.45 **Selective inflammatory activation of megakaryocytes and platelets by transgenic expression of ikk2 results in a hypo-reactive platelet phenotype**

Salzmann M, Mussbacher M, Schrottmaier WC, Kral-Pointner JB, Resch U, Hoesel B, Bleichert S, Moser B, Basílio J, Assinger A, Schmid JA
Institute of Vascular Biology and Thrombosis Research, Medical University of Vienna, Austria

17.00 *Coffee break*

Room 1 - Afternoon (17.30 - 18.30)

Opening FEPS Lecture

Hormonal Regulation of Secretion in Collecting Duct Intercalated Cells

Jens Leipziger

Aarhus University, Denmark

Introduced by **Markus Hecker (Heidelberg, Germany)**

19.00 *Welcome Cocktail*

Palazzo Grassi - Via Marsala 12, Bologna

Room 1 - Morning (8.30 - 10.30)

Symposium - Cell Physiology 2 (supported by SIF): Physiopathology of signaling transmission and membrane transport

Organizer: **Giovanna Valenti, Bari, Italy**

Invited Speakers

8.30 **Regulation of renal urea and water transport: implications for therapy of nephrogenic diabetes insipidus**

Sands JM, Klein JD

Department of Medicine and Department of Physiology, Emory University, USA

9.00 **Targeting calcium-sensing receptor signaling as novel therapeutic for asthma**

Riccardi D

University of Cardiff, UK

9.30 **Adipose and liver aquaglyceroporins: functional relevance and (dys)regulation in metabolic disorders**

Calamita G

Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari "Aldo Moro", Italy

Oral Presentations

10.00 **Honeybee products and wound healing: an AQP3, H_2O_2 and Ca^{2+} signaling affair**

Martinotti S[1], Pellavio G[2], Patrone M[1], Laforenza U[2], Moccia F[3], Ranzato E[1]

[1]Dipartimento di Scienze e Innovazione Tecnologica (DiSIT) University of Piemonte Orientale Italy; [2]Department of Molecular Medicine, University of Pavia, Italy; [3]Department of Biology and Biotechnology "L. Spallanzani", University of Pavia, Italy

10.15 **Two novel *SCN5A* loss-of-function mutations affect patients with severe arrhytmogenic syndromes**

Murano C[1], Binda A[1], Lucano D[1], Micaglio E[2], Ciconte G[2], Ghiroldi A[3], Anastasia L[3,4], Pappone C[2], Rivolta I[1]

[1]School of Medicine and Surgery, University of Milano Bicocca, Italy; [2]Arrhythmology Department, Scientific Institute for Research, Hospitalization, and Health Care (IRCCS) Policlinico San Donato, Italy; [3]Laboratory of Stem Cells for Tissue Engineering, Scientific Institute for Research, Hospitalization, and Health Care (IRCCS) Policlinico San Donato, Italy; [4]Department of Biomedical Sciences for Health (L.I.T.A.), University of Milano, Italy

Room 2 - Morning (8.30 - 10.30)

Symposium - Cardiovascular Physiology 1: The role of intrinsic and environmental factors in microvascular regulation: impact of nutrients and life style

Organizer: Helena Lenasi (Ljubljana, Slovenia)

Invited Speakers

8.30 **Increased oxidative stress underlies attenuated flow-induced dilation in cerebral resistance arteries of Sprague-Dawley rats on a high salt diet**

Drenjančević I, Matić M, Jukić I, Mihaljević Z, Stupin A
Faculty Medicine University of Osijek, Croatia

9.00 **Exploring the short-term, physiological, micro-circulatory effects of regional diets in sedentary, older, adult populations**

Klonizakis M[1], Rogerson D[2], Milner M[1], Könönen H[1], McNeill S[2], Liu Y[1]
1Centre for Sport and Exercise Science, Sheffield Hallam University, UK; 2Academy of Sport and Physical Activity, Sheffield Hallam University, UK

9.30 **Exercise can reverse hypertension-induced microvascular dysfunction**

Koller A
Department of Morphology and Physiology, Semmelweis University, Sport-physiology Res Center, University of Physical Education, Budapest, Hungary, Department of Physiology, New York Medical College, Valhalla, NY, USA

Oral Presentations

10.00 **Glutamate induces intracellular Ca^{2+} signals and nitric oxide release in human brain microvascular endothelial cells**

Negri S[1], Faris P[1,2], Pellavio G[3], Orgiu M[1], Forcaia G[4], Botta L[1], Sancini G[4], Laforenza U[2], Moccia F[11]
[1]Department of Biology and Biotechnology "L. Spallanzani", University of Pavia, Italy; [2]Research Centre, Salahaddin University-Erbil, Iraq; [3]Department of Molecular Medicine, University of Pavia, Italy; [4]Department of Experimental Medicine, University of Milano Bicocca, Italy

10.15 **TRPV4 channels involvement in the response of lymphatic vessels intrinsic contractility to temperature**

Solari E, Marcozzi C, Giaroni C, Baj A, Bistoletti M, Negrini D, Moriondo A
Department of Medicine and Surgery, University of Insubria, Italy

Room 3 - Morning (8.30 - 10.30)

Symposium - Physiology of Metabolism 1: Glucose metabolism in neurodegeneration

Organizer: Helena Chowdhury (Ljubljana, Slovenia)

Invited Speakers

8.30 **Modulation of brain glucose metabolism by exercise and fasting**

Jensen J, Johansen E

Department of Physical Performance, Norwegian School of Sport Sciences, Oslo, Norway

8.55 **Energy Metabolism of Reactive Astrocyte during Brain injury**

Morita M

Department of Biology, Kobe University, Japan

9.20 **Insulin and Adrenaline Modulate Cytoplasmic Glucose, Lactate and Glycogen Levels in Astrocytes**

Kreft M[1,2,3], Fink K[1], Muhič M[1], Chowdhury H[1,2], Vardjan N[1,2], Zorec R[1,2]

[1]Laboratory of Neuroendocrinology-Molecular Cell Physiology, Institute of Pathophysiology, Faculty of Medicine, University of Ljubljana, Slovenia; [2]Celica Biomedical Center, Tehnoloski park 24, Ljubljana, Slovenia [3]Department of Biology, Biotechnical Faculty, University of Ljubljana, Vecna pot 111, Slovenia

9.40 **ALS- and FTD-associated TDP-43 inclusions in astrocytes reduce β-adrenergic cAMP signalling and alter glucose and lipid metabolism**

Velebit J[1], Horvat A[1,2], Prpar Mihevc S[3], Rogelj B[3,4,5], Zorec R[1,2], Vardjan N[1,2]

[1]LCI, Celica Biomedical, Ljubljana, Slovenia; [2]LN-MCP, Institute of Pathophysiology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; [3]Department of Biotechnology, Jožef Stefan Institute, Ljubljana, Slovenia; [4]Biomedical Research Institute BRIS, Ljubljana, Slovenia; [5]Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia

Oral presentations

10.00 **3,5-diiodo-L-thyronine (T2) down-regulates miR-22-3p to modulate gluconeogenic pathway in high-fat diet rats**

Senese R[1], Cioffi F[2], Petito G[1], Lange P[1], Russo A[1], Goglia F[2], Lanni A[1]*, Potenza N[1]

[1]Department of Environmental, Biological and Pharmaceutical Sciences and Technologies, University of Campania "L. Vanvitelli", Caserta, Italy; [2]Department of Sciences and Technologies, University of Sannio, Benevento, Italy

10.15 **Beneficial effects of Sicilian Black Bee Honey on the obesity-related glucose dismetabolism**

Terzo S[1], Mulè F [2], Amato A[2]

[1]Department of Experimental Biomedicine and Clinical Neuroscience, University of Palermo, Italy; [2]Department of Biological- Chemical- Pharmaceutical Science and Technology, University of Palermo, Italy

Room 4 - Morning (8.30 - 10.30)

Workshop 1: Integrative Neurophysiology

***Chairs*: Leonardo Chelazzi (Verona, Italy) and Patrizia Fattori (Bologna, Italy)**

Oral Presentations

8.30 **The vision-for-action network in monkey brain**

Gamberini M, Passarelli L, Impieri D, Fattori P, Galletti C

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy

8.45 **Voluntary action modulates visually evoked cortical responses in primary visual cortex: an integrated ultra-high field fMRI and EEG study**

Benedetto A[1], Binda P[1], Ho T[1], Costagli M[2], Tosetti M[2], Morrone MC[1,2]

[1]Department of Translational Research on New Technologies in Medicines and Surgery, University of Pisa, Pisa, Italy. [2]IRCCS Stella Maris, Calambrone, Pisa, Italy

9.00 **Topographic organization of the "third tier" dorsomedial visual cortex in the macaque**

Hadjidimitrakis K[1,2,3], Bakola S [2,3], Chaplin TA[2,3], Yu HH[2,3], Alanazi O[2], Chan JM[2], Worthy KH[2], Rosa MGP[2,3,4]

[1]Department of Biomedical and Visuomotor Sciences, University of Bologna, Piazza di Porta San Donato, Bologna, Italy; [2]Biomedicine Discovery Institute and Department of Physiology, Monash University, Clayton, Australia; [3]Australian Research Council, Centre of Excellence for Integrative Brain Function, Monash University Node, Clayton, Australia; [4] School of Biomedical Sciences, The University of Queensland, Brisbane, Australia

9.15 **Microsaccades could indicate the locus of attention during self-motion perception**

Piras A, Trofè A, Perazzolo M, Raffi M

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2]Department for Life Quality Studies University of Bologna, Italy

9.30 **Motor adaptation to a virtual perturbation incompatible with muscle synergies across multiple days**

Borzelli D[1], Gurgone S[2], de Pasquale P[1,3], Berger D[3], Acri G[1], d'Avella A[1,3]

[1]Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Messina, Italy; [2]Department of Mathematical and Computer Sciences, Physical Sciences, and Earth Sciences, University of Messina, Messina, Italy; [3]Laboratory of Neuromotor Physiology, IRCCS Santa Lucia Foundation, Rome, Italy

9.45 **Effects of the visual context on ocular and interceptive responses to partially occluded ballistic trajectories with different laws of motion**

Delle Monache S[1,2,3], Lacquaniti F [1,2,3], Bosco G [1,2,3]

1Department of Systems Medicine, Neuroscience Section, and 2Center of Space Biomedicine, University of Rome Tor Vergata, Rome, Italy; 3Laboratory of Neuromotor Physiology, Santa Lucia Foundation, Rome, Italy

10.00 **Evidence for object-mirroring mechanism specificity in monkey's mirror neuron network**

Lanzilotto M[1], Livi A[2], Maranesi M[1], Ferroni CG[1], Bonini L[1]

[1] Department of Medicine and Surgery, University of Parma, Parma, Italy; [2] Department of Neuroscience, Washington University in St. Louis, St. Louis, MO, USA.

10.15 **Neuronal dynamics of signal selective motor plan cancellation in macaque dorsal premotor cortex**

Giarrocco F[1,2], Giamundo M[1], Fabbrini F[1], Brunamonti E[1], Pani P[1], Ferraina S[1]

[1]Department of Physiology and Pharmacology, Sapienza University, Rome, Italy; [2]Behavioural Neuroscience PhD program, Sapienza University, Rome, Italy

Room 5 - Morning (8.30 - 10.30)

Workshop 2: Joint Workshop Austria/Africa

Organizer: **Nandu Goswami (Graz, Austria)**

Oral presentations

8.30 **Exploring the Underlying Mechanisms Driving HIV-mediated Cardiovascular Diseases Onset - Focus on Immune-related Changes**

Essop F

CMRG, Department of Physiological Sciences, Stellenbosch University, South Africa

8.50 **Innovative Methods of Vascular Health Assessment in HIV**

Goswami N

Department of Physiological Sciences, University of Stellenbosch, South Africa

9.10 **Comparability of Pulse Wave Velocity in Children and Adolescents living with HIV**

Mellin J[1], Goswami N[2], Klein N[3]

[1]Institute of Physiology, Medical University of Graz, Austria; [2]Institute of Physiology, Medical University of Graz, Austria; [3]Institute of Child Health, University College of London, Great Britain;

9.30 **Antiretroviral Drugs and the Human Gut Microbiome: Implications for the development of cardiovascular diseases in people living with HIV - An Austrian/South African Project**

Musarurwa HT[1], Sewani-Rusike CR[1], Nkeh-Chungag BN[2], Goswami N[3]

[1]Department of Human Biology, Faculty of Health Sciences, Walter Sisulu University, Mthatha, South Africa; [2]Department of Environmental and Biological Sciences, Faculty of Natural Sciences, Walter Sisulu University, Mthatha, South Africa; [3]Otto Loewi Research Centre, Division of Physiology, Medical University of Graz, Graz, Austria

9.50 **Obesity and related cardiometabolic risk factors in HIV-infected individuals**

Strijdom H[1], Kamau F[1], Goswami N[2], Essop F[3]

[1]Division of Medical Physiology, University of Stellenbosch, South Africa; [2]Otto Loewi Research Centre for Vascular Biology, Immunology and Inflammation, Medical University of Graz, Austria; [3]Department of Physiological Sciences, University of Stellenbosch, South Africa

10.30 *Coffee break*

10.30 - 12.00

Poster Session I (Poster Area)

Poster Session I (1/2) - Neurophysiology: Integrative neurophysiology

PP.01 **Kir4.1 gain-of-function and gut dysbiosis appear as risk factors for autism-epilepsy phenotype in a new mouse model of autism**

Coretti L[1], Ambrosini E[2], Cenciarini M[1], Sforna L[1], Belia S[3], Harold-Barry E[4], Hasan S[5], Lanciotti A[2], Brignone MS[2], Sicca F[6], Santorelli F[6], Chiarotti L[7], Lembo F[8], Pessia M[1,4], D'Adamo MC[4]

[1]Department of Experimental Medicine, University of Perugia, Italy; [2]Department of Cell Biology and Neuroscience, Istituto Superiore di Sanità, Rome, Italy; [3]Department of Chemistry, Biology and Biotechnology, University of Perugia, Italy; [4]Department of Physiology and Biochemistry, University of Malta, Msida, Malta; [5]Faculty of Medicine, Kuwait University, Kuwait; [6]Department of Developmental Neuroscience, IRCCS Fondazione Stella Maris, Pisa, Italy; [7]Department of Molecular Medicine and Medical Biotechnology, University of Naples Federico II; Naples, Italy; [8]Department of Pharmacy, University of Naples Federico II; Naples, Italy

PP.02 **Object observation activates neurons in the ventrolateral prefrontal cortex of the macaque**

Fogassi L[1], Gravante A[1], Simone L[2], Rozzi S[1]

[1]Department of Medicine and Surgery, University of Parma; [2]Laboratory of Motor Control, Department of Medical Biotechnologies and Translational Medicine, Università degli Studi di Milano, Humanitas Reasearch Hospital, IRCCS, Milano Italy

PP.03 **Kinesthetic illusion shapes motor cortex plasticity induced by action observation**

Bisio A, Biggio M, Ruggeri P, Avanzino L, Bove M

Department of Experimental Medicine, University of Genoa, Italy

PP.04 **The splanchnic anti-inflammatory pathway can be exogenously activated to inhibit inflammation**

Martelli D[1,2], McKinley MJ[2], McAllen RM[2]

[1] Department of Biomedical and Neuromotor Science, University of Bologna, Italy; [2]. Florey Institute of Neuroscience and Mental Health, Parkville, Australia

PP.05 **Study of reaching trajectories in physiological and pathological conditions: a decoding approach**

Bosco A[1], Bertini C[2], Ladavas E[2], Fattori P[1]

[1]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2]Department of Psychology, University of Bologna, Italy

PP.06 **Activation of dopamine D1 receptor signaling in the dentate gyrus is required for antidepressant action of SSRI in a mouse model of depression**

Kuroiwa M[1], Shuto T[1], Sotogaku N[1], Nishi A[1]

[1]Department of Pharmacology, Kurume University School of Medicine, Japan

PP.07 **Analysis of microsaccade direction during learning of an attentional task in the macaque monkey**

Raffi M, Meoni A, Piras A

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy

PP.08 **Processing of depth and direction signals in the medial posterior parietal cortex of the macaque**

Breveglieri R[1], De Vitis M[1,2,3], Hadjidimitrakis K[1,4,5], Galletti C[1], Fattori P[1]

[1]Department of Biomedical and Visuomotor Sciences, University of Bologna, Italy; [2]Laboratory of Neuro- and Psychophysiology, Leuven, Belgium; [3]Leuven Brain Institute, Leuven, Belgium; [4]Biomedicine Discovery Institute and Department of Physiology, Monash University, Clayton, Australia; [5]Australian Research Council, Centre of Excellence for Integrative Brain Function, Monash University Node, Clayton, Australia

PP.09 **Neurons modulated by action execution and observation in area V6A of the macaque**

Vaccari, FE[1], Tabanelli M[1], Breveglieri R[1], Bosco A[1], Gamberini M[1], Fattori P[1], Galletti C[1]

[1]Department of Biomedical and Neuromotor Sciences, University of Bologna, Bologna, Italy

PP.10 **Postural Control during Gait Initiation in children with Cerebellar Ataxia**

Farinelli V[1], Marchese SM[1], Strano C[1], D'Arrigo S[2], Ardissone A[2], Nardocci N[2], Bolzoni F[1], Esposti R[1], Cavallari P[1]

[1]Human Physiology section of the De.P.T., University of Milan, Italy; [2]Developmental Neurology Unit, IRCCS C. Besta Neurological Institute, Milan, Italy

PP.11 **Sleep loss affects membrane physical state of myelin sheaths**

Fiorini R[1], Aboufares El Alaoui A[2], Fabri M[2], Bellesi M[3]

[1]Department of Life and Environmental Sciences, [2]Department of Experimental and Clinical Medicine, Università Politecnica delle Marche (Ancona, Italy); [3]School of Physiology, Pharmacology & Neuroscience, University of Bristol, UK

PP.12 **Postural orientation contributes to modeling the effects of gravity for target interception in humans**

La Scaleia B[1], Lacquaniti F[1,2,3], Zago M[1,3,4]

[1]Laboratory of Neuromotor Physiology, IRCCS Fondazione Santa Lucia, Rome, Italy; [2]Department of Systems Medicine, University of Rome Tor Vergata, Rome, Italy; [3]Centre of Space Bio-medicine, University of Rome Tor Vergata, Rome, Italy; [4]Department of Civil Engineering and Computer Science Engineering, University of Rome Tor Vergata, Rome, Italy

PP.13 **Exercise affects skeletal-muscle reinnervation after nerve crush via TrkB-A2A receptor crosstalk**

Sartini S[1], Di Palma M[1], Ambrogini P[1], Lattanzi D[1], Pellegrino MA[2], Bottinelli R[2], Cuppini R[1]

[1]Dept. of Biomolecular Sciences, University of Urbino Carlo Bo, Italy; [2]Dept. of Molecular Medicine, University of Pavia, Italy

PP.14 **How the brain holds its horses: a new model of inhibitory control implementationg**

Mirabella G[1,2]

[1]IRCCS Neuromed, Pozzilli (IS), Italy; [2]Department of Anatomy, Histology, Forensic Medicine & Orthopedics, Sapienza University, Rome, Italy

PP.15 **Effects of occlusal rebalancing on cognitive performance**

Tramonti Fantozzi MP[1], De Cicco V[1], Diciotti S[2], Tessa C[3], Vignali C[3], Barresi M[4], Cataldo E[5], Bruschini L[6], Faraguna U[1,7], Manzoni D[1]

[1]Department of Translational Research and of New Surgical and Medical Technologies, University of Pisa, Pisa, Italy; [2] Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi", University of Bologna, Cesena, Italy; [3]Department of Radiology, Versilia Hospital, Azienda USL Toscana Nord Ovest, Lido di Camaiore, Italy; [4]Institut des Maladies Neurodégénératives, University of Bordeaux, Bordeaux, France; [5]Department of Physics, University of Pisa, Pisa, Italy; [6]Department of Surgical, Medical, Molecular Pathology and Critical Care Medicine, University of Pisa, Pisa, Italy; [7]Department of Developmental Neuroscience, IRCCS Foundation Stella Maris, Pisa, Italy.

PP.16 **Influence of different facial expressions on face and hand primary motor cortices**

Ginatempo F[1], Manzo N[2], Ibanez-Pereda J[3], Rocchi L[3] , Rothwell JC[3], Deriu F[1]

[1]Department of Biomedical Sciences, University of Sassari, Sassari; [2]IRCCS NEUROMED, Pozzilli, IS, Italy; [3] Sobell Department of Motor Neuroscience and Movement Disorders, UCL Institute of Neurology, London, England

PP.17 **Thalamo-cortical projections to the macaque precuneate cortex**

Passarelli L[1], Gamberini M[1], Impieri D[1], Fattori P[1], Galletti C[1], Rosa MGP[2,3], Bakola S[2,3]

[1]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2]Department of Physiology and Biomedicine Discovery Institute, Monash University,Clayton, Victoria, Australia; [3]Australian Research Council, Centre of Excellence for Integrative Brain Function, Monash University Node, Clayton, Victoria, , Australia

PP.18 **The cognitive component of reaction time tasks in Parkinson's disease patients is improved after the program of "dry" immersion**

Meigal A[1,3], Tretjakova O[1], Gerasimova-Meigal L[1], Sayenko I[2]

[1]Department of Human and Animal Physiology, Pathophysiology, Petrozavodsk State University, Russia; [2]Institute of Biomedical Problems, Russia; [3]Laboratory of Novel Methods in Physiology, Petrozavodsk State University, Russia

PP.19 **Catodal or Anodal tDCS on Parietal Operculum do not affect Intra-limb Anticipatory Postural Adjustments**

Marchese SM, Esposti R, Bolzoni F, Cavallari P

Human Physiology Section of the De.P.T., Università degli Studi di Milano, Italy

PP.20 **Neural States in V6A during reaching task.**

Diomedi S, Filippini M, Breveglieri R, Fattori P

DIBINEM, Università of Bologna, Italy

PP.21 **Role of visual motion information and internalized gravity in motor and perceptual predictions**

Bosco G[1,2,3], Delle Monache S[1,2,3], De Sá Teixeira N[1,2,3], Lacquaniti F[1,2,3]

[1]Department of Systems Medicine and [2]Center of Space Biomedicine, University of Rome Tor Vergata, Rome (Italy); [3]Laboratory of Neuromotor Physiology, Santa Lucia Foundation, Rome (Italy)

PP.22 **A kinematic study of skilled reaching movement in Rat**

Parmiani P[1,2], Bonifazzi C[1], Lucchetti C[3], Franchi G[1]

[1]Department of Biomedical and Specialty Surgical Sciences, Section of Human Physiology, University of Ferrara, Ferrara, Italy; [2]Center for Translational Neurophysiology, Istituto Italiano di Tecnologia, Ferrara, Italy; [3]Department of Biomedical, Metabolic and Neural Sciences, Section of Physiology and Neuroscience, University of Modena and Reggio Emilia, Modena, Italy

PP.23 **Suppression history of visual locations shapes spatial priority maps sustaining transient ongoing control of saccadic behavior**

Di Caro V[1], Della Libera C[1,2]

[1]Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Verona, Italy; [2]National Institute of Neuroscience, Verona, Italy

PP.24 **High Fat Diet Induces Neuroinflammation and Brain Oxidative Stress Affecting Cerebral and Synaptic Mitochondria Function and Efficiency**

Trinchese G[1], Cavaliere G[1], Penna E[1], Cimmino F[1], Catapano A[1], Pirozzi C[2], Lama A[2], Annunziata C[2], Piscopo O[1], Zammit C[3], Crispino M[1], Mollica MP[1]

[1]Department of Biology, University of Naples Federico II, Italy; [2]Department of Pharmacy, University of Naples Federico II, Italy; [3]Department of Anatomy, University of Malta, Malta

PP.25 **Evaluation of the mechanisms involved in behavioral effects of obestatin**

Szakacs J[1], Csabafi K[1], Kovacs D[1], Pataki I[1], Szabo G[1]

[1]University of Szeged, Faculty of Medicine, Department of Pathophysiology, Hungary

PP.26 **Visuospatial attention and saccadic inhibitory control in children with cerebral palsy**

Maioli C[1]*, Falciati L1, Galli J[1,2], Micheletti S[2], Turetti L[1], Balconi M[3], Fazzi E[1,2]

[1]Department of Clinical and Experimental Sciences, University of Brescia, Italy; [2]Unit of Child Neurology and Psychiatry, ASST Spedali Civili of Brescia, Italy; [3]Department of Psychology, Catholic University of Milan, Italy

PP.27 **T-Patterns in the study of movement disorders**

Casarrubea M, Aiello S, Crescimanno G

Laboratory of Behavioural Physiology, Dept. of Biomedicine, Neurosciences and Advanced Diagnostic (Bi.N.D.), Human Physiology Section "Giuseppe Pagano", University of Palermo, Italy

Poster Session I (2/2) - Neurophysiology: Miscellaneous

PP.28 **Functional cerebellar organoid formation on peptide-functionalised polyethylene glycol hydrogels**

Balion Z[1], Cėpla V[2], Svirskienė N[3], Valiokas R[2], Jekabsone A[1,3]

[1]Institute of Pharmaceutical Technologies, University of Health Sciences, Lithuania; [2]Ferentis UAB, Lithuania; [3]Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania

PP.29 **Decoding Modality-invariant Spatial Targets from Planning-related Activity in Early Visual Areas**

Turella L[1], Malfatti G[1], Monaco S[1], Culham J[2,3], Cattaneo L[1,4]

[1]Center for Mind/Brain Sciences (CIMeC), University of Trento, Italy; [2].Department of Psychology, University of Western Ontario, Canada; [3]Brain and Mind Institute, University of Western Ontario, Canada; [4]Department of Neuroscience, Biomedicine and Movement, University of Verona, Italy

PP.30 **Laminar organization of the corticostriatal projections in the macaque**

Borra E[1], Gerbella M[1], Rizzo M[1], Rozzi S[1], Luppino G[1]

[1]Department of Medicine and Surgery, University of Parma, Parma, Italy

PP.31 **Endfoot targeting of AQP4ex is the determining factor of the anchoring of AQP4 water channel molecules at the brain-blood interface**

Palazzo C[1,3], Buccoliero C[1], Mola MG[3], Abbrescia P[1], Nicchia GP[2,3], Trojano M[1], Frigeri A[1,2]

[1]Department of Basic Medical Sciences, Neurosciences and Sense Organs, School of Medicine, University of Bari Aldo Moro, Bari, Italy; [2]Dominick P. Purpura Department of Neuroscience, Albert Einstein College of Medicine,Kennedy Center, Bronx, NY, USA; [3]Department of Bioscience, Biotechnologies and Biopharmaceutic, University of Bari "Aldo Moro", Bari, Italy

PP.32 **Inter-individual variability and predictability of throwing actions**

Maselli A[1], Russo M[2], Lacquaniti F[1,2], d'Avella A[1,3]

[1]Laboratory of Neuromotor Physiology, IRCCS Fondazione Santa Lucia, Rome, Italy; [2]Centre of Space Bio-medicine and the Department of Systems Medicine, University of Rome Tor Vergata, Italy; [3]Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Italy

PP.33 **Sonic hedgehog signalling pathway on neural stem cells during regenerative processes in a mouse model of motoneuronal loss**

Vicario N[1], Bernstock JD[2], Spitale FM[1], Giunta MAS[1], Spoto G[1], Giallongo C[3], Costantino A[1], Li Volti G[3], Tibullo D[3], Gulisano M[4], Leanza G[4], Gulino R[1], Parenti R[1]

[1]Dept. of Biomedical and Biotechnological Sciences, Section of Physiology, University of Catania, Italy; [2]Medical Scientist Training Program, The University of Alabama at Birmingham, AL, USA; [3]Dept. of Biomedical and Biotechnological Sciences, Section of Biochemistry, University of Catania, Italy; [4]Dept. of Drug Sciences, University of Catania, Catania, Italy

PP.34 **Glial phagocytic clearance in health and disease**

Giusti V[1], Gallasch L[2], Sandre M[1], Plotegher N[1], Bubacco L[1], Greggio E[1], Erlandsson A[2], Civiero L[1]

[1]Department of Biology, University of Padova, Italy; [2]Department of Public Health and Caring Sciences, Geriatrics, Uppsala University, Sweden

PP.35 **Blunting neuroinflammation with resolvin D1 prevents early signs of Parkinson's disease in a rat model**

Krashia P[1], Cordella A[1], Nobili A[1,2], La Barbera L[1,3], Federici M[1], Pisani A[1,3], Calabresi P[1,4], Viscomi MT[5], Chiurchiù V[1,2], D'Amelio M[1,2], Mercuri NB[1,3]

[1]Department of Experimental Neurosciences, IRCCS Santa Lucia Foundation, Rome, Italy; [2]Department of Medicine, University Campus Bio-medico, Rome, Italy; [3]Department of Systems Medicine, University of Rome 'Tor Vergata', Rome, Italy; [4]Department of Philosophy, Human, Social and Educational Sciences, University of Perugia, Italy; [5]Institute of Histology and Embryology, Università Cattolica del Sacro Cuore, Rome, Italy

PP.36 **The Effects of Melanocortin 4 Receptor Agonist RM-493 on the Behavioral outcomes of Western-Type Diet**

Aslan B[1], Karakaya B[2], Şirvancı S[2], Yıldırım A[1]

[1]Department of Physiology, Marmara University School of Medicine, Turkey; [2]Department of Histology, Marmara University School of Medicine, Turkey

PP.37 **Evaluation of the Effects of Recurrent Dexmedetomidine on Cognitive Functions and Brain Tissue in Streptozotocin-Induced Rats with Alzheimer's Disease**

Arslan M[1], Küçük A[2], Meryem Kıran M[3], Dilmen Z[1], Kavutçu M[4], Kurtipek Ö[1]

[1]Gazi University, Faculty of Medicine, Department of Anesthesiology of Reanimation, Ankara, Turkey; [2]Kütahya Health Sciences University, Faculty of Medicine, Department of Physiology, Kütahya, Turkey; [3]Yıldırım Beyazit University, Faculty of Medicine, Department of Medical Pathology, Ankara, Turkey; [4]Gazi University, Faculty of Medicine, Department of Medical Biochemistry, Ankara, Turkey

PP.38 **Cord blood serum (CBS) based eye drops mitigate light-induced retinal neurodegeneration**

Di Marco S[1,2], Riccitelli S[1], Di Paolo M[1], Buzzi M[3], Ciavarella C[4], Versura P[4], Campos E[4], Bisti S[1,2]

[1] Department of Applied Clinical Science and Biotechnology, University of L'Aquila, L'Aquila, Italy; [2]Istituto Nazionale di Biostrutture e Biosistemi (INBB), Roma, Italy; [3]Emilia- Romagna Cord Blood Bank-Transfusion Service, S. Orsola-Malpighi Teaching Hospital, Bologna, Italy; [4]Ophthalmology Unit, University of Bologna and S. Orsola Teaching Hospital, Bologna, Italy

PP.39 **The role of altered voltage-gated currents in motor-neuron degeneration: Analysing the spinal and bulbar muscular atrophy (SBMA) case**

Jimenez Garduño AM, Martinez Rojas VA, Juarez Hernandez LJ, Musio C

UDLAP, Mexico/ IBF Trento, Italy

PP.40 **Stepping in neonates**

Sylos-Labini F[1,2], Magnani S[3], Cappellini G[1,2], La Scaleia V[1,2], Fabiano A[4], Picone S[4], Paolillo P[4], Di Paolo A[5], Lacquaniti F[1,2,6], Ivanenko Y[2]

[1]Center of Space BioMedicine of the University of Rome Tor Vergata, Rome, Italy; [2]Laboratory of Neuromotor Physiology of the IRCCS Santa Lucia Foundation, Rome, Italy; [3]Sapienza University of Rome, Rome, Italy; [4]Neonatology and Neonatal Intensive Care Unit, Casilino Hospital, Rome, Italy; [5]Neonatology and Neonatal Intensive Care Unit of the Ospedale San Giovanni, Rome, Italy; [6]Department of Systems Medicine of the University of Rome Tor Vergata, Rome, Italy

PP.41 **The Cerebral Microvascular endothelial cells: are they a new target for AD therapy?**

Forcaia G[1], Formicola B[1], Negri S[2], Blasi P[3], Re F[1], Moccia F[2], Sancini G[1]

[1]School of Medicine and Surgery, Nanomedicine Center, Neuroscience Center, University of Milano Bicocca, Monza, Italy; [2] Department of Biology and Biotechnology "L. Spallanzani", University of Pavia, Italy; [3] Department of Pharmaceutical Sciences, University of Camerino, Perugia, Italy

PP.42 **Regulation of Aquaporin-4 isoforms expression investigated by a CRISPR/Cas9 genome editing mouse model**

Pisani F[1], Frigeri A[2], De Bellis M[1], Svelto M[1], Nicchia GP[1]

[1]Dept of Bioscience, Biotechnology and Biopharmaceutics, University of Bari "Aldo Moro"; [2] School of Medicine, Basic Medical Sciences, Neuroscience and Sense Organs, University of Bari "Aldo Moro"

PP.43 **Anti-inflammatory and cognitive effects of Interferon-β1a (IFNβ1a) in a rat model of Alzheimer's disease**

Di Liberto V[1], Frinchi M[1], Nuzzo D[2], Scaduto P[1], Plescia F[3], Massenti MF[3], Di Carlo M[2], Cannizzaro C[3], Cassata G[4], Cicero L[4], Ruscica M[5], Belluardo N[1], Grimaldi LM[5] Mudò G[1]

[1]Department of Biomedicine, Neurosciences and Advanced Diagnostic, University of Palermo, Italy; [2]Institute of Biomedicine and Molecular Immunology "Alberto Monroy" (IBIM), Consiglio Nazionale delle Ricerche (CNR), Palermo, Italy; [3]Department of Sciences for Health Promotion and Mother and Child Care, University of Palermo, Italy; [4]Experimental Zooprophylactic Institute of Sicily "A. Mirri", Palermo, Italy; [5]Neurology Department, Fondazione Istituto Giuseppe Giglio, Cefalù (PA), Italy

PP.44 **Pindolol Reduces The Inhibition Induced by 5-HT in DRN Neurons of Mice**

Yaman B, Bal R

Department of Physiology, Faculty of Medicine, Gaziantep University, Gaziantep, Turkey

PP.45 **Alpha-band cortico-muscular coherence predicts visual sensitivity**

Tomassini A[1], Hilt P[1], Fadiga L[1,2], D'Ausilio A[1,2]

[1]Center for Translational Neurophysiology of Speech and Communication (CTNSC), Istituto Italiano di Tecnologia (IIT), Ferrara, Italy; [2]Università di Ferrara, Dipartimento di Scienze Biomediche e Chirurgico Specialistiche, Ferrara, Italy

PP.46 **Progressive epileptic encephalopathy associated with a novel HCN2 mutation**

Binda A[1], Murano C[1], Di Francesco JC[2,3], Castellotti B[4], Milanesi R[5], Ragona F[6], Freri E[6], Canafoglia L[2], Franceschetti S[2], Solazzi R[6], Granata T[6], Gellera C[4], Rivolta I[1]

[1] School of Medicine and Surgery, University of Milano-Bicocca, Milan, Italy; [2]. Clinical Neurophysiology and Epilepsy Center, Fondazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy; [3]. Department of Neurology and Epilepsy Center, Milan Center for Neuroscience, San Gerardo Hospital, University of Milano-Bicocca, Monza, Italy; [4]. Unit of Genetics of Neurodegenerative and Metabolic Diseases, Fondazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy; [5]. Molecular Physiology and Neurobiology, The PaceLab, Department of Biosciences, Università degli Studi di Milano, Milan, Italy; [6]. Department of Pediatric Neuroscience, Fondazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy

PP.47 **Dynamics of changes in heart rate variability after prolonged exposure to dark**

Svorc Jr P, Jarkuliš V, Škrda D, Michalčák T, Kmet S, Marko A

Dep. of Physiology and Pathophysiology, Faculty of Medicine, University of Ostrava, Czech Republic

PP.48 **Loopomics: explaining the complexity of life by conjugating physiology and control theory**

Burlando B[1,2], Martinoia S[3,2], Massobrio P[3], Palmero S[1], Blanchini F[4], Giordano G[5]

[1]Dept. of Pharmacy, University of Genova, Italy; [2]Biophysics Institute, National Research Council, Genova, Italy; [3]Dept. of Informatics, Bioengineering, Robotics and Systems Engineering, University of Genova, Italy; [4]Dept. of Mathematics, Computer Science and Physics, University of Udine, Italy; [5]Delft Center for Systems and Control, Delft University of Technology, Netherlands

PP.49 **DSS-induced colitis generates chronic visceral hypersensitivity in rats**

López-Estévez S, Martínez V

Department of Cell Biology, Physiology and Immunology; Neuroscience Institute, Universitat Autònoma de Barcelona, Spain

PP.50 **Comparison of housekeeping genes for qPCR analysis in rat hippocampus: chronic depression model**

Kurar E[1,2], Eroglu C[1,2], FarukUguz[1,3], Mehmet Ak[1,3], Koca RO[4], Solak H[4], Koç A[5], Sahin Z[6], Kutlu S[1,4]

[1]Necmettin Erbakan University Neuroscience Research and Application Center (NENRC); Konya, Turkey; [2]Department of Medical Biology, Necmettin Erbakan University, Meram Faculty of Medicine, Konya, Turkey; [3]Department of Psychiatry, Necmettin Erbakan University, Meram Faculty of Medicine, Konya, Turkey; [4]Department of Physiology, Necmettin Erbakan University, Meram Faculty of Medicine, Konya, Turkey; [5]Department of Physiology, Hitit University, Faculty of Medicine, Çorum; [6]Department of Physiology, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey.

PP.51 **Expression of the glucose transporter GLUT12 in mouse models of Alzheimer's disease and aging**

Gil-Iturbe E[1,2], Solas M[3,5,6], Cuadrado-Tejedo M[4,5,6], Ramírez MJ[3,6], Lostao MP[1,2,6]

[1]University of Navarra, Department Nutrition, Food Science and Physiology, Pamplona, Spain; [2]University of Navarra, Nutrition Research Centre, Pamplona, Spain; [3]University of Navarra, Department of Pharmacology and Toxicology, University of Navarra, Pamplona, Spain; [4]University of Navarra, Division of Neurosciences, CIMA, Pamplona, Spain; [5]University of Navarra, Pathology, Anatomy and Physiology Department, Pamplona, Spain; [6]IdiSNA, Navarra Institute for Health Research, Pamplona, Spain

PP.52 **Effects of antipsychotic drug administration on antioxidative defense enzymes in male rat liver**

Nikolić-Kokić A[1], Tatalović N[1] Nestorov J[2], Oreščanin-Dušić Z[1], Vidonja-Uzelac T[1], Blagojević D[1], Spasić M[1], Miljević Č[3]

[1] Department of Physiology, Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia; [2] Department of Biochemistry, Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia; [3] Institute of Mental Health, School of Medicine, University of Belgrade, Belgrade, Serbia

PP.53 **Combined Lipoic Acid and Vitamin D3 on Astrocytes as a Way to Prevent Brain Ageing by Induced Oxidative Stress and Iron Accumulation**

Molinari C[1], Morsanuto V[1], Ruga S[1], Notte F[1], Gaetano L[2], Uberti F[1]

[1]Department of Translational Medicine, University of Piemonte Orientale, Novara, Italy; [2]Contract Research Organization (MIAC AG) affiliated to the University Hospital of Basel, Basel, Switzerland

PP.54 **The effects of clozapine, ziprasidone and sertindole treatment on lipid profile in rats**

Blagojević D[1], Nikolić-Kokić A[1], Tatalović N[1], Oreščanin-Dušić Z[1], Vidonja-Uzelac T[1], Spasić M[1], Miljević Č[2]

[1]Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia; [2]Institute of Mental Health, School of Medicine, University of Belgrade, Belgrade, Serbia

PP.55 **Olfactory sensitivity is associated with body mass index, polymorphism in the odor binding-protein (OBPIIa) gene and inflammatory bowel disease**

Sollai G[1], Melis M[1], Mastinu M[1], Magri S[2], Chicco F[2], Usai P[2], Tomassini Barbarossa I[1], Crnjar R[1]

[1]Department of Biomedical Sciences, University of Cagliari, Italy; [2]Department of Medical Sciences and Public Health, University of Cagliari, Italy

PP.56 **SNC80, an agonist of delta-opioid receptors, differently affects neonatal hippocampal neurons from male and female rats**

Moravcikova L, Moravcik R, Dremencov E, Lacinova L

Institute of Molecular Physiology and Genetics, Center of Biosciences Slovak Academy of Sciences, Slovakia

PP.57 **Gating properties of Cav3.3 T-type channel are modulated by highly conserved proximal region in channel carboxy terminus**

Jurkovicova Tarabova B[1], Cmarko L[2], Rehak R[3], Zamponi GW[3], Lacinova L[1], Weiss N[2]

[1]Center of Biosciences, Institute of Molecular Physiology and Genetics, Academy of Sciences, Bratislava, Slovakia; [2]Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague, Czech Republic; [3]Department of Physiology and Pharmacology, Cumming School of Medicine, University of Calgary, Calgary, Canada

PP.58 **Effects of Magnesium on Behavior, iNOS, nNOS and eNOS Expression in Male Rats Exposed to Anxiety**

Cetin A[1], Karabulut S[2], Taskiran AS[3], Ergul M[4], Ozdemir E[3]

[1]Department of Obstetrics and Gynecology, Cumhuriyet University Faculty of Medicine, Turkey; [2]Department of Medical Physiology, Erciyes University Faculty of Medicine, Turkey; [3]Department of Medical Physiology, Cumhuriyet University Faculty of Medicine, Turkey; [4]Biochemistry Department, Faculty of Pharmacy, Cumhuriyet University, Turkey

PP.59 **ELOVL5-dependent fatty acids are required for proper action potential conduction**

Hoxha E[1], Balbo I[1], Ravera F[1], Spezzano R[2], Genovese F[1], Malvicini E[1], Di Gregorio E[3], Brusco A[3], Mitro N[2], Caruso D[2], Tempia F[1]

[1]Dept. of Neuroscience and NICO, University of Torino; [2] Dept. of Pharmacological and Biomolecular Sciences, University of Milan; [3] Dept. of Medical Sciences, University of Torino, Italy

PP.60 **Establishing the model of tMCAO induced stroke in TFF3-/- knockout mice**

Mihaljević Z[1], Misir M[2], Radmilovic M[3], Justic H[3], Grgic S[3], Matić A[1], Šušnjara P[1], Kozina N[1], Drenjancevic I[1]

[1]Institute and Department of Physiology and Immunology, Faculty of Medicine Josip Juraj Strossmayer University of Osijek, Osijek, Croatia; [2]Department for Neurology, Osijek University Hospital, Osijek, Croatia; [3]Department of Histology and Embryology, School of Medicine University of Zagreb, Zagreb, Croatia

PP.61 **Compensatory changes in skeletal muscle and spinal cord of mice carrying motoneuronal loss induced by cholera toxin-B saporin**

Vicario N[1], Giunta MAS[1], Spoto G[1], Calabrese G[1], Vecchio M[1], Gulisano M[2], Leanza G[2], Parenti R[1], Gulino R[1]

[1]Department of Biomedical and Biotechnological Sciences, University of Catania, Italy; [2]Department of Drug Sciences, University of Catania, Italy

PP.62 **Subretinally njected P3ht nanoparticles fully rescue vision in a rat model of retinal dystrophy**

Maya-Vetencourt JF Manfredi G, Mete M, Colombo E, Bramini M, DiFrancesco ML, Shmal D, Eleftheriou CG, Di Maria F, Cossu V, Emionite L, Ticconi F, Marini C, Sambuceti G, Pertile G, Lanzani G, Benfenati F

Center for Synaptic Neuroscience and Technology, Istituto Italiano di Tecnologia, Genova, Italy

PP.63 **Functional connectivity underlying leftward visuospatial bias: an EEG study**

Brignani D[1], Bagattini C[1], Mazza V[2], Ferrari C[1], Carlo M[1,2]

[1]IRCCS Istituto Centro San Giovanni di Dio Fatebenefratelli, Brescia, Italy; 2Center for Mind/Brain Sciences, University of Trento, Rovereto, Italy

PP.64 **Evaluation of the antidepressant effect of chronic administration of Nigella fixed oil versus fluoxetine in rats**

Kadil Y[1], Tabyaoui I[2], Badr L[2], Hakkou F[1], Tahiri JN[2], Filali H[1]

[1]Laboratory of Pharmacology-Toxicology, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco; [2]Laboratory of Cellular and Molecular Inflammatory, Degenerative and Oncologic Pathophysiology, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco

PP.65 **Evaluation of the antidepressant effect of chronic administration of vitamin D versus fluoxetine in an animal model**

Filali H[1], Kadil Y[1]

[1]Laboratory of Pharmacology-Toxicology, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco

PP.66 **Local neural population dynamics rely on specific connectivity patterns in monkey pre-supplementary motor area**

Albertini D[1,2], Gerbella M[1,2], Lanzilotto M[1], Livi A[1], Maranesi M[1], Ferroni CG[1], Bonini L[1,3]

[1]Department of Medicine and Surgery, University of Parma, Parma (Italy); [2]These authors equally contributed to the work; [3]Lead Contact: luca.bonini@unipr.it

PP.67 **Quantification and characterization of nitric oxide neurons in human corpus callosum**

Sagrati A[1], Lorenzi T[1], Montanari E[2], Tagliabracci A[2], Barbaresi P[1], Morroni M[1], Fabri M[1]

[1]Dip. Med. Sper. e Clin., Univ. Politecnica Marche, Ancona, Italy; [2]Dip. Med. Sci. Biomed. e San. Pubb., Univ. Politecnica Marche, Ancona, Italy

PP.68 **Characterization and quantification of neurons in human indusium griseum**

Lorenzi T[1], Sagrati A[1], Montanari E[2], Tagliabracci A[2], Barbaresi P[1], Fabri M[1], Morroni M[1]

[1]Dip. Med. Sper. e Clin., Univ. Politecnica Marche, Ancona, Italy; [2]Dip. Med. Sci. Biomed. e San. Pubb., Univ. Politecnica Marche, Ancona, Italy

PP.69 **Pain control by proprioceptive and exteroceptive stimulation at the trigeminal level**

Zampino C[1], Ficacci R[1], Checcacci M[2], Franciolini F[1], Catacuzzeno L[1]

[1]Department of Chemistry, Biology and Biotechnology, University of Perugia, Perugia, Italy; [2]Azienda Sanitaria Locale ROMA 1, Via Marco Polo 93, 00154 Roma, Italy

PP.70 **The effect of trazodone on bladder detrusor smooth muscle**

Burunsuz O, Ozdengul F

NEU Meram Faculty of Medicine, Department of Physiology

PP.71 **Colon inflammation increased the excitability of rat pyramidal neurons of motor cortex**

Carrascal I[1,3], García-Miranda P[1], Vázquez-Carretero MD[1], Coutteau A[1], Ilundáin AA[1], Castro C [2,3], Calonge ML[1], Peral MJ[1], Nunez-Abades P[1,3]

1Departamento Fisiología, Facultad de Farmacia, Universidad Sevilla, Spain; 2Departamento Fisiología, Facultad de Medicina, Universidad Cádiz, Spain; 3Instituto de Investigación e Innovación Biomédica de Cádiz (INiBICA), Universidad Cádiz, Spain

PP.72 **Reversible Hyperphosphorylation of Tau protein in the Enteric Nervous System during Synthetic Torpor**

Luppi M[1], Stanzani A[2], Chiocchetti R[2], Giancola F[3], De Giorgio R[4], Hitrec T[1], Squarcio F[1], Occhinegro A[1], Piscitiello E[1], Cerri M[1], Amici R[1]

[1]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2]Department of Veterinary Medical Sciences, University of Bologna, Italy; [3]Department of Medical and Surgical Sciences, University of Bologna, Italy; [4]Department of Medical Sciences, Nuovo Arcispedale S.Anna, University of Ferrara, Italy

PP.73 **Which structure in the central nervous system integrates bilateral corticobulbar output to lower facial muscles?**

Ginatempo F[1], Manzo N[2], Rothwell JC[3], Deriu F[1]

[1]Department of Biomedical Sciences, University of Sassari, Sassari, Italy; [2]IRCCS NEUROMED, Pozzilli, IS, Italy; [3]Sobell Department of Motor Neuroscience and Movement Disorders,

PP.74 **Binge drinking have different effects on sociability and preference for social novelty**

Bagosi Z, Simon B, Karasz G, Csabafi K, Szakács J, Ibos KE, Szabó G

Department of Pathophysiology, Faculty of Medicine, University of Szeged, Hungary

PP.75 **Investigating the effect of kisspeptin-13 fragments on anxiety and nociception in rodents**

Ibos KE, Csabafi K, Szakács J, Bagosi Z, Szabó G

Department of Pathophysiology, Faculty of Medicine, University of Szeged, Hungary

PP.76 **Different processes of Concurrent Motor Inhibition are active during Joint Action: Evidence from TMS study**

Cardellicchio P[1], Dolfini E[1,2], Vescovo E[2], Fadiga L[1,2], D'Ausilio A[1,2]

[1]IIT@UniFe Center for Translational Neurophysiology, Istituto Italiano di Tecnologia, Ferrara, Italy; [2] Section of Human Physiology, University of Ferrara, Ferrara, Italy

PP.77 **Kisspeptin-13's anxiogenic action might be mediated by central vasopressin release**

Csabafi K, Ibos K, Filkor K, Szakács J, Bagosi Z, Szabó G

Department of Pathophysiology, University of Szeged, Hungary

PP.78 **Effects of central salusin-beta infusion on pituitary-thyroid axis in rats**

Tekin S[1], Demir I[1], Özyalin F[2], Sandal S[1]

[1] Department of Physiology, Inonu University Medical School, Turkey; [2]Department of Medical Biochemistry, Inonu

PP.79 **Oxaliplatin-induced cytosolic acidification alters TRP and K2P channel activity in sensory neurons**

Dionisi M[1], Riva B[1], Ruffinatti AF[1], Potenzieri A[1], Lim D[1], Carozzi VA[2,3], Cavaletti G[2], Marmiroli P[2], Genazzani AA[1], Distasi C[1]

[1]Department of Pharmaceutical Sciences, University of Piemonte Orientale, Novara, Italy; [2]Experimental Neurology Unit, School of Medicine and Surgery, University of Milano- Bicocca, Monza, Italy;[3]Young Against Pain Group, Monza, Italy

PP.80 **Role of physiochemical properties on the residence time of serotonin 7 (5-HT7) receptor ligands**

Penna E[1,4], Niso M[3], Lacivita E[3], Perrone Capano C[2], Crispino M[1], Leopoldo M[3,4]

[1]Department of Biology, [2]Department of Pharmacy, University of Napoli Federico II, Napoli, Italy; [3]Department of Pharmacy-Drug Sciences, University of Bari Aldo Moro, Bari, Italy; [4]Biofordrug srl, Bari, Italy

PP.81 **Oxidative Damage of Polyunsatured Fatty Acid Plays a Key Role in the Pathogenesis and Progression of Krabbe Desease**

Graziano ACE[1], Signorini C[2], Pannuzzo G[1], Durand T[3], Galano JM[3], Oger C[3], Leoncini S[4], Cortelazzo A[4], Lee JCY[5], Hayek J[4], De Felice C[4,6], Cardile V[1]

[1]Department of Biomedical and Biotechnological Sciences, Section of Physiology, University of Catania, Italy; [2]Department of Molecular and Developmental Medicine, University of Siena, Italy; [3]Institut des Biomolécules Max Mousseron, (IBMM), CNRS, Université de Montpellier, ENSCM, France; [4]Child Neuropsychiatry Unit, Azienda Ospedaliera Universitaria Senese, Siena, Italy; [5]The University of Hong Kong, School of Biological Sciences, Hong Kong Special Administrative Region; [6]Neonatal Intensive Care Unit, Azienda Ospedaliera Universitaria Senese, Siena, Italy

PP.82 **Modulating attentional capture via Transcranial Magnetic Stimulation (TMS) of right TPJ**

Lega C[1], Ferrante O[1], Santandrea E[1], Cattaneo L[1,2], Chelazzi L[1,2]

[1]Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona, Italy; [2]Istituto Nazionale di Neuroscienze (INN), Italy

PP.83 **Influence of Propranolol and Clonidine on Epileptogenic Threshold in Neocortex and Hippocampus**

Saralidze E[1], Diasamidze I[1], Kobaidze I[2], Khuchua L[3]

[1]Batumi Shota Rstaveli State University,Batumi,Georgia; [2]Ivane Javkhishvili, Tbilisi State University,Tbilisi,Georgia; [3].Institute Of neurology.Tbilisi, Georgia

PP.84 **Exosomes from Virus-Affected Airway Cells Enter Brain and Suppress Microglial Mitochondria**

Blazauskaite D[1], Jankauskaitė L[2], Balion Z[2], Jekabsone A[1,2]

[1]Institute of Neuroscience, Lithuanian University of Health Sciences, Lithuania; [2]Institute of Pharmaceutical Technologies, Lithuanian University of Health Science, Lithuania

PP.85 **A TrkB agonist rescues impairments in synaptic plasticity and dedritic morphology in the perirhinal cortex and restores visual recognition memory in a mouse model of CDKL5 deficiency disorder**

Ren E[1], Roncacè V[2], Trazzi S[1], Fuchs C[1], Medici G[1], Gennaccaro L[1], Loi M[1], Galvani G[1], Ye K[3], Rimondini R[3], Aicardi G[2,4], Ciani E[1]

[1]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2]Department for Life Quality Studies, University of Bologna, Italy; [3]School of Medicine, Emory University, Atlanta, USA; [4]Department of Medical and Clinical Sciences, University of Bologna, Italy; [5]Interdepartmental Center "Luigi Galvani" for the Integrated Study of Biophysics, Bioinformatics and Biocomplexity, University of Bologna, Italy

PP.86 **Investigation of Metabolic Response to Virus and Virus-Primed Cell Exosomes in Astrocytes with Triple Alzheimer's Disease Mutation**

Vydmantaitė G[1], Jankauskaitė L[2], Balion Z[1,2], Lim D[3], Morkūnienė R[4], Jekabsone A[1,2]

[1]Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania; [2]Institute of Pharmaceutical Technologies, Lithuanian University of Health Sciences, Lithuania; [3]Department of Pharmaceutical Sciences, Università del Piemonte Orientale, Italy; [4]Department of Drug Chemistry, Faculty of Pharmacy, Medical Academy, Lithuanian University of Health Sciences, Lithuania

PP.87 **Deletion of calcineurin from GFAP-expressing astrocytes impairs neuronal excitability and reproduces features of neurological diseases**

Tapella L[1], Soda T[2], Mapelli L[2], Ponzoni L[3], Bortolotto V[1], Bondi H[1], Farruggio S[4], Raina G[4], Ummarino S[4], Manfredi M[5], Di Ruscio A[4], Verpelli C[3], Sala M[3], Marengo E[5], Grossini E[4], Grilli M[1], Genazzani AA[1], D'Angelo E[2], Moccia F[6], Lim D[1]

[1]Department of Pharmaceutical Sciences, Università del Piemonte Orientale (UPO), Novara, Italy; [2]Department of Brain and Behavioral Sciences, University of Pavia, Italy; [3]Department of Pharmacology, University and CNR of Milan, Italy; [4]Department of Translational Medicine, UPO, Novara, Italy; [5]Depatment of Sciences and Technological Innovation, UPO, Novara, Italy; [6]Department of Biology and Biotechnology "Lazzaro Spallanzani", University of Pavia, Italy

PP.88 **TRP channels expression in Chronic Low Back Pain**

Fozzato S[1], Baranzini N[2], Bossi E[2], Roseti C[2], Cinquetti R, Grimaldi A[2], Campomenosi A[2], Surace MF[2,3]

[1]PhD School of Experimental and Translational Medicine, Insubria University- Department of Medicine and Surgery, University of Insubria, Varese, Italy; [2]Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy; [3]Interdisciplinary Research Centre for Pathology and Surgery of the Musculoskeletal System, Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy

PP.89 **Changes in static perimetry during CHAMBER REST: a pilot study**

Michalčák T[1], Škrda D[1], Malůš M[2], Vavřina Z[1], Ekrtová T[1], Jarkuliš V[1], Švorc PJ[1]

[1]Dep. of Physiology and Pathophysiology, University of Ostrava, Czech Republic; [2] Dep. of Psychology, University of Ostrava, Czech Republic

PP.90 **Selection for action in Fruitfly**

Frighetto G[1,4], Zordan MA[2,4], Castiello U[1], Megighian A[3,4]

[1]Department of General Psychology, University of Padova, Italy; [2]Department of Biology, University of Padova, Italy; [3]Department of Biomedical Sciences, University of Padova, Italy,[4]Padova Neuroscience Center, University of Padova, Italy

PP.91 **Changes in brain NOS activity depending on duration of social isolation**

Vrankova S, Benko J, Galandakova Z, Cebova M, Murinova J, Riecansky I, Pechanova O

Centre of Experimental Medicine, SAS, Institute of Normal and Pathological Physiology, Bratislava, Slovakia

PP.92 **Neuronal alterations in retinas with defective expression of the full length dystrophin**

Catalani E[1], Coazzoli M[2], Zecchini S[3], Giovarelli M[2], Perrotta C[2], De Palma C[3], Clementi E[2,3], Cervia D[1]

[1]Department for Innovation in Biological, Agro-food and Forest systems (DIBAF), Università degli Studi della Tuscia, Viterbo, Italy; [2]Department of Biomedical and Clinical Sciences "Luigi Sacco" (DIBIC), Università degli Studi di Milano, Milano, Italy; [3]Unit of Clinical Pharmacology, University Hospital "Luigi Sacco"-ASST Fatebenefratelli Sacco, Milano, Italy

PP.93 **Cellular brain edema induced by water intoxication in rat experimental model**

Pokorný J, Marešová D, Kozler P

Institute of Physiology, First Faculty of Medicine, Charles University, Prague, Czech Republic

PP.93a **p11 in cholinergic interneurons of the nucleus accumbens is essential for dopamineresponses to rewarding stimuli**

Hanada Y[1], Kawahara Y[1], Ohnishi Y[1], Shuto T[1], Kuroiwa M[1], Sotogaku N[1], Greengard P[2], Sagi Y[2], Nishi A[1]

[1]Department of Pharmacology, Kurume University School of Medicine, Japan; [2]Laboratory of Molecular and Cellular Neuroscience, The Rockefeller University, USA

PP.93b **M4 muscarinic receptor regulation of locomotor activity biorhythm is caused by core clock changes and striatum, thalamus, motor cortex and intergeniculate leaflet are involved**

Riljak V, Janisova K, Myslivecek J

Institute of Physiology, 1st Faculty of Medicine, Charles University, Prague, Czech Republic

PP.93c **Cortical and subcortical representations of interoceptive inputs from Microbial populations in the gut**

Sanchini G, Gelmini S, Brocci F, Quadraro D, Esposti F

Vita-Salute San Raffaele University, Neuroscience Division, Milan, Italy

Room 3 - Morning (10.45 - 11.45)

FEPS ExCo Meeting

Room 1 - Morning (12.00 - 13.00)

Rising Star Award Lecture

Roads, cars and trailers: How the microtubule network regulates β-adrenoceptor relaxation in arteries

Thomas Jepps

University of Copenhagen, Denmark

Introduced by **Maria Marino (Roma, Italy)**

13.00 - 14.00 – *Lunch Break*

Room 1 - Afternoon (14.00 - 18.00)

EYPS - European Young Physiologists Symposium (EYPS)

Organizers: **Markus Hecker (Heidelberg, Germany), Burak Oymak (Denizli, Turkey), Corrado Poggesi (Firenze, Italy), and Nina Ullrich (Heidelberg, Germany)**

Oral presentations

Dissecting the physiological function of amyloid-β peptide at the synapse

Gulisano W[1], Melone M[2,3], Ripoli C[4,5], Tropea MR[1], Li Puma DD[4,5], Giunta S[1], Cocco S[4], Marcotulli D[2], Origlia N[6], Palmeri A[1], Conti F[2,3,7], Grassi C[4,5], Puzzo D[1,8]

[1]Dept. Biomedical and Biotechnological Sciences, University of Catania, Italy; [2]Dept. Experimental and Clinical Medicine, Università Politecnica delle Marche, Italy; [3]Center for Neurobiology of Aging, IRCCS INRCA, Italy; [4]Institute of Human Physiology, Università Cattolica del Sacro Cuore, Italy; [5]Fondazione Policlinico Universitario A. Gemelli IRCCS, Italy; [6]Neuroscience Institute, Italian National Research Council, Italy; [7]Foundation for Molecular Medicine, Università Politecnica delle Marche, Italy; [8]Oasi Research Institute-IRCCS, Italy.

Altered dopamine metabolism leads to a unique impaired αSynuclein proteostasis in Parkinson's Disease.

Masato A[1], De Lazzari F[1], Madany M[2], Thor A[2], Bisaglia M[1], Greggio E[1], Beltramini M[1], Boassa D[2], Bubacco L[1].

[1]Department of Biology, University of Padova, Italy; [2]Department of Neurosciences and National Center for Microscopy and Imaging Research, University of California San Diego, California, USA.

Decoding visuospatial properties and movement intentions from macaque posterior parietal cortex.

Filippini M[1], Morris AP[2], Hadjidimitrakis K[2,1], Breveglieri R[1], Fattori P[1].

[1]DIBINEM University of Bologna, Italy; [2]Neurosci. Program, Biomedicine Discovery Institute, Department of Physiology., Monash Univ., Clayton, Australia

Specific activation of raphe pallidus-projecting neurons from dorsomedial hypothalamic nucleus at torpor onset in mice

Squarcio F[1], Amici R[1], Bastianini S[1], Berteotti C[1], Chiavetta P[1], Hitrec T[1], Lo Martire V[1], Luppi M[1], Martelli D[1], Occhinegro A[1], Stanzani A[2], Tupone D[1], Zoccoli G[1], and Cerri M[1]

[1]Department of Biomedical and Neuromotor Sciences-Physiology, [2]Department of Veterinary Medicine, University of Bologna

The impact of constitutive GABA-A receptor-mediated depolarization in peripheral Cfibers axons.

Bonalume V[1], Caffino L[1], Castelnovo LF[1], Liu S[2], Hu J[2], Schmelz M[3], Fumagalli F[1], Carr RW[3]*, Magnaghi V[1]*

[1]Department of Pharmacological and Biomolecular Sciences, University of Milano, Italy; [2]Institute of Pharmacology, Heidelberg University, Mannheim, Germany; [3]Experimental Pain Research, Heidelberg University, Germany.

Receptor architecture of the macaque monkey superior parietal lobule

Impieri D[1], Zilles K[2,3,4], Niu M[2], Rapan-Jankovic L[2], Schubert N[2], Gamberini M[1], Galletti C[1], Palomero-Gallagher N[2,3]

[1]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2]Institute of Neuroscience and Medicine (INM-1), Research Centre Jülich, Germany; [3]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen, Germany; [4]JARA-BRAIN, Jülich-Aachen Research Alliance, Jülich, Germany

Short communications

Neural correlates of spatial attention shifts in the medial superior parietal lobule of the macaque.

De Vitis M[1,2,3], Balan P[1,2], Galletti C[3], Fattori P[3], Vogels R[1,2], Vanduffel W[1,2,4,5]

[1]Laboratory of Neuro- and Psychophysiology, KU Leuven, Belgium; [2]Leuven Brain Institute, KU Leuven,Belgium; [3]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [4]MGH Martinos Center, Charlestown, MA, USA; [5]Harvard Medical School, Boston, MA USA

Functional analysis, properties and kinetics of a PepT2-type di/tripeptide transporter of the Atlantic salmon (Salmo salar) highly expressed in midgut and hindgut

Vacca F[1], Bossi E[1], Gomes AS[2], Cinquetti R[1], Barca A[3], Verri T[3], Murashita K[2,4], Rønnestad I[2]

[1]Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy; [2]Department of Biological Sciences, University of Bergen,Norway; [3]Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, Italy; [4]Research Center for Aquaculture Systems, National Research Institute of Aquaculture, Japan Fisheries Research and Education Agency, Minamiise, Mie, Japan.

Role of the genetic variants of bitter taste receptor TAS2R38 in disease aetiology and attainment of longevity

Melis M[1], Sollai G1, Errigo A[2], Pes GM[2], Cossu G[3], Hummel T[4], Morelli M[1], Crnjar R[1], Barbarossa IT

[1]Department of Biomedical Sciences, University of Cagliari, Italy; [2]Department of Clinical and Experimental Medicine, University of Sassari, Italy; [3]Neurology service and Stroke Unit, A.O. Brotzu, Cagliari, Italy; [4]Department of Otorhinolaryngology, Dresden University of Technology, Germany

Depressant effects of adiponectin on the smooth muscle cell excitability in the mouse gastric fundus: a possible peripheral signal in the hunger-satiety cycle?

Idrizaj E[1], Garella R[1], Castellini G[2], Francini F[1], Ricca V[2], Baccari MC[1], Squecco R[1]

[1]Department of Experimental and Clinical Medicine, University of Florence, Italy; [2]Department of Health Sciences, University of Florence, Italy.

Pharmacological targeting of VTA dopaminergic neurons in a mouse model of Alzheimer's disease

La Barbera L[1,2,3], Nobili A[1,3], Latagliata EC[1], Cutuli D.[1], Krashia P[1,2], Vedele F[1,2], D'Amelio M[1,3]

[1]Department of Experimental Neurosciences, IRCCS Santa Lucia Foundation, Rome, Italy; [2]Department of Systems Medicine, University of Rome 'Tor Vergata', Italy; [3]Department of Medicine, University Campus Bio-medico, Rome, Italy

A BDNF mimetic can rescue trisomy-linked neurodevelopmental alterations

Stagni F, Uguagliati B, Giacomini A, Emili M, Bartesaghi R, Guidi S

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy.

BRomoDomain-containing protein 4 (BRD4) regulates oxidative stress and autophagy in skeletal muscle

Segatto M[1], Fittipaldi R[2], Szokoll R[2], Filippakopoulos P[3], Caretti G[2]

[1]Department of Biosciences and Territory, University of Molise, Italy; [2]Department of Bioscience, University of Milan, Milan, Italy; [3]Nuffield Department of Clinical Medicine, University of Oxford, UK.

Ghrelin Has Protective Effect on Synaptic Transmission and Neuronal Damage in Sepsis

Ates Ulucay G[1], Ozkok E[2], Yorulmaz H[3], Gundogan GI[4], Tamer S[5]

[1]Department of Physiology, Istanbul Yeni Yuzyil University, Turkey; [2]Department of Neuroscience, Istanbul University, Turkey; [3]School of Nursing, Halic University, Istanbul, Turkey; [4]Department of Histology and Embryology, Yeni Yuzyil University, Istanbul, Turkey; [5]Department of Physiology, Istanbul University, Istanbul, Turkey.

Crosstalk between p21 Activated Kinase 6 (PAK6) and transcription factor EB (TFEB) to regulate neuronal autophagy

Plotegher N, Agostini F, Cogo S, Tessari I, Bubacco L, Civiero L, Greggio E

Department of Biology, University of Padova

Room 2 - Afternoon (14.00 - 16.30)

Collegio dei Professori Ordinari di Fisiologia (Only for Italians)

Room 3 - Afternoon (14.00 - 16.00)

Teaching Symposium (supported by FEPS) - Changing from Traditional Lectures to Interactive Classrooms and Digital Based Learning

Organizer: **Bayram Yilmaz (Istanbul, Turkey)**

Oral Presentations

14.00 **Evidence-based teaching, flipped classrooms, and resistance to change**

Silverthorn D

Medical Education, University of Texas at Austin, USA

14.30 **Tough Topics in physiology (made easy) - a peer reviewed, interactive online resource to enhance student learning**

Wallace H

Medical Education, University of Liverpool, UK

15.00 **MyMi.mobile - a Personalized Adaptive Approach to Digital Learning in Microscopic Anatomy**

Langer-Fischer K[1], Eichner B[4], Brandt D[1], Bertsch A[3], Dietrich M[3], Schmucker M[3], Igel C[3], Heimrich B[2], Britsch S[1]

[1]Institute of Molecular and Cellular Anatomy, Ulm University, Ulm,Germany; [2]Institute of Anatomy and Cell Biology, Albert-Ludwigs-University Freiburg, Germany; [3]German Research Center for Artificial Intelligence (DFKI Berlin), Germany; [4]Competence Center eLearning in Medicine Baden-Württemberg, Ulm University, Germany

15.30 **Scientific visualisation: medical ıllustration and animation in physiology education**

Evren M

Visuluma Scientific Visualisation, Ege University Technology Devolopment Zone, Turkey

16.30 *Coffee break*

16.30 - 18.00

Poster Session II (Poster Area)

Poster session II (1/7) - European Young Physiologists

PP.94 **The effect of surfactant on the airway smooth muscle after lipopolysaccharide exposure**

Topercerova J[1], Kolomaznik M[2], Kopincova J[1], Nova Z[1], Urbanova A[2], Mokra D[2], Mokry J[2,3], Calkovska A[1]

[1]Department of Physiology; [2]Division of Respirology, Martin Biomedical Centre; [3]Department of Pharmacology, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia

PP.95 **Oxidative imbalance and kidney damage: new study perspectives from animal models to hospitalized patients**

La Russa D[1,2], Montesanto A[3], Pellegrino D[2,3].

[1]Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Italy; [2]LARSO, University of Calabria, Italy; [3]Department of Biology, Ecology and Earth Sciences, University of Calabria, Italy.

PP.96 **Role of orexin neurons in the lateral hypothalamus in torpor onset in mice**

Hitrec T[1], Amici R[1], Bastianini S[1], Berteotti C[1], Chiavetta P[1], Lo Martire V[1], Luppi M[1], Martelli D[1], Occhinegro A[1], Squarcio F[1], Stanzani A[2], Tupone D[1], Zoccoli G[1], Cerri M[1]

[1]Department of Biomedical and Neuromotor Sciences-Physiology, [2]Department of Veterinary Medicine, University of Bologna.

PP.97 **Investigation of the Possible Antiproliferative and Hepatoprotective Effects of an alcoholic extract from Thymbra spicata (Lamiaceae) aerial parts**

Khalil M[1, 2], Khalifeh H[2], Baldini F[1], Daher A[2] Voci A[1] Vergani L[1*]

[1]Department of Earth, Environment and Life Sciences (DISTAV), University of Genova, Italy; [2]Department of Biology, Laboratory Rammal Rammal (ATAC), Lebanese University, Beirut, Lebanon.

PP.98 **Proinflammatory effects of phorbol-12-myristate-13-acetate on Caco-2 cells monolayers at different stages of spontaneous enterocyte-like differentiation in the presence or absence of the dipeptide carnosine: analysis of differential cytoskeletal morphology and gene expression**

Mazzei A[1], Croce F[1], Giampetruzzi L[2], Francioso L[2], Siciliano P[2], Verri T[1], Barca A[1]

[1]Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, IT; [2]CNR Institute for Microelectronics and Microsystems Lecce, IT

PP.99 **Omega 3 fatty acids and hepatic insulin resistance: focus on ER stress and mitochondrial dynamics markers**

Di Gregorio I[1], Busiello RA[2], Lepretti M[1], Migliaccio V[2], Lionetti L[1]

[1]Department of Chemistry and Biology "A. Zambelli", University of Salerno, Fisciano; [2]Department of Biology, University of Naples "Federico II", Italy

PP.100 **Physiological adaptation to chronic exposure to high fat diet and environmental pollutant (DDE) in rat testis.**

Migliaccio V[1,2], Sica R[2], Scudiero R[2], Simoniello P[3], Putti R[2], Lionetti L[1].

[1]Department of Chemistry and Biology, University of Salerno, Italy; [2]Deptment of biology, University Federico II, Naples, Italy; [3]Deptment of science and technology, University Parthenope, Naples, Italy

PP.101 **Effects of Weekend Warrior and Continuous Exercise Models on Depression Induced Cognitive Impairment**

Öztürk ÇÇ[1], Ataoğlu SN[2], Arvas A[2], Tokol H[2], Yaprak H[2], Gürel S[2], Levent HN[3], Akakın D[3], Karademir B[4], Çakır B[1], Çakır ÖK[5].

[1]Department of Physiology, Maltepe University Turkey; [2]Marmara University Turkey; [3]Department of Histology & Embryology, Marmara University, Turkey; [4]Department of Biochemistry, Marmara University, Turkey; [5]Department of Physiology, Marmara University, Turkey

PP.102 **Experimental Parkinson Disease (PD) Alters Severity of Colitis in Rats**

Secil F[2], Can HE[2], Karakoc HF[2], Dalgic N[2], Boyukyilmaz S[2], Karamahmutoglu T[4], Ozdemir ZN[1], Arabacı S[1], Sen LS[1], Karagoz A[2], Onat F[4], Akakın D[5], Alican YI[3], Imeryuz N[1,3]

[1]Physiology, Marmara University, Istanbul, Turkey; [2]Marmara University, Istanbul, Turkey; [3]Internal Medicine, Gastroenterology, Marmara University, Istanbul, Turkey; [4]Pharmacology, Marmara University, Istanbul, Turkey; [5]Histology, Marmara University, Istanbul, Turkey

PP.103 **The splanchnic anti-inflammatory pathway requires the brain stem but not the hypothalamus**

Occhinegro A[1], Farmer DGS[2], McKinley MJ[2], McAllen RM[2], Martelli D[1,2]

[1]Department of Biomedical and Neuromotor Science, University of Bologna, Italy; [2]Florey Institute of Neuroscience and Mental Health, Parkville, Australia

PP.104 **Digoxin, A HIF 1 Pathway Inhibitor possesses significant effects on Glycemic Balance and Redox Status in a Rat Model of Type One Diabete Mellitus**

Silvester N, Waweru P, Bukachi F

Department of Medical Physiology, University of Nairobi, Kenya

PP.105 **Effects of Antiepileptic Agents on Contractility of Detrusor Muscle Isolated from Wistar and Absence Epileptic WAG/Rij Rats**

Salihoglu AK, Kurt A, Ayar A

Department of Physiology, Karadeniz Technical University Faculty of Medicine, Trabzon, Turkey.

Poster Session II (2/7) - Animal and environmental physiology

PP.106 **A physiological approach to investigate the stress syndrome development in the Mediterranean mussel, *Mytilus galloprovincialis*.**

Capolupo M, Franzellitti S, Valbonesi P, Fabbri E

Department of Biological, Geological, and Environmental Science, University of Bologna, Italy

PP.107 **Angiotensin II-dependent morpho-functional remodelling of osmoregolatory organs in the eel (*Anguilla anguilla*)**

Filice M, Amelio D, Garofalo F, Gattuso A, Imbrogno S, Cerra MC

Department of Biology, Ecology and Earth Sciences, University of Calabria, Italy

PP.108 **Physiological mechanisms of early embryo development in the bivalve *Mytilus*: influence of environmental factors**

Miglioli A[1,2], Balbi T[1], Kapsenberg L[3,4], Gattuso J-P[3], Dumollard R[2], Canesi L[1]

[1]Dept. of Environmental, Earth and Life Sciences, University of Genoa, Italy; [2]Sorbonne University, CNRS, Laboratoire de Biologie du Developpement de Villefranchesur-mer, France; [3]Sorbonne Université, CNRS, Laboratoire d'Océanographie de Villefranche surmer, France; [4]Institute of Marine Sciences, Spain

PP.109 **Heat stress-dependent morpho-functional changes in the gills of the Antarctic *Trematomus bernacchii* and *Chionodraco hamatus***

Garofalo F[1], Santovito G[2], Amelio D[1]

[1]Department of Biology, Ecology and Earth Sciences (B.E.S.T.), University of Calabria, Italy; [2]Department of Biology, University of Padova, Italy

PP.110 **Too warm or not too warm... Is the antioxidant system of Antarctic fish ready to face climate changes?**

Tolomeo AM[1], Carraro A[1], Bakiu R[2], Toppo S[3], Gerdol M[4], Irato P[5], Bonato M[5], Corrà F[5], Pellegrino D[6], Garofalo F[6], Ferro D[7], Place SP[8], Santovito G[5]

[1]Department of Women's and Children's Health, University of Padova, Italy; [2]Department of Aquaculture and Fisheries, Agricultural University of Tirana, Albania, [3]Department of Molecular Medicine, University of Padova, Italy; [4]Department of Life Sciences, University of Trieste, Italy; [5]Department of Biology, University of Padua, Italy; [6]Department of Biology, Ecology and Earth Sciences, University of Calabria, Italy; [7]Department of Molecular and Cellular Biology, University of Arizona, USA; [8]Department of Biology, Sonoma State University, USA.

PP.111 **Total oxidant and antioxidant activities in milk with various somatic cell count intervals during discrete cow and buffalo lactation periods**

Yigit AA[1], Cinar M[2], H. Macun C[3], Ozenç E[4], Kabakci R[1], Yazici E[4], Kalender H[3], Bastan A[5], Salar S[5]

[1]Department of Physiology, University of Kirikkale, TURKEY; [2]Department of Biochemistry, University of Kirikkale, TURKEY; [3]Department of Obstetrics and Gynecology, University of Kirikkale, TURKEY; [4]Department of Obstetrics and Gynecology, University of Afyon Kocatepe, TURKEY; [5]Department of Obstetrics and Gynecology, University of Ankara, Turkey

PP.112 **Effect of different lighting regimes on the growth and expression level of muscle-specific genes in yearlings (1+) Atlantic salmon (*Salmo salar* L.).**

Shulgina N, Churova M, Krupnova M, Nemova N

Institute of Biology of the Karelian Research Centre of the Russian Academy of Sciences, Russia.

PP.113 **Innate immunity in bivalve molluscs: specificity of hemocyte responses to different environmental *Vibrio* species**

Balbi T, Vezzulli L, Canesi L [5]

Department of Earth, Environment and Life Sciences-DISTAV, University of Genoa, Italy.

PP.114 **Mechanisms of physiological protection in early embryo stages of marine mussels**

Wathsala RGH, Fabbri E, Capolupo M, Valbonesi P, Franzellitti S

Department of Biological, Geological and Environmental Sciences, University of Bologna, Italy

PP.115 **Nanoparticles as a tool for unravelling the physiological mechanisms of innate immunity in the marine bivalve *Mytilus***

Auguste M, Balbi T, Canesi L

Department of Earth, Environment and Life sciences DISTAV, University of Genoa, Italy

PP.116 **Chronic exposure to Calypso on digestive cells in *Mytilus galloprovincialis***

Pagano M[1], Stara A[1,2], Capparucci F[1], Faggio C[1]

[1]Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy. [2]Faculty of Fisheries and Protection of Waters, South Bohemian Research Centre of Aquaculture and Biodiversity of Hydrocenoses, University of South Bohemia in České Budějovice, Czech Republic

PP.117 **Evaluating bivalve cytoprotective responses and their regulatory pathways in a climate change scenario**

Franzellitti S, Fabbri E

Department of Biological, Geological and Environmental Sciences, University of Bologna, Italy

PP.118 **Nitrite stress and arginase activity in freshwater aquatic animals: similarities and differences between fish and shrimp**

Napolitano G[1], Venditti P[2], Fasciolo G[2], Agnisola C[2]

[1]Department of Science and Technologies, University of Naples "Parthenope", Italy; [2]Department of Biology, University of Naples "Federico II", Italy

PP.119 **ERK1/2 modulation of cell proliferation and migration in trophoblast cells exposed to bisphenols as endocrine disruptors**

Valbonesi P, Profita M, Fabbri E

Department of Biological, Geological and Environmental Sciences, University of Bologna, Italy

PP.120 **Seasonal variations in lipid content and protein degradation enzymes pattern in reared rainbow trout organs moderate by natural dietary supplement**

Kantserova N, Lysenko L, Fokina N, Sukhovskaya I, Nemova N

Institute of Biology KarRC RAS, Petrozavodsk, Russia

PP.121 **A physiological approach to assess the impact of endocrine disruptors, from invertebrate to human models**

Fabbri E[1], Acconcia F[2], Canesi L[3], Cerra MC[4], Senese R[5], Verri T[6]

1Dept. of Biological, Geological and Environmental Sciences, University of Bologna, Italy; 2Dept. of Science, University of Roma, Italy; 3Dept. of Earth, Environment and Life Sciences, University of Genoa, Italy; 4Dept. of Pharmacy and Health and Nutrition Sciences, University of Calabria, Italy; 5Dept. of Environmental, biological and pharmaceutical sciences and technologies, University of Campania, Italy; 6Dept. of Biological and Environmental Sciences and Technologies, University of Salento, Italy

PP.122 **Ambient Water Temperature Promotes Temperature Response Including Lipid Modifications and Oxidative Stress in Fish**

Sukhovskaya I[1], Fokina N[1], Kochneva A[1], Kurpe S[2], Kantserova N[1]

[1]Institute of Biology of KarRC RAS, Petrozavodsk, Russia ; [2]Petrozavodsk State University, Russia

PP.123 **SoLute Carrier (SLC) genes expression along the rostro-caudal axis of adult teleost fish gut: a publicly available datasets analysis**

Piccinno G[1],§, Del Vecchio G[1],4, Barca A[1], Mazzei A[1], Vacca F[2], Cinquetti R[2], Murashita K[3,4], Gomes AS[4], Bossi E[2], Rønnestad I[5], Verri T[1]

[1]Department of Biological and Environmental Sciences and Technologies, University of Salento, Italy; [2]Department of Biotechnology and Life Sciences, University of Insubria, Italy; [3]Research Center for Aquaculture Systems, National Research Institute of Aquaculture, Japan; [4]Fisheries Research and Education Agency, Japan; [5]Department of Biological Sciences, University of Bergen, Norway; [§]Present address: University of Trento, Italy

PP.124 **Metabolic enzymes activity and lipid profile in Atlantic salmon (*Salmo salar* L.) reared under different photoperiod regimes**

Churova M, Shulgina N, Murzina SA, Pekkoeva S, Voronin V, Krupnova M, Nemova N

Institute of Biology of the Karelian Research Centre of the Russian Academy of Sciences, Russia

PP.125 **Orofacial Stimulation Test after application of Tapentadol in rats**

Rokyta R[2], Fricova J[1,2]

[1]Department of Anesthesiology, Resuscitation and Intensive Care, First Faculty of Medicine, Pain Management Center, Charles University, Prague, Czech Republic; [2]Department of Physiology, Third Faculty of Medicine, Charles University, Prague, Czech Republic

PP.126 **Effetcs of Metoclopramide on motility of duodenum and colon in rats**

Kacar E, Yardimci A, Ulker N, Coban E

Department of Physiology, Firat University, Turkey

PP.127 **Effects of PFOA and PFBS exposure in the soil invertebrate *Dendrobaena veneta* (Annelida)**

Irato P[1], Bonato M[1], Corrà F[1], Dolfatto E[1], Guidolin L[1], Pietropoli E[1], Santovito G[1], Tallandini L[1], Vantini A[2]

[1]Department of Biology, University of Padua, Italy; [2]Regional Agency for the Environment, ARPA Veneto, Italy

Poster Session II (3/7) - Endocrine Physiology

PP.128 **Functional evaluation of chronic complications in type 2 mellitus diabetes**

Toth E[1], Gotia SL[2], Gotia SR[2], Borza C[1]

[1]Department of Pathohysiology, University of Medicine and Pharmacy "V. Babes", Romania; [2]Department of Physiology, University of Medicine and Pharmacy "V. Babes", Romania

PP.129 **The effects of Nesfatin-1 on rat acute pancreatitis model: role of melanocortin receptors**

Buzcu H[1], Özbeyli D[2], Yüksel M[2], Tuğçe Çilingir Kaya O[3], Kasimay Çakir O[1]

[1]Department of Physiology, Marmara University Turkey; [2]Department of Medical Laboratory Techniques, Marmara University, Turkey; [3]Department of Histology & Embryology, Marmara University, Turkey

PP.130 **Treadmill exercise improves control over the HPA and HPG axes response to restraint stress in male rats**

Kelestimur H[1], Bulmus O[2], Yardimci A[1], Tancan E[1], Serhatlioglu I[3], Kacar E[1], Gulcu Bulmus F[4]

[1]Department of Physiology, University of Firat, Turkey; [2]Department of Physiotherapy and Rehabilitation, University of Firat, Turkey; [3]Department of Biophysics, University of Firat, Turkey; [4]Vocational School of Medical Services, University of Firat, Turkey

PP.131 **Changes in neuroglia morphology and animal behavior under thyroid dysfunction**

Noda M[1], Niiyama T[1], Aoi K[1], Kuroiwa M[2], Shuto T[2], Kitahara Y[2], Nishi A[2]

[1]Graduate School of Pharmaceutical Sciences, Kyushu University, Japan; [2]Department of Pharmacology, Kurume University School of Medicine, Japan

PP.132 **Comparative assessment of renal function in the male Saharan Libyan jird *Meriones libycus* (Lichtenstein, 1823) during the breeding and non-breeding season**

Aknoun-Sail N[1], Zatra Y[1], Kheddache A[1], Benmouloud A[1], Exbrayat JM[2], Khammar F[1], Amirat Z[1], Khaldoun M[1]

[1]Faculty of Biological Sciences, University of Science and Technology Houari Boumediene (USTHB), Algeria; [2]Reproduction and Comparative Development, EPHE, Catholic University of Lyon, France

PP.133 **Liver local hypothyroidism and altered substrate metabolism in a mouse model of congenital hypothyroidism**

Giacco A[1], Iervolino S[1], Peluso T[1], Roberto L[2], Cioffi F[1], Goglia F[1], Ambrosino C[1,2], Moreno M[1], Silvestri E[1]

[1]Department of Science and Technology, University of Sannio, Italy; [2]IRGS, Biogem, Italy

PP.134 **Random matrix analysis of calcium oscillations in pancreatic beta-cell collectives**

Korošak D[1,2], Slak Rupnik M[1,3,4]

[1]Institute for Physiology, University of Maribor, Slovenia; [2]Faculty of Civil Engineering, Transportation Engineering and Architecture, University of Maribor, Slovenia; [3]Center for physiology and pharmacology, Medical University of Vienna, Austria; [4]Alma Mater Europaea - European Center Maribor, Slovenia

Poster Session II (4/7) - Nutrition, gut microbiota and health

PP.135 **Obesity and obesity-associated muscle wasting in patients on peritoneal dialysis**

Di Lauro T, Di Maro M, Trio R, Salomone E, Di Martino R, Di Lauro M, Sacco E, Colantuoni A, Guida B

Department of Clinical Medicine and Surgery, Physiology Nutrition Unit, Federico II University of Naples, Italy

PP.136 **Reelin expression in the progression from human inflammatory disease to colon cancer**

Serrano-Morales JM, García-Miranda P, Vázquez-Carretero MD, Calonge ML, Ilundáin AA, Peral Rubio MJ

Departamento de Fisiología, Universidad de Sevilla, Spain

PP.137 **Nutritional approach to control inflammation and support the remission in Crohn's Disease Patients: a pilot study**

Rizzello F[1,*], Spisni E[2,*], Imbesi V[1], Valerii MC[2], Gionchetti P[1]

[1]Dept. of Medical and Surgical Sciences, University of Bologna, Italy; [2]Dept. of Biological, Geological and Environmental Sciences, University of Bologna, Italy; [*]equally contributed to the work

PP.138 **Effect of a food supplement containing Palmrose essential Oil on microbiota composition and inflammatory profile of Irritable Bowel Syndrome patients: a randomized double blind-placebo controlled trial**

Rizzello F[1,*], Ricci C[2,*], Valerii MC[3], Spisni E[3], Imbesi V[1], Gionchetti P[1]

[1]Dept. of Medical and Surgical Sciences, University of Bologna, Italy; [2]Dept. of Clinical and Experimental Sciences, University of Brescia, Italy; [3]Dept. of Biological, Geological and Environmental Sciences, University of Bologna, Italy; [*]equally contributed to the work

PP.139 **Electroencephalogram (EEG) aspect in chronic alcoholism**

Borza C[1], Gotia SL[2], Gotia SR[2]

[1]Department of Pathohysiology, University of Medicine and Pharmacy "V. Babes", Romania; [2]Department of Physiology, University of Medicine and Pharmacy "V. Babes", Romania

PP.140 **The potential role of chronic otilonium bromide administration in preventing colonic dysmotility induced by repeated water avoidance stress in rats**

Traini C[1], Garella R[2], Idrizaj E[2], Squecco R[2], Vannucchi MG[1], Baccari MC[2]

[1]Histology and Embryology Research Unit, Dept. of Experimental and Clinical Medicine, University of Florence, Italy; [2]Section of Physiological Sciences, Dept. of Experimental and Clinical Medicine, University of Florence, Italy

PP.141 **Wheat, gluten and gut inflammation: in vitro models to ascertain the pro-inflammatory proprieties of different wheat cultivars**

De Fazio L[1], Truzzi F[2], Dinelli G[2], Valerii MC[3], Spisni E[1]

[1]Department of Biological, Geological and Environmental Sciences , University of Bologna, Italy; [2]Department of Agricultural Sciences , University of Bologna, Italy; [3]IBD Unit, S. Orsola-Malpighi Hospital and Department of Medical and Surgical Sciences, University of Bologna, Italy

PP.142 **Intake of table olives at two different doses: comparison between plasmatic concentrations of hydroxytyrosol and its metabolites in rat**

Kundisovà I[1], Juan ME[1], Colom H[2], Planas JM[1]

[1]Department de Bioquímica i Fisiologia e Institut de Recerca en Nutrició i Seguretat Alimentària-UB, Universitat de Barcelona, Spain; [2]Departament de Farmàcia i Tecnologia Farmacèutica i Fisicoquímica, Universitat de Barcelona,Spain

PP.143 **Blood pressure modifications in acordance with students habits**

Gotia SL[1], Borza C[2], Mederle A[2], Toth E[2]

[1]Department of Physiology, University of Medicine and Pharmacy "Victor Babes", Romania, [2]Department of Pathophysiology, University of Medicine and Pharmacy "Victor Babes", Romania

PP.144 **Nutritional status and body fat distribution in subjects with psychological traits typical of eating disorders**

Leone A, Vignati L, De Amicis R, Ponissi V, Beggio V, Battezzati A, Bertoli S

International Center for the Assessment of Nutritional Status (ICANS), Department of Food Environmental and Nutritional Sciences (DeFENS), University of Milan, Italy

Poster Session II (5/7) - Physiology of metabolism

PP.145 **Uncoupling protein 3 affects lipid handling in mice**

Gentile A[1], Busiello RA[1], De Matteis R[2] , Delli Paoli G[3], Buonaiuto S[3], Lanni A[3], Goglia F[4], Lombardi A[1]

[1]Department of Biology, University of Naples "Federico II", Italy; [2]Department of Biomolecular Sciences, University of Urbino "Carlo Bo", Italy; [3]Department of Environmental, Biological and Pharmaceutical Sciences and Technologies, University of Campania "Luigi Vanvitelli", Italy; [4]Department of Science and Technology, University of Sannio, Italy

PP.146 **Hepatic oxidative stress induced by "western diet" in middle-aged rats**

Mazzoli A, Crescenzo R, Cigliano L, Gatto C, Cancelliere R, Iossa S

Department of Biology, University of Napoli "Federico II", Napoli, Italy

PP.147 **Anti-oxidant effects of melatonin on energy balance and oxidative stress in sepsis-induced rats**

Ozkok E[1], Ates Ulucay G[2], Yorulmaz H[3], Aksu A[4], Balkis N[4], Tamer S[5]

[1]Department of Neuroscience, Aziz Sancar Institute of Experimental Medicine, Istanbul University, Istanbul, Turkey; [2]Department of Physiology, Faculty of Medicine, Istanbul Yeni Yuzyil University, Istanbul, Turkey; [3]School of Nursing, Halic University, Istanbul, Turkey; [4]Department of Chemical Oceanography, Institute of Marine Sciences and Management, Istanbul University, Turkey; [5]Department of Physiology, Istanbul Medical Faculty, Istanbul University, Turkey

PP.148 **Reduced adipogenesis and improved glucose uptake induced by a black pepper extract**

Geddo F[1] , Scandiffio R[1] , Antoniotti S[1] , Cottone E[1] , Querio G[1] , Levi R[1] , Maffei ME[1,2] , Bovolin P[1] , Gallo M[1]

[1]Department of Life Sciences and Systems Biology, University of Turin, Via Accademia Albertina 13, 10123, Turin, Italy; [2]Biosfered S.R.L., Corso Matteotti 42, 10121, Turin, Italy.

PP.149 **Involvement of TGR5 receptor in fat preference and obesity in mice**

Bensalem A [1,2], Murtaza B[2], Hichami A[2], Oulamara H[1], Khan A[2], Agli A[1], Khan N[2]

[1]Laboratoire de Nutrition et Technologie Alimentaire (LNTA), Institut de la Nutrition, de l'Alimentation et des Technologies Agro-Alimentaires (INATAA) - Université Frères Mentouri Constantine 1, 25000, Alegria; [2]Physiologie de la Nutrition & Toxicologie, UMR U1231 INSERM/Université de Bourgogne-Franche Compté (UBFC), Dijon 21000, France. Email: benadel2005@yahoo.fr

Poster Session II (6/7) - Renal physiology

PP.150 **Altered osmoregulation in kidney transplant recipients predict renal outcome**

Bienaimé F, Mazloum M, Jouffroy J, Neuraz A, Brazier F, Legendre C, Prié D, Anglicheau D
Hôpital Necker-Enfants Malades

PP.151 **The vasopressin-regulated water channel aquaporin-2 as target of the green Olive Leaf Extract**

Ranieri M[1], Di Mise A[1], Venneri M[1], Tingskov SJ[3], Centrone M[1], Pellegrino T, Difonzo G[2], Caponio F[2], Norregaard R[3], Valenti G[1], Tamma G[1]
[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari Aldo Moro, Italy; [2]Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy [3]Department of Clinical Medicine, Aarhus University, Denmark

PP.152 **b3-AR as novel potential mediators of the cystogenetic process in Autosomal Dominant Polycystic Kidney Disease**

Schena G[1], Gerbino A[2], Caplan MJ[1], Carmosino M[3]
[1]Department of Cellular and Molecular Physiology, Yale University, USA; [2]Department of Biosciences, Biotechnology and Biopharmaceutics, University of Bari, Italy; [3]Department of Science, University of Basilicata, Italy

PP.153 **The role of kisspeptin in myoglobinuric acute kidney injury in rats**

Iskan NG[1], Soyleyici B[1], Kandemir N[2], Ali Aydin M[2], Aydogdu N[2]
[1]Trakya University School of Medicine, Turkey; [2]Department of Physiology, Trakya University School of Medicine, Turkey

PP.154 **Determination of the protective role of spexin and adropin in chronic renal failure induced cardiovascular damage**

Memi G[1], Yazgan B[2], Tastekin E[3]
[1]Kesan Hakkı Yoruk Health School, University of Trakya, Turkey; [2]Sabuncuoglu Serefeddin Health School, University of Amasya, Turkey; [3]Pathology Department of School of Medicine, University of Trakya, Turkey

PP.155 **Dandelion Root Extract reduces the activity of the renal ClC-Ka chloride channel through a Ca^{2+}/PKC-mediated mechanism**

Gerbino A[1], De Zio R[1], Milano S[1], Russo D[2], Milella L[2], Procino G[1], Svelto M[1], Carmosino M[2]
[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari "Aldo Moro", Italy; [2]Department of Sciences, University of Basilicata, Italy

PP.156 **Renal function by developing population pharmacokinetics in Lithuania**

Stankevicius E, Radzeviciene A, Abramavicius S, Marcoux F, Kadusevicius E
Lithuanian University of Health, Lithuania

PP.157 **Direct physical interaction between Calcium Sensing Receptor and Polycystin-2: implication in Autosomal Dominant Polycystic Kidney Disease (ADPKD)**

Di Mise A, Venneri M, Ranieri M, Centrone M, Caroppo R, Tamma G, Valenti G
Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari, Italy

Poster Session II (7/7) - Repiratory Physiology

PP.158 **HPV infection inhibits aquaporin-mediated hydrogen peroxide elimination and affects human sperm function**

Pellavio G[1], Todaro F[2], Omes C[2], Alberizzi P[3], Scotti C[1], Gastaldi G[1,4], Caliogna L[4], Nappi R[2], Laforenza U[1]

[1]Department of Molecular Medicine, University of Pavia, Italy; [2]Center for Reproductive Medicine, Obstetrics and Ginecology Unit, Fondazione IRCCS Policlinico San Matteo, Italy; [3]IRCCS-Fondazione Policlinico San Matteo, Italy; [4]Center for Health Technologies, University of Pavia, Italy

PP.159 **Evaluation of the association between dietary pattern and fat distribution in pregnant women**

Ravella S, Spadafranca A, Lewandowski L, De Amicis R, Leone A, Foppiani A, Battezzati A, Bertoli S

International Center for the Assessment of Nutritional Status (ICANS), Department of Food Environmental and Nutritional Sciences (DeFENS), University of Milan, Italy

PP.160 **Can irisin change partner preference of female rats?**

Canpolat S[1], Ulker N[1], Bulmus O[2], Ozcan M[3]

[1]Department of Physiology, Firat University, Turkey; [2]Department of Physiotherapy and Rehabilitation, Firat University, Turkey; [3]Department of Biophysics, Firat University, Turkey

PP.161 **The role of potassium channels and calcium in relaxing effect of minoxidil on the isolated rat uterus**

Sokolović D[1], Blagojević D[2], Drakul D[1], Oreščanin-Dušić Z[2], Kulić M[1], Pecelj M[3,4,5], Milovanović RS[1,2]

[1]Faculty of Medicine Foča, University of East Sarajevo, Republic of Srpska Bosnia and Herzegovina; [2]Department of Physiology, Institute for Biological Research "Siniša Stanković", University of Belgrade, Serbia; [3]Faculty of Philosophy, University of East Sarajevo, Republic of Srpska, Bosnia and Herzegovina; [4]Geographical Institute "Jovan Cvijić" of the Serbian Academy of Sciences and Arts, Serbia; [5]Institute of Sports, Tourism and Service, South Ural State University, Russia

PP.162 **Irisin may have inhibitory effects on pubertal maturation in female rats**

Ulker N[1], Bulmus O[2], Ozcan M[3], Canpolat S[1]

[1]Department of Physiology, Firat University, Turkey; [2]Department of Physiotherapy and Rehabilitation, Firat University, Turkey; [3]Department of Biophysics, Firat University, Turkey

PP.163 **Effects of irisin on pubertal maturation process in male rats**

Ozcan M[1], Ulker N[2], Yardimci A[2], Bulmus O[3], Canpolat S[2]

[1]Department of Biophysics, Firat University, Turkey; [2]Department of Physiology, Firat University, Turkey; [3]Department of Physiotherapy and Rehabilitation, Firat University, Turkey.

PP.164 **Effects of Irisin on Sperm Characteristics and Testicular Tissue in Rats**

Bulmus O[1], Ulker N[2], Kaya N[3], Turk G[4], Canpolat S[2]

[1]Department of Physiotherapy and Rehabilitation, Firat University, Turkey; [2]Department of Physiology, Firat University, Turkey; [3]Department of Histology and Embryology, Firat University, Turkey; [4]Department of Reproduction, Firat

PP.165 **Gelatinases (MMP-2 and MMP-9) immunoexpression in vas deferens of Libyan jird (*Meriones libycus*) during seasonal reproductive cycle and after orchiectomy**

Belhocine M

Department of Biology, University of Mostaganem, Algeria

PP.166 **Remodeling extracellular matrix of seminal vesicles by hyperhomocysteinemia in Sand rat (*Psammomys obesus*)**

Ghoul A[1], Moudilou E[2], Zerrouk F[1], Chaouad B[1,3], Exbrayat JM[2], Benazzoug Y[1]

[1]Faculty of Biological Sciences (FSB), USTHB, Algeria; [2]Laboratory of General Biology, Catholic University of Lyon, France; [3]University Khemis Miliana, Algeria

18.00 - 19.00

Plenary SIF Lecture

Spinal and Brain Circuits for Movement

Ole Kiehn

Department of Neuroscience, University of Copenhagen, Denmark / Karolinska Institute, Sweden

***Introduced by* Francesco Lacquaniti (Rome, Italy)**

19.00 **Free Evening**

Room 1 - Morning (8.30 - 12.00)

Symposium - Cardiovascular Physiology 2 (supported by SIF): Genetic and epigenetic control of cardiac rhythm

Organizer: Dario Di Francesco, Milan, Italy

Invited Speakers

8.30 **Night bradyarrhythmias: circadian control of heart rate via a sinus node clock and the funny channel**

Boyett M, D'Souza A, Wang Y

Cardiovascular Sciences, University of Manchester, UK

9.00 **A heart in a dish: 3D microtissues with cardiomyocytes and non-myocyte cells derived from human iPSCs**

Campostrini G

Dept of Anatomy and Embryology, Leiden University Medical Center, The Netherlands

9.30 **Understanding arrhythmogenic cardiomyopathy using human iPSCs and primary stromal cells**

De Bortoli M

Institute for Biomedicine, Eurac Research, Italy

Oral Presentations

10.00 **Human iPSC modeling of familial forms of atrial fibrillation in patient-derived cardiomyocytes**

Benzoni P[1], Giannetti F[1], Rocchetti M[2] Bucchi A[1], Baruscotti M[1], Di Francesco D, Olesen MS[3], Dell'Era P[4], Barbuti A[1]

[1]Department of Biosciences, Università degli Studi di Milano, Italy; [2]Department of Biotechnology and Biosciences, Università degli Studi di Milano Bicocca, Italy; [3]The Heart Centre, Rigshospitalet Universit, Denmark, [4]Department of Molecular and Translational Medicine, Università degli Studi di Brescia, Italy

10.15 **Effects of a calmodulin kinase II inhibitor, KN-93, on the electrophysiological modifications produced by local stretch of ventricular myocardium. Experimental study**

Parra G[1], Zarzoso M[2], Such-Miquel L[2], Brines L[1], Muñoz M[1], Del Canto I[3], Goran R[1], Soler C[1], Genovés P[3], Arias O[4], Alberola A[1], Such L[1], Chorro FJ[4]

[1]Department of Physiology, Universitat de València, Spain; [2]Department of Physiotherapy, Universitat de València, Spain; [3]INCLIVA, Spain; [4]CIBERCV, Instituto de Salud Carlos III, Spain

11.00 - 12.00

Company Presentation: BIOPAC

Recording Physiological Data in the Lab, in the Field, and in MRI: Implementations for Teaching and for Research

Slav Dimov, Verna, Bulgaria

Room 2 - Morning (8.30 - 10.30)

Symposium - Physiology of metabolism 2: Brain regulation of metabolism: new insights in physiopathology

Organizer: **Luc Penicaud (Paris, France)**

Invited Speakers

8.30 **Brain Sugar Sensing**
Fioramonti X
NutriNeuro, UMR, 1286 INRA- University of Bordeaux, France

9.00 **Emerging role of hypothalamic astrocytes in the metabolic control**
Garcia-Caceres C
Institute for Diabetes and Obesity, Helmholtz Diabetes Center, Helmholtz Zentrum München, German Research Center for Environmental Health (GmbH), Neuherberg, Germany.

9.30 **Reward System and Energy Metabolism**
la Fleur SE
Department of Endocrinology and Metabolism, Amsterdam UMC, University of Amsterdam, Netherlands and the Netherlands Institute for Neuroscience (NIN), Royal Dutch Academy of Arts and Sciences (KNAW), Amsterdam, Netherlands

Oral Presentations

10.00 **Stress induces lipid droplet biogenesis in rat brain astrocytes**
Smolič T[1], Tavčar P[1] , Horvat A[1,2], Zorec R[1,2], Vardjan N[1,2]
[1]Laboratory of Neuroendocrinology-Molecular Cell Physiology, Institute of Pathophysiology, Faculty of Medicine, University of Ljubljana, 1000 Ljubljana, Slovenia; [2]Laboratory of Cell Engineering, Celica Biomedical, 1000 Ljubljana, Slovenia

10.15 **The Neural Control for Thermoregulatory Inversion**
Tupone D1,2, Cano G3, Conceicao EPS2, Chiavetta P1, Morrison SF[2]
[1]Dept. of Biomedical and Neuromotor Sciences, University of Bologna, Italy; [2] Dept. of Neurological Surgery, Oregon Health & Science University, Portland, USA; [3]Dept. of Neuroscience, University of Pittsburgh, Pittsburgh, USA

Room 3 - Morning (8.30 - 10.30)

Symposium - Renal Physiology: Hot topics in chronic kidney disease

Organizer: **Timo Rieg (Tampa, Florida, USA)**

Invited Speakers

8.30 *In vivo* **Npt2a inhibition in CKD**
Thomas L[1], Xue J[1], Fenton RA[2], Dominguez Rieg JA[1], Rieg T[1]
[1]Molecular Pharmacology and Physiology, University of South Florida, USA; [2]Biomedicine, Aarhus University, Denmark.

9.00 **Sympathetic regulation of renal function: physiological aspects and therapeutic implications**

Milano S[1], Gerbino A[1], Carmosino M[1], Dal Monte M[2], Svelto M[1], Procino G[1]

[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari, Italy; [2]Department of Biology, University of Pisa, Italy

9.30 **Intracellular Calcium Signaling in Podocytes in Diabetic Nephropathy**

Palygin O[1], Ilatovskaya D[1], Spires D[1], Khedr S[1], Shalygin A[1,2], Kaznacheyeva E[2], Staruschenko A[1]

[1]Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, USA; [2]Institute of Cytology, Russian Academy of Sciences, St. Petersburg, Russia

Oral Presentations

10.00 **Association of blood bicarbonate and pH with mineral metabolism disturbance and outcome after kidney transplantation**

Bienaimé F, Brazier F, Jouffroy J, Martinez F, Anglicheau D, Legendre C, Neuraz A, Prié D

Hôpital Necker-Enfants Malades

Room 4 - Morning (8.30 - 10.30)

Workshop 3: Cellular Physiology and Neurophysiology

Chairs: **Natale Belluardo (Palermo, Italy) and Marco Linari (Firenze, Italy)**

Oral presentations

8.30 **Alphavbeta3 integrin/Rac1 pathway as a possible target in retinitis pigmentosa**

Dal Monte M[1], Cammalleri M[1], Locri F[1], Pecci V[1], De Rosa M[2], Pavone V[3], Bagnoli P[1]

[1]Department of Biology, University of Pisa, Italy; [2]Department of Experimental Medicine, Second University of Napoli, Italy; [3]Department Department of Chemical Sciences, University of Napoli Federico II, Napoli, Italy

8.45 **Bi-directional Cross-talk between cells and microenvironment**

Fiocchetti M, Fernandez VS, Montalesi E, Marino M

Department of Science, Roma Tre University, Viale Guglielmo Marconi 446, I-00146 Rome, Italy

9.00 **The Effect of Growth Hormone and/or Swimming Exercise on PI3K/AKT/mTOR Signaling Pathway and Bone Mineral Density in Rats Skeletal Muscle**

Palabiyik O[1], Tayfur P[2], Tastekin E[3]

[1]Department of Medical Services and Techniques, Trakya University Health Services Vocational College, Turkey; [2]Department of Physiology, Trakya University, Turkey; 3Department of Pathology, Trakya University, Turkey

9.15 **Mechanotransductive signaling pathway in human islets of Langerhans: implications for β-cell survival and function.**

Galli A[1], Marku A[1], Castagna M[1], Maffioli E[2], Tedeschi G[2], Milani P[3], Lenardi C[3], Perego C[1]

[1]DISFEB Dept of Excellence Pharmacological and Biomolecular Sciences, [2]Dipartimento di Medicina Veterinaria. [3]CIMAINA and Dipartimento di Fisica, University of Milano, Italy

9.30 **Photoswitchable lipid membrane-spanning molecules for light-dependent modulation of neuronal activity**

DiFrancesco ML[1,2§], Lodola F[3§], Colombo E[1,2§], Maragliano L[1,2], Paternò GM[3], Bramini M[1,2], Cimò S[3,4], Colella L[4], Fazzi D[5], Eleftheriou CG[1,2], Maya-Vetencourt JF[1,2], Bertarelli C[3,4§], Lanzani G[3§], Benfenati F[1,2§].

[§]equal contribution [1]Center for Synaptic Neuroscience, Istituto Italiano di Tecnologia, Genova, Italy; [2]IRCCS Ospedale Policlinico San Martino, Genova, Italy; [3]Center for Nano Science and Technology, Istituto Italiano di Tecnologia, Milano, Italy; [4]Dipartimento di Chimica, Materiali e Ingegneria Chimica "Giulio Natta", Politecnico di Milano, Milano, Italy; [5]Department of Chemistry, Institut für Physikalische Chemie, University of Cologne, Köln, Germany

9.45 **Moderate concentration of ketone body β-hydroxybutirate inhibits endocytosis and exocytosis in rat brain synaptosomes.**

Fedorovich SV[1, 2], Hrynevich S[1]

[1]Institute of Biophysics and Cell Engineering NASB, Minsk, Belarus; [2]Department of Biochemistry, Belarusian State University, Minsk, Belarus

10.00 **Copper Dyshomeostasis In Neurodegenerative Diseases**

Maffia M[1,2], Greco M[1], Rizzo F[1], Garzarelli V[1], Intini V[1], Maffia MC[3], Danieli A[1], Vergara D[1,2], De Riccardis L[1,2]

[1]Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, Italy; [2]Laboratory of Clinical Proteomic, ASL-Lecce, Italy; 3San Raffaele-Telethon Institute for Gene Therapy, Vita Salute San Raffaele University, Milan, Italy

10.15 **Hyper-excitability and hyper-plasticity disrupt cerebellar signal transfer in the IB2 KO mouse model of autism**

Prestori F

Department of Brain and Behavioral Sciences, University of Pavia, Italy

Room 5 - Morning (8.30 - 10.30)

Workshop 4: Nutrition, gut microbiota and health

Chairs: **Alberto Battezzati (Milano, Italy) and Antonio Colantuoni (Napoli, Italy)**

Oral presentations

8.30 **Changes in tissue lipid mediators induced by severe negative energy balance in female rats**

Carta G, Giunti E, Scherma M, Abolghasemi A, Murru E, Fadda P, Banni S

Department of Biomedical Science, University of Cagliari, Italy

8.45 **Initial Brain Aging and High Fat-High Fructose Diet: Effect on Mitochondrial Bioenergetics, Oxidative Status and Cholesterol Homeostasis in Rat Brain**

Crescenzo R[1], Spagnuolo MS[2], Iannotta L[1], Cancelliere R[1], Mazzoli A[1], Gatto C[1], Canè M[1], Nazzaro M[1], Iossa S[1], Cigliano L[1]

[1]Dept of Biology, University of Naples Federico II, Italy; [2]ISPAAM, CNR, Italy

9.00 **Long-term effect of a classical ketogenic diet on glucose metabolism: A 12-months longitudinal study**

De Amicis R, Leone A, Foppiani A, Lessa C, Ravella S, Battezzati A, Bertoli S

International Center for the Assessment of Nutritional Status (ICANS), Department of Food Environmental and Nutritional Sciences (DeFENS), University of Milan, Italy

9.15 **Fumonisins induced toxic mechanisms on intestinal epithelial models**

Garbetta A[1], Martino NA[2], Debellis L[3]

[1]Institute of Sciences of Food Production (ISPA), CNR, Italy; [2]Dept. of Veterinary Science, University of Turin, Italy; [3]Dept. of Bioscience, Biotechnologies and Biopharmaceutics, University of Bari, Italy

9.30 **A nutritional intervention based on egg white for phosphorus control in hemodialyis patients.**

Di Maro M, Di Lauro T, Trio R, Salomone E, Di Martino R, Di Lauro M, Sacco E, Colantuoni A, Guida B

Department of Clinical Medicine and Surgery, Physiology Nutrition Unit, Federico II University of Naples, Italy

9.45 **Dietary supply of the antioxidant and prebiotic mix promotes muscle growth and improves disease resistance in cultivated fish**

Lysenko L, Kantserova N, Parshukov A, Sukhovskaya I

Institute of Biology KarRC RAS, Petrozavodsk, Russia

10.00 **Rifaximin-dependent modulation of gut commensal microbiota and host: bacterial interactions in a murine model of DSS-induced colitis**

Ferrer M, Martínez V

Department of Cell Biology Physiology and Immunology, Universitat Autònoma de Barcelona, Spain

10.15 **Effects of western diet and short chain fatty acids on colonic inflammation in rats**

Cantali Ozturk C[1], Sevim M[1], Ali Mergen M[2], Ceren Gullu E[2], Yaren Ayvaz E[2], Temel M[2], Oluc M[2], Şirvancı S[3], Abbak Ural M[4], Çevik O[4], Yeğen BÇ[1], Yildirim A[1]

[1]Marmara University School of Medicine, Department of Physiology, Turkey; [2]Marmara University School of Medicine, Turkey; [3]Marmara University School of Medicine, Department of Histology & Embryology, Turkey; [4]Adnan Menderes University School of Medicine, Department of Biochemistry, Turkey.

10.30 *Coffee break*

10.30 - 12.00

Poster Session III (Poster Area)

Poster Session III (1/3) - Neurophysiology - Synaptic transmission

PP.01 **Moderate extracellular acidification affects presynaptic endings via activation of phospholipase C pathway and calcium transport from SERCA-linked stores**

Dubouskaya T[1], Fedorovich SV[1,2]

[1]Laboratory of Immunology and Cell Biophysics, Institute of Biophysics and Cell Engineering National Academy of Sciences of Belarus, Belarus. [2]Department of Biochemistry, Belarusian State University, Belarus

PP.02 **Different nicotinic receptor (nAChR) subtypes regulate glutamate and GABA release onto regular spiking non-pyramidal cells in prefrontal (Fr2) layer V**

Meneghini S[1], Di Girolamo S, Modena D[2], Amadeo A[2], Becchetti A

[1]Department of Biotechnology and Biosciences, University of Milano-Bicocca, Italy; [2]Department of Biosciences, University of Milano, Italy

PP.03 **Influence of ketoacidosis on rat brain synaptosomes**

Voronina P[1], Adamovich K[1], Adamovich T[1], Hrynevich S[1], Waseem T[1], Fedorovich SV[1,2]

[1]Institute of Biophysics and Cell Engineering NASB, Minsk, Belarus; [2]Department of Biochemistry, Belarusian State University, Minsk, Belarus

PP.04 **Pulsed electromagnetic field exposure disrupts post-ischemic long-term potentiation of synaptic strength in rat perirhinal cortex slices**

Roncacè V[1], Burattini C[1], Camera F[2], Apollonio F[2], Liberti M[2], Capone F[3], Di Lazzaro V[3], Aicardi G[1,4]

[1]Department for Life Quality Studies, University of Bologna, Italy; [2]Department of Information Engineering, Electronics and Telecommunication, University of Rome "La Sapienza", Italy; [3]Neurology Unit, Campus Bio-Medico University of Rome, Italy; [4]Interdepartmental Center "Luigi Galvani" for the Integrated Study of Biophysics, Bioinformatics and Biocomplexity, University of Bologna, Italy

PP.05 **Analysis of dopamine release from GABAergic periglomerular cells in the olfactory bulb using false fluorescent neurotransmitters and brain-on-chip systems**

Viggiano D[1], Bellenchi G[2]

[1]Dept. Medicine and Health Sciences, Univ. Molise, Campobasso, Italy; [2]IGB, CNR, Naples, Italy

PP.06 **Canonical AKT pathway may serve as compensatory mechanism for AKT-induced eLTP abolishment**

Gorobetc D[1,2], Sheinin A[3], Pinhasov A[1,2], Michaelevski I[1,2]

[1]Dept. of Molecular Biology, Ariel University, Ariel, Israel; [2]Integrated Brain Science Center - Ariel (IBSCA), Ariel University, Ariel, Israel; [3]Sagol School of Neuroscience, Tel Aviv University, Tel Aviv, Israel

PP.07 **A somatosensory cortex microcircuit involving layer 2/3 cortical pyramidal cells and somatostatin-expressing interneurons is altered in a genetic mouse model of migraine**

Marchionni I[1,2], Pilati N[1], Forli A[1], Sessolo M[1], Pietrobon D[1,2,3]

[1]Department of Biomedical Sciences and [2]Padova Neuroscience Center, University of Padova; [3]CNR Institute of Neuroscience, Padova, Italy

PP.08 **Influence of glucose deprivation on membrane potentials of different membranes in rat brain synaptosomes**

Hrynevich SV[1], Fedorovich SV[1]

[1]Laboratory of Biophysics and Engineering of Cell, Institute of Biophysics and Cell Engineering National Belarus Academy of Sciences, Belarus

PP.09 **Long-lasting response changes in deep cerebellar nuclei in vivo correlate with low-frequency oscillations**

Moscato L[1]*, Montagna I[1]*, De Propris L[2], Di Domenico D[1], Tritto S[1], Mapelli L[1], D'Angelo E[1,2]****

[1]Dept of Brain and Behavioral Sciences, University of Pavia, Pavia, Italy; [2] Brain Connectivity Center, C. Mondino National Neurological Institute, Pavia, Italy; * co-first authors; ** co-last authors

PP.10 **The Parkinson-related E193K LRRK2 variant impacts neuronal vesicles dynamics through perturbed protein interactions**

Marku A[1], Casiraghi Z[1], Galli A[1], Ghislanzoni S[1], Marciani P[1], Piccoli G[2], Perego C[1]

[1]DISFEB Dept of Pharmacological and Biomolecular Sciences, Università degli Studi di Milano, Milan, Italy; [2]CIBIO Dept of Cellular, Computational and Integrative Biology, Università degli Studi di Trento,Trento, Italy

Poster Session III (2/3) - Neurophysiology - Memory formation, storage and recall

PP.11 **Characterization of the potentiated synapse-specific PSD-95 interactome via activity-dependent in vivo expression of a proteomic probe**

Mainardi M[1], Gobbo F[1], Jacob A[1], Faraone A[1], Sorokina O[2], Zentilin L[3], Marrone MC[5], Marinelli S[5], Cellerino A[1,4], Armstrong JD[2], Ori A[4], Cattaneo A[1,5]

[1]Laboratory of Biology "Bio@SNS", Scuola Normale Superiore, Pisa, ITALY; [2]School of Informatics, University of Edinburgh, Edinburgh, UK; [3]International Center for Genetic Engineering and Biotechnology (ICGEB), Trieste, ITALY; [4]Leibniz Institute on Aging - Fritz Lipmann Institute (FLI), GERMANY; [5]European Brain Research Institute "Rita Levi-Montalcini" (EBRI), Rome, ITALY

PP.12 **Quantifying barcode information content in dendritic spines of the rodent brain**

Viggiano D[1], Perrone Capano C[2]

[1]Dept. Medicine and Health Sciences, Univ. Molise, Campobasso, Italy; [2]Department of Pharmacy, University of Naples "Federico II", Naples, Italy

PP.13 **The relevance of a standardized experimental context to assess recognition memory: realization of a novel modular behavioral apparatus**

Gulisano W[1], Tropea MR[1], Puzzo D[1,2]

1Department of Biomedical and Biotechnological Sciences, Section of Physiology, University of Catania, Catania, Italy; 2Oasi Research Institute (IRCCS), Troina, Italy

PP.14 **Cellular mechanisms of time-dependent fear generalization**

Concina G, Renna A, Sacchetti B

Department of Neuroscience, University of Turin, Italy

PP.15 **An Examination on the Possible Effects of Exogenous BDNF on AMPA Receptor GluR1 Subunit in Rat Hippocampus**

Sırmatel B[1], Özer Ç[1], Seymen CM[2]

[1]Department of Physiology, Gazi University, Turkey; [2]Department of Histology and Embryology, Gazi University, Turkey

PP.16 **The relationship between the locomotor and cognitive decline during physiological aging in wild type mice**

Ratto D, Occhinegro A, Di Iorio C, Bottone MG, Rossi P

Department of Biology and Biotechnology "L. Spallanzani", University of Pavia, Italy

PP.17 **Tau paired helical filaments and neuronal loss in an experimental model of metabolic syndrome**

Lyutfi E[1], Stoyanov GS[2], Tonchev AB[3], Bratoeva K[4]

[1]Student, Faculty of Medicine, Medical University of Varna, Bulgaria; [2]Department of General and Clinical Pathology, Faculty of Medicine, Medical University of Varna, Bulgaria; [3] Department of Anatomy and Cell Biology, Faculty of Medicine, Medical University of Varna, Bulgaria; [4]Department of Physiology and Pathophysiology, Division of Pathophysiology, Faculty of Medicine, Medical University of Varna, Bulgaria

PP.18 **Cytotoxicity, genotoxicity and apopitozis changes elicited by exposure of hippocampal cell line HT-22 cells to Cysteine-S-sulfate**

Tekin V, Altintas F, Oymak B, Tunc Ata M, Burcu Tuzcu E, Kucukatay V

Department of Physiology, University of Pamukkale Denizli, Turkey

PP.19 **Effects of Optogenetic and Chemogenetic Manipulations of Hypothalamic Kisspeptin Neurons on Hippocampal Astrocytes in Kiss-Cre Mice**

Aguş S[1], Civas CC[1], Eyüboglu S[1], Yavuz Y[1], Baser O[1], Topcu IC[1], Bilgin VA[1], Atasoy D[3], Yilmaz B[1]

[1]Yeditepe University, Faculty of Medicine, Departments of Physiology, İstanbul, Turkey; [2]University of Iowa, Carver College of Medicine, Department of Physiology, Iowa City, USA

PP.20 **Investigation of Long-term Potentiation-and Depression-Induced Tau Phosphorylation in Rats with Starch Based Sugar (no nation)**

Taşçı Y, Temeltas A, Barutcu Ö, Süer C

Kayseri Sugar Factory

Poster Session III (3/3) - Cellular physiology

PP.21 **Revealing regulation patterns of the coupled apical SLC15A1/PEPT1 and endosomal SLC15A4/PHT1 oligopeptide transport systems in enterocyte-like cell monolayers under insulin stimulation**

Barca A[1], Mazzei A[1], Croce F[1], Del Vecchio G[1], Verri T[1]

[1]Department of Biological and Environmental Sciences and Technologies (DeBEST), University of Salento, Lecce, Italy

PP.22 **A cell culture model of human mesothelium to study the physiology of water transport and biocompatibility of innovative glucose-sparing solutions for peritoneal dialysis.**

Piccapane F[1], Arduini A[2], Corciulo R[3], Svelto M[1], Caroppo R[1], Procino G[1]

[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari, Italy; [2]Department of R&D SAGL Corequest, Manno, Switzerland, [3]Department of Emergency and Organ Transplantation, University of Bari, Italy

PP.23 **The ERα L370 and E471 residues control receptor stability and E2-induced gene transcription.**

Bartoloni S, Leone S, Busonero C, Cipolletti M, Acconcia F

Department of Sciences, Section Biomedical Sciences and Technology, University Roma Tre, Rome, Italy

PP.24 **Changes in the expression of autophagy markers in a rat model of retinopathy of prematurity**

Pesce NA[1], Locri F[1], André H[2], Dal Monte M[1]

[1]Department of Biology, University of Pisa, Italy, [2]Department of Clinical Neuroscience, St Erik Eye Hospital, Karolinska Institute, Sweden

PP.25 **Effects of thyroid hormones and analogues in the immune system cells**

Gionfra F[1], Pallottini V[1], Incerpi S[1]

[1]Department of Sciences, University Roma Tre, Rome, Italy

PP.26 **Large-scale analysis of protein networks involved in oligodendrocytes differentiation reveals novel key regulators of the differentiation program**

Vergara D[1,2], Damato M[1,2,3], Musarò D[1,2], Fournier I[3], Salzet M[3], Maffia M[1,2]

[1]Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, Italy [2]Laboratory of Clinical Proteomic, "'Giovanni Paolo II'" Hospital, ASL-Lecce, Italy [3]Laboratoire PRISM: Protéomique, Réponse Inflammatoire, Spectrométrie de Masse, - U1192 INSERM, Bât SN3, , Université de Lille 1, Villeneuve d'Ascq, France

PP.27 **Novel 17β-estradiol pathways necessary for neuroglobin-induced cell survival.**

Fernandez VS, Pescatori S, Fiocchetti M, Marino M

Department of Science, Roma Tre University, Rome, Italy

PP.28 **PKA signaling cascade regulation in cancer**

Grisan F.[1,2], Iannucci LF.[3,2], Di Benedetto G.[1,2] Lefkimmiatis K.[1,2]

[1]Institute of Neuroscience, CNR , Padova ,Italy; [2]Veneto Institute of Molecular Medicine, Padova, Italy; [3] Department of Biology, University of Padova, Italy

PP.29 **Two novel SCN5A loss-of-function mutations affect patients with severe arrhytmogenic syndromes**

Murano C[1], Binda A[1], Lucano D[1], Micaglio E[2], Ciconte G[2], Ghiroldi A[3], Anastasia L[3,4], Pappone C[2], Rivolta I[1].

[1]School of Medicine and Surgery, University of Milano Bicocca, Monza [2]Arrhythmology Department, Scientific Institute for Research, Hospitalization, and Health Care (IRCCS) Policlinico San Donato, San Donato Milanese [3]Laboratory of Stem Cells for Tissue Engineering, Scientific Institute for Research, Hospitalization, and Health Care (IRCCS) Policlinico San Donato, San Donato [4]Department of Biomedical Sciences for Health (L.I.T.A.), University of Milano

PP.30 **Aquaporin-9 (AQP-9) is involved in the lipid-lowering activity of the nutraceutical silybin on hepatocytes through modulation of autophagy**

Vergani L[1], Baldini F[1], Grasselli E[1], Voci A[1], Khalil M[1], Portincasa P[3], Gena P[4], Calamita G[4]

[1]Dept. of Earth, Environment and Life Sciences, and [2]Dept. of Experimental Medicine, University of Genova, Italy; [3]Dept. of Biomedical Sciences and Human Oncology, [4]Dept of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari "Aldo Moro", Italy.

PP.31 **Physio/mechanical challenges regulate Schwann cell changes by Nf2/merlin signaling and DNA methylation**

Colciago A.[1], Bonalume V.[1], Castelnovo LF.[1], Ballabio M.[1], Caffino L.[1], Fumagalli F.[1], Magnaghi V.[1]

[1]Department of Pharmacological and Biomolecular Sciences, University of Milan, Italy

PP.32 **Gain of function of TTX-sensible voltage dependent sodium currents promoted by Vitamin D3 induced hippocampal embryonic neuronal differentiation.**

Monarca L[1], Ragonese F[2], Bastioli F[1], Cataldi S[1,3], Arcuri C[2], Mancinelli L[1], Iannitti RG[1], Albi E[3], Fioretti B[1]

[1]Department of Chemistry, Biology and Biotechnologies, University of Perugia, Italy; [2]Department of Experimental Medicine, University of Perugia, Italy; [3]Department of Farmaceutical Sciences, University of Perugia, Italy

PP.33 **Gaseous mediators in gastrointestinal physiology, pathophysiology and pharmacology**

Bakalarz D[1,2], Wójcik D[1], Magierowska K[1,3], Korbut E[1], Danielak A[1], Janmaat V[3], Ginter G[1], Mateusz Wierdak M[1], Kwiecień S[1], Śliwowski Z[1], Brzozowski T[1], Magierowski M[1,3]*

[1]Department of Physiology, Jagiellonian University Medical College, Krakow, Poland [2]Department of Forensic Toxicology, Krakow, Poland [3]Department of Gastroenterology and Hepatology, Erasmus University Medical Center, Rotterdam, The Netherlands

PP.34 **Efficacy of Echinomycin in hypoxia-inducible factor-mediated ocular angiogenesis**

Plastino F[1], Santana Garrido Á[1,2], Aronsson M[1], Mate Barrero A[2], Kvanta A[1], Vázquez Cueto CM[2], André H[1]

[1]Department of Clinical Neuroscience, St. Erik Eye Hospital, Karolinska Institutet, Stockholm, Sweden; [2]Department of Physiology, University of Seville, Spain

PP.35 **Ghrelin influence on neural differentiation of Adipose-derived mesenchymal Stem Cells**

Lo Furno D

Department of Biomedical and biotechnological sciences, University of Catania, Italy

PP.36 **Spatiotemporal coordination of nuclear cAMP signals via EPAC1**

Iannucci LF[1,3], Grisan F[1,2], Quotti Tubi L[1], Scorrano L[1,3], Di Benedetto G[1,2], Piazza F[1], Lefkimmiatis K[1,2]

[1]Foundation of Advanced Biomedical Research, Veneto Institute of Molecular Medicine,Padua, Italy, [2]Neuroscience Institute of Italian National Research Council, Padua, Italy, [3] Department of Biology, University of Padua, Italy

PP.37 **p53 system at the molecular crossroad regulating apoptosis/autophagy balance: natural bioactive compounds as small molecule killing tumours and dual targeting prodrug strategy**

Catalani E[1], Buonanno F[2], Zecchini S[3], Coazzoli M[4], Giovarelli M[4], Perrotta C[4], De Palma C[3], Clementi E[3,4], Marcantoni E[5], Ortenzi C[2], Fausto AM[1], Picchietti S[1], Cervia D[1].

[1]Department for Innovation in Biological, Agro-food and Forest systems (DIBAF), University of Tuscia, Viterbo, Italy; [2]Laboratory of Protistology and Biology Education, Department of Education, Cultural Heritage and Tourism, University of Macerata, Italy; [3]Unit of Clinical Pharmacology, University Hospital "Luigi Sacco"-ASST Fatebenefratelli Sacco, Milano, Italy; [4]Department of Biomedical and Clinical Sciences "Luigi Sacco" (DIBIC), University of Milano, Italy; [5]School of Sciences and Technologies, Università degli Studi di Camerino, Italy.

PP.38 **The Effect of Thymoquinone on Autophagy-related Proteins in 6-hydroxydopamine-Induced Neurodegeneration**

Tuzcu Gürkan F[1] , Bilgiç T[1], Şahbaz U[1], Birim D[2] , Ertürk M[3] , Armagan G[2] , Dağcı T[1]

[1]Department of Physiology, Ege University, Bornova, Izmir [2]Department of Biochemistry, Ege University, Bornova, [3]Department of Anatomy, Ege University, Bornova

PP.39 **Alternations of the alpha2 Na,K-ATPase Observed in Distinct Mice Models of Myodystrophy**

Kravtsova V[1], Bouzinova E[2], Matchkov V[2], Krivoi I[1]

[1]Department of General Physiology, St. Petersburg State University, Russia; [2]Department of Biomedicine, University of Aarhus, Denmark

PP.40 **Involvement of Chloride Channels in Alveolar Cells Response to Oxidative Stress**

Canella R[1], Benedusi M[2], Martini M[1], Cervellati F[1], Valacchi G[1-3]

[1]Department of Life Sciences and Biotechnology, University of Ferrara, Ferrara, Italy. [2]Department of Biomedical and Specialist Surgical Sciences, University of Ferrara, Italy. [3]Department of Animal Science, Plants for Human Health Institute, NC State University, Kannapolis, North Carolina, USA

PP.41 **Anti-oxidant and anti-steatotic effects of fucoidans isolated from marine algae and terrestrial plants**

El Rashed Z[1], Khalife H[2], Kanaan H[2], Allaria G[1], Voci A[1], Grasselli E[1], Canesi L[1], Demori I[1]

[1]Department of Earth, Environmental and Life Sciences, University of Genova, Italy; [2]Department of Biology, Lebanese University, Lebanon; [3]Laboratory of Chemical Synthesis and Extraction of Polysaccharides from Seaweed, Faculty of Pharmacy, Lebanese University, Lebanon.

PP.42 **Vesicle-Cloaked Virus Clusters Are Optimal Units for Inter-organismal Viral Transmission: Focus on the lipid analyses**

Lopalco P[1], Santiana M[2] Ghosh S[2], Ho BA[2], Rajasekaran V[1], Du W-L[2], Mutsafi Y[2], De Je´ sus-Diaz DA[3], Sosnovtsev SV[3], Levenson EA[3], Parra GI[4], Takvorian PM[5,6], Cali A[5], Bleck C[7], Vlasova AN[8], Saif LJ[8], Patton JT[9], Corcelli A[1], Green KY[3] Altan-Bonnet N[2]

[1]Department of Basic Medical Sciences, Neurosciences and Sensory Organs, University of Bari A Moro, Italy [2]Laboratory of Host-Pathogen Dynamics, National Heart Lung and Blood Institute, National Institutes of Health, Bethesda, MD, USA [3]Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, USA [4]U.S. Food and Drug Administration, Division of Viral Products, Silver Spring, MD, USA [5]Federated Department of Biological Sciences, Rutgers University, Newark, NJ, USA [6]Albert Einstein College of Medicine, Department of Pathology, Bronx, NY, USA [7]Electron Microscopy Core, National Heart Lung and Blood Institute, National Institutes of Health, Bethesda, MD, USA [8]Food Animal Health Research Program, Ohio Agricultural Research and Development Center, CFAES, Veterinary Preventive Medicine Department, College of Veterinary Medicine, The Ohio State University, Wooster, OH, USA [9]Department of Biology, Indiana University Bloomington, Bloomington, IN, USA

PP.43 **Chk1 regulates 17β-estradiol-induced cell proliferation.**

Bartoloni S, Leone S, Acconcia F

Department of Sciences, University Roma Tre, Rome, Italy.

PP.44 **Chemical functionalization of HA-Mg/Coll scaffold for bone tissue engineering**

Calabrese G[1], Petralia S[2], Dolcimascolo A[1], Zappalà A[1], Figallo E[3], Conoci S[4], Parenti R[1]

[1]Dept of Biomedical and Biotechnological Sciences, University of Catania, Italy [2]Applied Chemical Works, Paternò (CT), Italy [3]Fin-Ceramica Faenza, Italy [4]Distretto Tecnologico Micro e Nano Sistemi Sicilia, Catania, Italy

PP.45 **The Effect of Platelet-Rich Plasma in Inactive Form on the Burn Zone of Stasis in Rats**

Orhan E[1], Gündüz Ö[2], Kaya O[3], Metin MS[4], Tarladaçalışır YT[4].

[1]Department of plastic and reconstructive surgery, University of Gaziantep, Gaziantep, Turkey. Departments of [2]Pharmacology, [3]Physiology, and [4]Histology and embryology, University of Trakya, Edirne, Turkey.

PP.46 **Temperature-dependent Increase in the Calcium Sensitivity and Acceleration of Activation of ANO6 Chloride Channel Variants**

Lin H[1], Kim SJ[2], Nam JH[3,4]

[1]Department of Otorhinolaryngology, Yonsei University Republic of Korea [2]Department of Physiology, Seoul National University, Korea [3]Department of Physiology, Dongguk University Korea [4]Channelopathy Research Center (CRC), Korea

PP.47 **Human neuronal CDKL5 knockout cells: a novel tool for the characterization of cellular and molecular mechanisms underlying CDKL5 deficiency disorder phenotype**

Loi M, Trazzi S, Fuchs C, Medici G, Gennaccaro L, Elisa Ren E, Tassinari M, Galvani G, Ciani E.

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy

PP.48 **The effect of zero-glucose on uterine contractility**

Kaleta T, Wray S

Department of Molecular & Cellular Physiology, University of Liverpool, UK.

PP.49 **Expression levels of selected calcium homeostasis- and mitochondrial dynamics-related proteins in Wolframin1 deficient rats**

Kureková S[1], Zahradníkova AJr.[1,2], Cagalinec M[1,2,3]

[1]Centre of Biosciences, Slovak Academy of Sciences, Slovakia. [2]Biomedical Research Center, University Science Park of Biomedicine, Slovak Academy of Sciences, Slovakia. [3]Institute of Biomedicine and Translational Medicine, University of Tartu, Estonia.

PP.50 **Amphibian skin peptide macrotympanain A1 powerfully reduces lipid accumulation in a cellular model of hepatic steatosis**

Demori I[1], Lobasso S[2], Lopalco P[2], Corcelli A[2], Bellese G[3], Queirolo L[1], El Rashed Z[1], Millo E[4], Salvidio S[1], Canesi L[1], Cortese K[3], Grasselli E[1]

[1]Department of Earth, Environmental and Life Sciences, University of Genova, Italy; [2]Dipartimento di Scienze Mediche di base, Neuroscienze e Organi di Senso - Università degli Studi di Bari Aldo Moro - BA, Italia [3] Dipartimento di Medicina Sperimentale - Università degli Studi di Genova, Italia [4] Dipartimento di Medicina Sperimentale - Sezione di Biochimica - Center of Excellence for Biomedical Research (CEBR) - Università degli Studi di Genova, Italia

PP.51 **Role of disulfide bonding in modulation of Cx36 gap junction channel conductance by n-alcohols and general anesthetics**

Raškevičius V[1], Jotautis V[1], Rimkutė L[1], Marandykina A[1], Kairys V[2], Skeberdis VA[1]

[1]Institute of Cardiology, Lithuanian University of Health Sciences, Kaunas LT-50162, Lithuania; [2]Institute of Biotechnology, Vilnius University, Vilnius LT-10257, Lithuania

PP.52 **Induction of the apoptotic volume decrease (AVD) under normotonic conditions in HeLa cells exposed to Trolox**

Giordano ME, Caricato R, Schettino T, Lionetto MG

Department of Biological and Environmental Sciences and Technologies, Salento University, Lecce, Italy

PP.53 **Effect of O-GlcNAcylation of ICln in the regulation of cellular volume**

Remigante A[1,2], Costa R[1], Civello D[1], Morabito R[2], Nagy T[3], Marino A[2], Dossena S[1]

[1]Institute of Pharmacology and Toxicology, Paracelsus Medizinische Privatuniversität, Salzburg, Austria; [2]Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy; [3]Department of Laboratory Medicine, University of Pécs, Hungary

PP.54 **A novel Nrf2 activator protects retinal explants from oxidative stress and neurodegeneration**

Rossino MG[1], Amadio M[2], Govoni S[2], Dal Monte M[1,3], Casini G[1,3]

[1]Department of Biology, University of Pisa [2]Department of Drug Sciences, University of Pavia [3]Interdepartmental Research Center Nutrafood "Nutraceuticals and Food for Health", University of Pisa, Italy

PP.55 **Effects of alpha and beta glucans on immune modulating factors expression in enterocyte-like Caco-2 and goblet-like LS174 cells**

Damiano S[1], La Rosa G[1], D'Errico A[1], Del Buono A[2], Montanino C[2], De Felice B[2], Santillo M[1]

[1]Dipartimento di Medicina Clinica e Chirurgia, Università di Napoli "Federico II," Naples, Italy, [2]Dipartimento di Scienze e Tecnologie Ambientali Biologiche e Farmaceutiche, Università della Campania Luigi Vanvitelli, Caserta, Italy

PP.56 **Rat motor cortex neurons lose resistance to oxidative stress during postnatal development**

Gorton E[1], Castro C[2, 3], Pardillo-Díaz R[1], Nunez-Abades P[1, 3], Carrascal L[1, 3]

[1]Departamento Fisiología, Universidad Sevilla, Spain; [2]Departamento Fisiología, Universidad Cádiz, Spain; [3]Instituto de Biomedicina, Universidad Cádiz, Spain.

PP.57 **The use of recombinant allergens for the study of the allergic immune response in ragweed allergy**

Panaitescu C[1,2], Marusciac L[1,2], Buzan RM[1], Chen KW[1]

[1]Timisoara County Emergency Clinical Hospital Pius Brinzeu [2]Victor Babes University of Medicine and Pharmacy Timisoara

PP.58 **Kelch-like protein 33 may participate in regulating cytokinesis during epithelial mesenchymal transition**

Vázquez-Carretero MD[1], Morales-Capita C[2], Torres B[2], Rodriguez-Mateos C[2], Polo S[2], Pintor-Toro JA[2]

[1]Department of Physiology. University of Seville. Spain. [2]Department of Cell Cycle and Oncogenesis. Andalusian Molecular Biology and Regenerative Medicine Centre. Spain

PP.59 **TRP Expression Signature in Tumor-Derived Endothelial Cells: Functional Roles in Prostate Cancer Angiogenesis**

Bernardini M[1,2,3], Chinigò G[1], Brossa A[4], Grolez G[2,3], Genova T[1], Mattot V[6], Fromont-Hankard G[5], Munaron L[1], Bussolati B[4], Prevarskaya N[1,2], Fiorio Pla A[1,2,3], Gkika D[1,2]

[1]Department of Life Science and Systems Biology, University of Turin, Italy. [2]Inserm U1003, Université Lille 1, Villeneuve d'Ascq, France. [3]Laboratory of Excellence, Ion Channels Science and Therapeutics, Université de Lille 1, France. [4]Department of Molecular Biotechnology and Health Sciences, Molecular Biotechnology Centre, University of Turin Italy. [5]Inserm UMR 1069, Université de Tours, France. [6]Institute de Biologie de Lille, France

PP.60 **Neurogenesis in Brain Injuries Is Promoted by EOF2 A Diterpene that Activates Protein Kinase C Mediating Neuregulin Release**

Gómez-Oliva R[1,6], Domínguez-García S[1,6], Geribaldi-Doldán N[1,6], Ruiz FA[2,6], Nunez-Abades P[3,6], Carrascal L[3,6], Bolívar J[4,6], Macías-Sánchez AJ[5,6], Hernández-Galán R[5,6], Castro C[1,6]

[1]Área de Fisiología, Universidad Cádiz, Spain; [2]Área de Nutrición, Universidad Cádiz, Spain; [3]Departamento Fisiología, Universidad Sevilla, Spain; [4]Área de Bioquímica y Biología Molecular. Universiad de Cádiz, Spain; [5]Departamento de Química Orgánica, Universidad de Cádiz, Spain; [6]Instituto de Investigación Biomédica de Cádiz (INIBICA), Spain

PP.61 **Intraocular pressure lowering effect of new formulations of melatonin and agomelatine**

Locri F[1], Pezzino S[2], Pescosolido N[3], Pignatello R[4], Corsaro R[4], Cammalleri M[1], Bagnoli P[1], Dal Monte M[1], Rusciano D[2]

[1]Department of Biology, University of Pisa, Italy [2]Sooft Italia SpA, Montegiorgio, Italy [3]Department of Sense Organs, Sapienza University, Rome, Italy [4]Department of Drug Sciences, University of Catania, Italy

PP.62 **Contribution of GABAA and GABAB receptors in the modulation of contractile activity in human colon.**

Zizzo MG[1,2], Serio R[1]

[1]Dipartimento di Scienze e Tecnologie Biologiche Chimiche e Farmaceutiche (STEBICEF), Università di Palermo, Italy; [2]ATeN (Advanced Technologies Network) Center, Università di Palermo, Italy

PP.63 **The potential role of O-GlcNAcylation in diabetes and depression comorbidity**

Remigante A[1,2], Morabito R[2], Marino A[2], Dossena S[1]

[1]Institute of Pharmacology and Toxicology, Paracelsus Medizinische Privatuniversität, Salzburg, Austria; [2]Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy

PP.64 **Development of a polarized 3D organoid pancreatic ductular epithelium that recapitulates the normal ductual architecture and function**

Greco MR, Cannone S, Cozzolino M, Casavola V, Guerra l, Caroppo R, Reshkin SJ, Cardone RA

Department of Biosciences, Biotechnology and Biopharmaceutics, University of Bari, Italy

PP.65 **Lipid accumulation in hepatocytes impairs endothelial cell function in a manner dependent on the grade of hepatic steatosis**

Baldini F[1§], Khalil M[1], Fabbri R[1], Serale N[1], Voci A[1], Portincasa P[2], Vergani L[1]

[1]Department of Earth, Environment and Life Sciences, University of Genova, Italy; [2]Dept. of Biomedical Sciences and Human Oncology, University of Bari, Italy.

PP.66 **Usnic Acid: Does Protect Neurons from Glutamate Excitotoxicity?**

Gundogdu G[1], Taşçı Y[2], Nalci KA[3], Demirkaya Miloglu F[4], Hacimuftuoglu A[3]

[1]Department of Physiology, Pamukkale University, Turkey [2]Department of Physiology, Ataturk University, Turkey [3]Department of Pharmacology, Ataturk University, Turkey, [4]Department of Analytical Chemistry, Ataturk University, Turkey.

PP.67 **Vesicles-mediated release of AQP4 from glioblastoma cells: a communication mechanism?**

Simone L[1], Pisani F[2], Frigeri A[3], Svelto M[2], Vescovi AL[1], Binda E[1], Nicchia GP[2]

[1]Fondazione IRCCS Casa Sollievo della Sofferenza, Cancer Stem Cells Unit, San Giovanni Rotondo, Italy. [2]Department of Bioscience, Biotechnology and Biopharmaceutics and Centre of Excellence in Comparative Genomics, University of Bari Aldo Moro,Italy. [3]Department of Basic Medical Sciences, Neuroscience and Sense Organs, University of Bari Aldo Moro, Italy.

PP.68 **The Cytotoxic Effects of Suberosin Isolated from Ferulago cassia on SH-SY5Y Human Neuroblostoma Cells**

Gundogdu G[1], Yilmaz Tasci S[2], Nalci KA[3], Karakaya S[4], Hacimuftuoglu A[3]

[1]Department of Physiology, Pamukkale University, Turkey [2]Department of Physiology, Ataturk University, Turkey [3]Department of Pharmacology, Ataturk University, Turkey, [4]Department of Pharmacognosy, Ataturk University, Turkey.

PP.69 **Intracellular functions of protein C inhibitor (PCI)**

Resch U, Mihaly-Bison J, Sokolikova B, Furtmüller M, Uhrin P, Geiger M

Department of Vascular Biology and Thrombosis Research, Centre for Physiology and Pharmacology, Medical University Vienna, Austria

Room 3 - Morning (11.00 - 12.00)

FEPS GC Meeting

Room 1 - Morning (12.00 - 13.00)

Plenary SIF Lecture "Fabio Ruzzier"

Control of calcium in the heart: free and beyond

David Eisner

Unit of Cardiac Physiology, The University of Manchester, Manchester, United Kingdom

Introduced by **Corrado Poggesi (Florence, Italy)**

13.00 - 14.00 *Lunch break*

Room 1 - Afternoon (14.00 - 17.00)

Symposium - Neurophysiology 2 (Supported by SIF): Shaping integrative physiology during wakefulness and sleep by the hypocretin/orexin neurons

Organizer: **Giovanna Zoccoli (Bologna, Italy)**

Invited Speakers

14.00 **Thermoregulation and REM sleep expression: The energy allocation hypothesis and the role of hypocretins**

Schmidt MH

Department of Neurology, Bern University Hospital, Switzerland

14.30 **The hypocretin/orexin neurons as part of the central autonomic network: implications for cardiovascular control during wakefulness and sleep**

Silvani A

Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy

15.00 **The hypocretin/orexin circuit shapes wake behavior and EEG activity: repercussions for NREM sleep quality**

Vassalli A[1], Li S[1], Franken P[2], Tafti M[1]

[1]Department of Physiology, University of Lausanne, Switzerland; [2]Center for Integrative Genomics, University of Lausanne, Switzerland.

Oral Presentations

15.30 **Regulation by hypocretin (orexin) of excitatory postsynaptic potentials in layer V pyramidal neurons of murine prefrontal cortex (PFC)**

Colombo G[1], Coatti A[1], Vassalli A[2], Becchetti A[1]

[1]Department of Biotechnology and Biosciences, University of Milano-Bicocca, Italy; [2]Department of Physiology, University of Lausanne, Switzerland

15.45 **Effects of very low calorie ketogenic diet upon orexinergic system, visceral adipose tissue and ROS production**

Valenzano A[1], Polito R[1], Di Palma A[1], Aurora D[2], Di Maio G[3], Messina A[3], Monda V[3], Villano I[3], Monda M[3], Cibelli G[1], Messina G[1]

[1]Department of Clinical and Experimental Medicine, University of Foggia, Foggia, Italy; [2]Department of Biological and Pharmaceutical Environmental Sciences and Technologies, University of Campania "Luigi Vanvitelli", Caserta, Italy; [3]Department of Experimental Medicine, Section of Human Physiology and Unit of Dietetic and Sport Medicine, Università degli Studi della Campania "Luigi Vanvitelli", Naples, Italy

Room 1 - Afternoon (17.00 - 19.00)

General Assembly of the Italian Physiological Society (SIF) (Only for members)

Room 2 - Afternoon (14.00 - 16.00)

Symposium - Endocrine Physiology: Oxytocin, vasopressin and related peptides: novel functions and therapeutic potentials

Organizer: Sara Arrowsmith and Susan Wray (Liverpool, UK)

Invited Speakers

14.00 **Novel analogues of oxytocin and vasopressin to modulate human myometrial contraction**

Arrowsmith S

Harris-Wellbeing Preterm Birth Research Centre, Institute of Translational Medicine, University of Liverpool, UK

14.30 **Oxytocin in pain and associated disorders**

Charlet A

Centre National de la Recherche Scientifique, and University of Strasbourg Institute for Advanced Study (USIAS), France

15.00 **Septal oxytocin signaling and the regulation of social fear**

Menon R, Grossmann C, Neumann I

Department of Behavioural and Molecular Neurobiology, University of Regensburg, Germany

Oral Presentations

15.30 **Functional characterization of gain-of-function mutations of the V2 vasopressin receptor leading to nephrogenic syndrome of inappropiate antidiuresis (NSIAD)**

Ranieri M[1], Tamma G[1], Pellegrini T[1], Vezzi V[2], D'Ambrosio C[2], Di Mise A[1], Venneri M[1], Costa T[2], Cotecchia S[1], Valenti G[1]

[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari, Italy; [2]Department of Pharmacology, Istituto Superiore di Sanità, Italy

15.45 **Sexual differences in the adrenal structure and morphometry in the Saharan gerbil** *Gerbillus tarabuli* **(Thomas, 1902)**

Zatra Y[1,2], Aknoun-Sail N[2], Kheddache A[2], Benmouloud A[2], Charallah S[2], Khammar F[2], Amirat Z[2]

[1]Faculty of Nature and Life Sciences, University of Blida 1, Algeria; [2]Research Laboratory of Arid Lands, University of Science and Technology Houari Boumediene (USTHB), Algeria

Room 3 - Afternoon (14.00 - 16.00)

Workshop 5 - Exercise and Cardiovascular Physiology

Chairs: Guido Ferretti (Brescia, Italy) and William E. Louch (Oslo, Norway)

Oral presentations

14.00 **Non-invasive assessment of the vascular baroreflex arm**

Javorka M[1], Krohova J[1], Czippelova B[1], Turianikova Z[1], Mazgutova N[1], Wiszt R[1], Lazarova Z[1], Faes L[2,3]

[1]Department of Physiology and Biomedical Centre Martin (BioMed Martin), Jessenius, Comenius University, Martin, Slovakia; [2]Department of Energy, Information engineering and Mathematical models (DEIM), University of Palermo, Italy; [3]BIOtech Center of the Department of Industrial Engineering, University of Trento, Italy

14.15 **Light Sensitive conjugated polymers optically tune the fate of Endothelial Progenitor Cells**

Lodola F[1], Tullii G[1], Desii A[1], Tapella L[2], Catarsi P[3], Rosti V[3], Lim D[2], Moccia F[4], Antognazza MR[1]

[1]Center for Nano Science and Technology, IIT@PoliMi, Milano, Italy; [2]Department of Pharmaceutical Sciences, University of Eastern Piedmont "Amedeo Avogadro", Novara, Italy; [3]Center for the Study of Myelofibrosis, Research, Foundation IRCCS Policlinico San Matteo, Pavia, Italy; [4]Department of Biology and Biotechnology "Lazzaro Spallanzani", University of Pavia, Italy.

14.30 **Advanced Morpho-Functional Analysis on Ventricular and Atrial Tissue Reveals Cross-Bridge Kinetics Alterations and Sarcomere Energetic Impairment in HCM Patients**

Vitale G, Lazzeri E, Costantini I, Giardini F, Piroddi N, Scellini B, Pioner JM, Ferrantini C, Tesi C, Sacconi L, Poggesi C

University of Florence, Italy

14.45 **The effect of gender differences on cardiac ischemic preconditioning in chronic kidney disease**

Sárközy M[1*], Márványkövi F[1*], Szűcs G[1], Gáspár R[1], Dajka D[1], Siska A[2], Földesi I[2], Csont T[1] (*these authors are equally contributed)

[1]MEDICS Group, Department of Biochemistry, University of Szeged, Szeged, Hungary; [2]Department of Laboratory Medicine, University of Szeged, Szeged, Hungary

15.00 **Cardiovascular kinetics during moderate3intensity arm and leg exercise: a preliminary report**

Bruseghini P[1], Vinetti G[1], Taboni A[2], Fagoni N[1], Ferretti G[1,2]

[1]Department of Molecular and Translational Medicine, University of Brescia [2]Departments APSI and NEUFO, University of Geneva

15.15 **Effects of hormone replacement therapy in combination with swimming exercise and/or melatonin on oxidative tissue damage in postmenopausal rats**

Tamer SA[1], Altınoluk T[1], Emran M[2], Korkmaz S[2], Yüksel RG[2], Baykal Z[2]. Dur ZS[2], Levent HN[3], Ural MA[4], Yüksel M[5], Çevik O[4], Ercan F[3], Yıldırım A[1], Yeğen BÇ[1]

[1]Marmara University, Department of Physiology, Istanbul, Turkey; [2]Marmara University, Istanbul, Turkey; [3]Marmara University, Department of Histology & Embryology, Istanbul, Turkey; [4]Adnan Menderes University, Department of Biochemistry, Aydin, Turkey; [5]Marmara University, Department of Medical Laboratory, Istanbul, Turkey

15.30 **Heart Rate Kinetics and Sympathovagal Balance Accompanying a Maximal Sprint Test**
Storniolo J, Esposti R, Cavallari P
Human Physiology Section of the De.P.T., Università degli Studi di Milano, Italy

15.45 **The Acute Effect of High-Intensity Interval Training on Energetic Substrate Oxidation Rate During Exercise and 1-Hour Post-Exercise Period in Young, Normal-Weight Women**
Tiltina K, Ozolina-Moll L
Department of Human and Animal Physiology, University of Latvia, Latvia

Room 4 - Afternoon (14.00 - 16.00)

Workshop 6: Animal and Environmental physiology

Chairs: **Laura Canesi (Genova, Italy) and Maria Carmela Cerra (Cosenza, Italy)**

Oral Presentations

14.00 **Estrogens in molluscs revisited: not hormones but powerful exogenous modulators of physiological functions?**
Canesi L[1], Ciacci C[2], Balbi T[1]
[1]Department of Earth, Environment and Life sciences-DISTAV, University of Genoa, Italy; [2]Department of Biomolecular Sciences, DISB, University of Urbino "Carlo Bo", Italy

14.15 **Slc15a1 transporters in teleosts fish: PepT1a and PepT1b, comparative functional studies**
Vacca F[1], Bossi E[1], Gomes AS[2], Cinquetti R[1], Barca A[3], Verri T[3], Murashita K[2,4], Rønnestad I[2]
[1]Department of Biotechnology and Life Sciences, University of Insubria, Italy. [2]Deptartment of Biological Sciences, University of Bergen, Norway. [3]Department of Biological and Environmental Sciences and Technologies, University of Salento, Italy. [4]National Research Institute of Aquaculture, and Fisheries Research and Education Agency, Japan

14.30 **5 Cardiac adaptation to hypoxia: the role of beta3-adrenoceptors in the goldfish (*Carassius auratus*)**
Imbrogno S., Filice M, Leo S, Mazza R, Gattuso A, Cerra MC
Deptartment of Biology, Ecology and Earth Sciences (B.E.ST), University of Calabria, Italy

14.45 **Sensitivity of carbonic anhydrase to metal exposure in the model organisms *Mytilus galloprovincialis: in vitro*, *in vivo* and in field approach**
Caricato R[1], Salmina S[2], Giordano ME[1], Schettino T[1], Lionetto MG[1]
[1]Dept. of Biological and Environmental Sciences and Technologies, University of Salento, Italy; [2]University of Ghent, Belgium

15.00 **Adverse effects of sunscreen agents on a marine flatfish: oxidative stress and energetic profiles in response to titanium dioxide nanoparticles and oxybenzone**
Pereira B1, Carvalhais A1, Sabato M2, Dolbeth M3, Marques A1, Guilherme S1, Pacheco M1, Mieiro C1
[1]CESAM and Department of Biology, University of Aveiro, Portugal; [2]Università degli Studi di Messina, Italy; [3]CIIMAR, University of Porto, Portugal

15.15 **Effects of long-term treatment of the green olive leaf extract (OLE) and functional responses in renal cells exposed to low doses of cadmium**

Ranieri M[1], Di Mise A[1], Difonzo G[2], Centrone M[1], Venneri M[1], Pellegrino T[1], Russo A[1], Mastrodonato M[3], Caponio F[2], Valenti G[1,4,5], Tamma G[1,4]

[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari Aldo Moro, Italy; [2]Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy; [3]Department of Biology, University of Bari Aldo Moro, Italy; [4]Istituto Nazionale di Biostrutture e Biosistemi (I.N.B.B.), Italy; [5]Center of Excellence in Comparative Genomics (CEGBA), University of Bari, Italy.

15.30 **Diversity in proton movement and coupling to substrate in vertebrate PepT1 proteins: filling the gaps through the 'phylogenetic' approach**

Verri T[1], Bossi E[2], Barca A[1], Del Vecchio G[1,4], Mazzei A[1], Piccinno P[1,§,] Vacca F[2], Cinquetti R[2], Murashita K[3,4], Gomes AS[4], Rønnestad I[4]

[1]Department of Biological and Environmental Sciences and Technologies, University of Salento, Italy; [2]Department of Biotechnology and Life Sciences, University of Insubria, Italy; [3]National Research Institute of Aquaculture and Fisheries Research and Education Agency, Japan; [4]Department of Biological Sciences, University of Bergen, Norway; §present affiliation: University of Trento, Italy

16.00 *Coffee break*

16.00 - 18.00

Poster Session IV (Poster Area)

Poster session IV (1/4) - Cardiovascular Physiology

PP.70 **A platform for assessing pro- and anti-arrhythmic effects of drugs based on isogenic human iPSC-derived cardiomyocytes**

Campostrini G[1], Sala L[1], Ward-van Oostwaard D[1], van Meer B[1], Tertoolen LGJ[1], Bartulos-Encinas O[2], Braam SR[2], IJzerman AP[3], Mummery CL[1], Bellin M[1]

[1]Dept of Anatomy and Embryology, Leiden University Medical Center, Leiden, The Netherlands; [2]Ncardia BV, The Netherlands; [3]Leiden Academic Centre for Drug Research, Leiden University, The Netherlands

PP.71 **Baroreflex sensitivity: a fast tilt test study on humans**

Taboni A[1], Fontolliet T[1], Moia C[1], Ferretti G[1,2]

[1]Department of Anaesthetics, Pharmacology, Intensive Care and Emergencies, University of Geneva, Switzerland; 2Department of Molecular and Translational Medicine, University of Brescia, Italy

PP.72 **Effects of phenylephrine on bioelectric activity of the rat atrial septum myocardium**

Pustovit K[1,2], Malolina E[3]

[1]Department of Human and Animal Physiology, Lomonosov Moscow State University, Russian Federation; [2]Department of Physiology, Pirogov Russian National Research Medical University, Russian Federation; [3]Laboratory of evolutionary biology of development, Koltzov Institute of Developmental Biology of Russian Academy of Sciences, Russian Federation

PP.73 **The effect of chamber-rest on electrophysiology of the heart in young people**

Škrda D, Svorc Jr P, Jarkuliš V, Michalčák T, Kmet S, Marko A

Dep. of Physiology and Pathophysiology, University of Ostrava, Czech Republic

PP.74 **Beat-to-beat variability of pulse wave velocity**

Svacinova J[1], Hidegová S[2], Sieglová H[1], Kaščáková Z[1], Fabšík M[1], Jakubík J[1,2], Novák J[1], Nováková Z[1], Hrušková H[1,2]

[1]Department of Physiology, Faculty of Medicine, Masaryk University, Czech Republic; [2]International Clinical Research Center, St. Anne's University Hospital Brno, Czech Republic

PP.75 **Autonomic regulation in young healthy subjects during the short-term "dry" immersion**

Gerasimova-Meigal L, Sireneva N, Meigal A

Department of Human and Animal Physiology, Pathophysiology, Petrozavodsk State University, Russian Federation

PP.76 **Glucose-stressed human brain microvascular endothelial cells: preventive role of nutritional compounds.**

Bassino E[1*], Bramardi B[1], Gasparri F[2], Munaron L[1]

[1]Department of Life Sciences and Systems Biology, University of Turin, Italy; [2]Department of Pharmacy, University of Salerno, Italy

PP.77 **Antagonism of prostaglandin F2a-FP receptor signaling inhibits spreading depolarization in cerebral ischemia**

Varga DP, Szabó I, Varga VE, Menyhárt A, Bálint AR, Farkas E, Bari F

Department of Medical Physics and Informatics, University of Szeged, Hungary

PP.78 **H_2S induces pro-angiogenic effects and decreases ischemia/reperfusion injury in human microvascular endothelial cells**

Zicola E, Arrigo E, Mancardi D

Department of Clinical and Biological Sciences, University of Turin, Italy

PP.79 **Angiotensin II Infusion Changes Hypoxia-Inducible Factor 1 (HIF-1) And Its Accompanying Genes Expression in Cerebral Microcirculation of High Salt Fed Sprague-Dawley Rats**

Matić A[1], Mihaljević Z[1], Šušnjara P[1], Kolobarić K[1], Stupin A[1,2], Drenjančević I[1]

[1]Institute and Department of Physiology and Immunology, Faculty of Medicine Osijek, [2]Faculty of Dental Medicine and Health Sciences Osijek, Josip Juraj Strossmayer University of Osijek, Croatia

PP.80 **Role of endothelial cells in the process of osteo-differentiation and bone formation**

Genova T[1,2], Petrillo S[3], Zicola E[4], Tolosano E[3], Altruda F[3], Carossa S[2], Mussano F[2], Munaron L[1]

[1]Department of Life Sciences and Systems Biology, UNITO, via Accademia Albertina 13, Turin, Italy; [2]CIR DS, Department of Surgical Sciences UNITO, via Nizza 230, Turin, Italy; [3]Department of Molecular Biotechnology and Health Sciences, UNITO, Via Nizza 52, Turin, Italy; [4]Department of Clinical and Biological Sciences, UNITO Orbassano

PP.81 **Effects of Ketamine-Xylazine anesthesia on hemorheological parameters: A rat model**

Akbudak I[1], Kilic-Erkek O[2], Tuzcu EB[2], Pakyurek H[2], Bor-Kucukatay M[2]

[1]Pamukkale University Hospital, Department of Anesthesia and Reanimation, Denizli, Turkey [2]Pamukkale University, Faculty of Medicine, Department of Physiology, Denizli, Turkey

PP.82 **Postocclusive reactive hyperemia of the cutaneous microcirculation: impact of different mechanisms**

Lenasi H

Faculty of Medicine, University of Ljubljana

PP.83 **Purinergic Calcium Signals in Tumor-Derived Endothelium**

Scarpellino G[1], Genova T[1,2], Avanzato D[3], Bernardini M[1], Bianco S[4], Petrillo S[5], Tolosano E[5], Bussolati B[5], Fiorio Pla A[1], Munaron L[1]

[1]Department of Life Sciences & Systems Biology, University of Torino, Italy; [2]Department of Surgical Sciences, University of Torino, Italy; [3]Department of Oncology, University of Torino, Italy; [4]Department of Public Health and Pediatrics, University of Torino, Italy; [5]Department of Molecular Biotechnology and Health Sciences, University of Torino, Italy

PP.84 **Skin hyperemic response to compression**

Seddone S, Messere A, Roatta S

University of Turin, Italy

PP.85 **KV7 and BKCa channels mediate GYY4137 and sodium hydrogen sulfide induced relaxation of rat mesenteric small arteries**

Abramavicius S

Lithuanian University of Health Sciences

PP.86 **Effect of low-density lipoproteins (LDL) on lymphatic vessel intrinsic contractility**

Solari E, Marcozzi C, Negrini D, Moriondo A

Department of Medicine and Surgery, University of Insubria, Varese, Italy

PP.87 **Physiological levels of sympatho-chromaffin Chromogranin A exert potent cardioprotection against doxorubicin-induced cardiotoxicity**

Rocca C[1], Scavello F[1], Colombo B[3], Gasparri AM[3], Dallatomasina A[3], Granieri MC[1], Amelio D[1], Pasqua T[1], Cerra MC[1,2], Tota B[1,2], Corti A[3] Angelone T[1,2]

[1]Department of Biology, E. and E.S., University of Calabria, Rende (CS), Italy; [2]National Institute of Cardiovascular Research (INRC), Bologna, Italy; [3]San Raffaele Vita-Salute University and IRCCS San Raffaele Scientific Institute, Milan, Italy

PP.88 **The effect of the preimplantation factor on the cardiac expression of miR-21 in radiationinduced heart disease**

Kovács MG[1], Kiscsatári L[2], Varga Z[2], Kővári B[3], Fábián G[2], Cserni G[3], Thum T[4], Csont T[1], Bátkai S[4], Barnea E[5], Kahán Z[2*], Sárközy M[1*]

[1]Department of Biochemistry, University of Szeged, Hungary; [2]Department of Oncotherapy, University of Szeged, Hungary; [3]Department of Pathology, University of Szeged, Hungary; [4]Hannover Medical School, IMTTS, Hannover, Germany; [5]BioIncept LLC, Cherry Hill, New Jersey, USA

PP.89 **Phoenixin14 induces cardioprotection as post-conditioning agent in rats with high-fat diet induced obesity**

Pasqua T[1], Rocca C[1], Granieri MC[1], Palasz A[2], Cerra MC[3,4], Angelone T[1,4]

[1]Department of Biology, E. and E.S., University of Calabria, 87036 Rende (CS), Italy; [2]Department of Histology, Medical University of Silesia, ul. Medyków 18, 40-752, Katowice, Poland; [3]Department of Biology, E. and E.S., University of Calabria, 87036 Rende (CS), Italy; [4]National Institute of Cardiovascular Research (INRC), Bologna, Italy.

PP.90 **The potential role of miR-125b and its target chemokine ligand 21 (CCL21) in the development of uremic cardiomyopathy**

Kovács Z[1], Sárközy M[1], Gáspár R[1], Siska A[2], Kővári B[3], Szabó M[1], Bodai L[4], Zsindely N[4], Cserni G[3], Földesi I[2], Thum T[5], Bátkai S[5], Csont T[1]

[1]Department of Biochemistry, University of Szeged, Hungary; [2]Department of Laboratory Medicine, University of Szeged, Hungary [3]Department of Pathology, University of Szeged, Hungary [4]Department of Biochemistry and Molecular Biology, University of Szeged, Hungary [5]IMTTS, Hannover Medical School, Germany

PP.91 **Comparison of Sertraline Usage on Human and Rat Atrium**

Solak Gormus ZI[1], Solak H[1], Ozen Koca R[1], Gormus N[2]

[1]Department of Physiology, [2]Department of Cardiovascular Surgery, University of Necmettin Erbakan, Meram Medical School, Turkey

PP.92 **Inotropic Effects of Combined MgSO4 and Sertraline Administration on Rat Atrium**

Fidan E, Solak Gormus ZI

NEU Meram Faculty of Medicine, Department of Physiology, Konya TURKEY

PP.93 **Trimethylamine N-oxide fails to impact viability, ROS production and mitochondrial membrane potential of adult rat cardiomyocytes**

Querio G[1], Antoniotti S[1], Levi R[1], Gallo MP[1]

[1]Department of Life Sciences and Systems Biology, University of Turin, Italy

PP.94 **Comparison of Saphena with Sertraline and Alarin On Human**

Solak Gormus ZI[1], Ozen Koca R[1], Solak H[1]

[1]Department of Physiology, University of Necmettin Erbakan, Meram Medical School, Turkey

PP.95 **Interrupted administration of sevoflurane improves circulating levels and functional properties of endothelial progenitor cells in patients undergoing coronary angioplasty**

Vlad A[1,2], Niculescu L[3], Stancu C[4], Popescu M[1,2], Stanca I[2], Corneci D[1,2], Ceafalan L[1,4], Gilca M[1], Surcel M[4], Popescu AC[1,2], Dimulescu D[1,2]

[1]'Carol Davila' University of Medicine and Pharmacy, Romania;[2]'Elias' University Emergency Hospital, Romania; [3]'Nicolae Simionescu' Insititute of Cellular Biology and Pathology, Romania; [4]'Victor Babes' National Institute, Romania

PP.96 **Protective effect of delayed phase of remote preconditioning in the rat heart is not blunted by acute STZ diabetes**

Ravingerová T[1], Murarikova M[1], Kindernay L[1], Farkašová V[1], Ferko M[1], Duris Adameova A[1,2]

[1]Institute for Heart Research, Centre of Experimental Medicine, Slovak Academy of Sciences; [2]Faculty of Pharmacy, Comenius University, Bratislava, Slovakia

PP.97 **Venous Pulse Wave Velocity**

Ermini L[1], Pastore L[2], De Benedictis C[2], Ferraresi C[2], Roatta S[1]

[1]Dept. Neuroscience Sect. Physiology, University of Turin, Italy; [2]Dept. Mechanical Engineering, Polytechnic of Turin, Italy;

PP.98 **Platelet function and autonomic nervous system dysregulation in newly diagnosed hypertensive condition**

Grossini E[1], De Zanet D[1], Migliavacca S[2], Pirisi M[2], Rolla R[3]

[1]Department of Translational Medicine, Laboratory of Physiology, University East Piedmont, Italy; [2]Department Translational Medicine, Internal Medicine Unit, University East Piedmont, Italy; [3]Department Health of Sciences, Clinical Chemistry, University East Piedmont, Italy

PP.99 **Effect of Synchronized Muscle Contraction and Heartbeat on Blood Flow.**

Giuriato G[1], Ruzzante F[1], Tarperi C[1], Bortolan L[1], Cevese A[1], Schena F[1], Venturelli M[1,2]

[1]Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona, Italy; [2]Department of Internal Medicine, University of Utah, USA

PP.100 **Effect of long-term passive stretching of the knee extensor and plantar flexor muscles on vascular function**

Esposito F, Bisconti AV, Longo S, Shokohyar S, Rampichini S Borrelli M, Doria C, Limonta E, Coratella G, Cè E.

Department of Biomedical Sciences for Health, Università degli Studi di Milano, Italy

PP.101 **Non-genomic effects of calcitriol (1,25-dihydroxyvitamin D3) on transient receptor potential canonical 3 channels (TRPC3) in cardiac ventricular fibroblasts**

Nakhl S[1,2], Saliba Y[1], Chahine R[2], Fares, N[1]

[1]Laboratory of Physiology and Pathophysiology, Faculty of Medicine, Saint Joseph University of Beirut, Lebanon; [2]Faculty of Medical Sciences, Lebanese University, Beirut, Lebanon. Funded: National Council for Scientific Research-Lebanon (CNRSL).

PP.102 **Arterial stiffness in obese adolescents: contribution of peripheral circulation**

Czippelova B[1], Turianikova Z[1], Krohova J[1], Mazgutova N[1], Wiszt R[1], Lazarova Z[1], Pozorciakova K[2], Ciljakova, M[2,3], Javorka M[1]

[1]Comenius University in Bratislava, Jessenius Faculty of Medicine in Martin, Department of Physiology and Biomedical Centre Martin, Martin, Slovakia; [2]Comenius University in Bratislava, Jessenius Faculty of Medicine in Martin and University Hospital Martin, Clinic of Children and Adolescents, Martin, Slovakia; [3]National Endocrinological and Diabetes Institute in Lubochna, Slovakia

PP.103 **Effect of cerium oxide on ischemia reperfusion injury in skeletal muscle rats**

Küçük A[1], Polat Y[2], Sungu N[3], Kilicarslan A[3], Kartal H[4], Tatar T[5], Arslan M[6]

[1]Department of Physiology, Kutahya Health Sciences University Turkey; [2]Department of Cardiovascular Surgery, Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, Istanbul-Turkey; [3]Department of Pathology, Yildirim Beyazit University Ankara Turkey; [4]Department of Cardiovascular Surgery, Gulhane Gulhane Education and Research Hospital, Ankara-Turkey; [5]Department of Cardiovascular Surgery, Gazi University AnkaraTurkey; [6]Department of Anaesthesiology and Reanimation, Gazi University, Ankara-Turkey

PP.104 **Sex-Related Differences of Blood Pressure in Older Ren-2 Transgenic Rats**

Rauchová H, Hojná S, Kadlecová M, Vaněčková I, Zicha J

Institute of Physiology of the Czech Academy of Sciences, Prague, Czech Republic

PP.105 **Effect of smoking on endothelial function in healthy adolescents**

Mazgutova N, Czippelova B, Krohova J, Wiszt R[1], Turianikova Z, Kosutova P, Javorka M

Department of Physiology and Biomedical Center Martin, Comenius University in Bratislava, Jessenius Faculty of Medicine, Martin, Slovak Republic

PP.106 **The role of the mitochondrial permeability transition pore - regulating proteins in relation to metabolic preconditioning**

Andelová N[1], Waczulíková I.[2], Szeiffová Bačová B[1], Farkašová V[1], Ravingerová T[1], Ferko M[1]

[1]Center of Experimental Medicine, Slovak Academy of Sciences, Institute for Heart Research, Bratislava, Slovak Republic; [2]Department of Nuclear Physics & Biophysics, Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava, Slovak Republic

PP.107 **Inhibition of RAS components attenuates progression of heart failure and its adverse consequences on myocardial extracellular remodeling and PKC signaling in normotensive rats with aorto-caval fistula**

Sykora M[1], Kratky V[2], Kopkan L[2], Tribulova N[1], Barancik M[1], Cervenka L[2], Szeiffová Bačová B[1].

[1]Institute for Heart Research, Centre of Experimental Medicine, Slovak Academy of Sciences, Bratislava, Slovak Republic; [2]Institute of Clinical and Experimental Medicine, Prague, Czech Republic

PP.108 **Heart Rate Variability Mechanisms Analysed by Multiscale Information Decomposition**

Krohova J[1], Czippelova B[1], Turianikova Z[1], Mazgutova N[1], Wiszt R[1], Faes L[2,3], Javorka M[1]

[1]Department of Physiology and Biomedical Center Martin, Comenius University, Jessenius Faculty of Medicine, Slovakia; [2]Department of Energy, Information engineering and Mathematical models (DEIM), University of Palermo, Italy; [3]BIOtech Center of the Department of Industrial Engineering, University of Trento, Italy

PP.109 **The Effect of Hypnosis on Systolic Blood Pressure**

Sunar F[1], Solak Gormus ZI[2]

[1]Karatay University Faculty of Medicine, Department of Medical Education, Konya, Turkey [2]NEU Meram Medical Faculty, Department of Physiology, Konya, Turkey

PP.110 **The effect of lower body negative pressure on phase 1 cardiovascular responses at exercise onset in healthy humans**

Fontolliet T[1], Fagoni N[2], Bruseghini P[2], Capelli C[3,4], Lador F[5], Moia C[1], Tam E[4], Bringard A[5], Ferretti G[1,2]

[1]Département d'Anesthésiologie, Pharmacologie et Soins Intensifs, Université de Genève, Switzerland, [2]Department of Molecular and Translational Medicine, University of Brescia, Italy, [3]Department of Physical Performances, Norwegian School of Sport Sciences, Norway, [4]Dipartimento di Scienze Neurologiche e della Visione, Università di Verona, Italy, [5]Division de Pneumologie, Département des Spécialités de Médecine, Hôpitaux Universitaires de Genève, Switzerland

PP.111 **Effects of wild-type and mutant forms of atrial natriuretic peptide on cardiac fibrosis in type-2 diabetes**

Bakhos JJ, Saliba Y, Hajal J, Fares, N

Laboratory of Physiology and Pathophysiology, Faculty of Medicine, Saint Joseph University of Beirut, Lebanon.

PP.112 **Cardiovascular responses and baroreflex sensitivity during apnoea phase 1 in spinal cord injury**

Camelio S[1], Morelli D[2], Taboni A[3], Vinetti G[4], Fagoni N[4], Ferretti G[3,4]

[1]School of Specialization in Sports Medicine, University of Brescia, Italy; [2]U.O.R.R.F., Casati Hospital, Passirana di Rho (Mi), Italy; [3]Department of Anesthesiology, Pharmacology, Intensive Care and Emergencies, University of Geneva, Switzerland; [4]Department of Molecular and Translational Medicine, University of Brescia, Italy

PP.113 **Search for the source of the retinal relaxing factor**

Vanden Daele L[1], Boydens C[1], Devoldere J[2], Remaut K[2], Van de Voorde J[1]

[1]Department of Pharmacology, Ghent University, Ghent, Belgium, [2]Laboratory of General Biochemistry and Physical Pharmacy, Ghent University, Ghent, Belgium

PP.114 **Pannexin 1 is a participant of purinergic signaling in murine basilar artery**

Kiryukhina OO[1,2], Tarasova OS[1,2,3]

[1]Institute for Biomedical Problems RAS, Moscow, Russian Federation; [2]Institute for Information Transmission Problems, RAS, Moscow, Russian Federation; [3]Faculty of Biology, M.V. Lomonosov Moscow State University, Moscow, Russian Federation

PP.115 **Effects of mandibular extension on systemic arterial blood pressure in spontaneously hypertensive rats: probable involvement of calcitonin gene-related peptide**

Lapi D[1], Saracino L[2], Federighi G[2], Del Seppia C[3], Sabatino L[3], Di Maro M[1], Colantuoni A[1], Scuri R[2]

[1]Department of Clinical Medicine and Surgery, "Federico II", Naples, Italy; [2]Department of Traslational Research on new Technologies in Medicine and Surgery, University of Pisa, Italy; [3]CNR Institute of Clinical Physiology, Pisa, Italy

Poster session IV (2/4) - Exercise Physiology

PP.116 **Physical and psycho-physiological responses to self-paced running exercise following partial sleep deprivation**

Souissi W, Hammouda O, Ayachi M, Khcharem A, de Marco G, Souissi M, Driss T

Research Center on Sport and Movement (CeRSM, EA 2931), UFR STAPS, Paris Nanterre University, Nanterre, France

PP.117 **The VO_2 Slow Component: is there such a thing?**

Colosio AL[1], Caen K[2], Bourgois J[2], Boone J[2], Pogliaghi S[1]

[1]Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Italy; [2]Department of Movement and Sports Sciences, Ghent University, Belgium

PP.118 **Cardiovascular drift and left ventricular performance during prolonged exercise at moderate intensity**

Laginestra, FG[1,2], Wang E[2], Berg OK[2], Nyberg SK[2], Venturelli M[1], Helgerud, J[2]

[1]Department of Neuroscience, Biomedicine, and Movement Sciences, University of Verona, Verona. [2]Department of Circulation and Imaging, Faculty of Medicine, Norwegian University of Science and Technology, Trondheim, Norway

PP.119 **Acute static stretching does not alter balance control ability: the role of neuromuscular activation**

Cè E, Longo S, Shokohyar S, Coratella G, Bisconti AV, Rampichini S, Borrelli M, Doria C, Limonta E, Esposito F

Department of Biomedical Sciences for Health, Università degli Studi di Milano, Milan, Italy

PP.120 **Estimating metabolic rates during daily living activities in people with multiple sclerosis**

Manca A[1], Martinez G[1], Ventura L[1], Aiello E[2], Deriu F[1]

[1]Department of Biomedical Sciences, University of Sassari, Sassari, Italy; [2]Department of Experimental, Medical and Surgical Sciences, University of Sassari, Sassari, Italy

PP.121 **Oxygen Uptake efficiency slope can accurately track changes of cardiorespiratory fitness early after heart transplant**

Allam M[1], Teso M[1], Borrelli E[2], Grassi B[3], Pogliaghi S[1]

[1] Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Italy; [2]Department of Surgery and Bioengineering, University of Siena, Italy; [3]Department of Medicine, University of Udine, Italy

PP.122 **Title. Effect of a re-training protocol (3X3) in obese women**

Guedjati MR[1]. Silini S[2]. Bouznita Z[3]

[1]Faculty of medicine University of Batna; [2]Department of Physiology University Hospital of Batna; [3]Department of Epidemiology University Hospital of Batna

PP.123 **Equivalent Load calculation for exercise prescription: validation of a new model**

Pogliaghi S[1], Colosio AL[1], Iannetta D[2], Caen K[3], Keir DA[4], Boone J[3], Murias JM

[1]Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Italy; [2]Faculty of Kinesiology, University of Calgary, Canada; [3]Department of Movement and Sports Sciences, Ghent University, Belgium; [4]Department of Cardiology, University Health Network, Toronto, Canada

PP.124 **Physical activity among medical students**

Gotia SL[1], Borza C[2], Mederle A[2]

[1]Department of Physiology, University of Medicine and Pharmacy "Victor Babes", Timisoara, Romania; [2]Department of Pathophysiology, University of Medicine and Pharmacy "Victor Babes", Timisoara, Romania

PP.125 **Peripheral capillary oxygen saturation in relation to aerobic capacity during Himalayas trek**

Girgis Kalim A[1], Ruzic L[2]

[1]Antonine University, Baabda, Lebanon; [2]Dpt. Of Sport and Exercise Medicine, Faculty of Kinesiology, University of Zagreb, Croatia

PP.126 **Effect of pulsed electromagnetic fields (PEMFs) on the VO_2 kinetics**

Trofè A[1], Raffi M[2], Campa F[2], Toselli S[2], Muehsam D[2], Piras A[2]

[1]Department for Life Quality Studies, University of Bologna, Italy; [2]Department of Biomedical and Neuromotor Sciences, University of Bologna, Italy

PP.127 **Effects of additional loads during self-resistance exercises**

Zbidi S, Zinoubi B, Vandewalle H, Driss T

Research Center on Sport and Movement (CeRSM, EA 2931), UFR STAPS, Paris Nanterre University, Nanterre, France

PP.128 **Cognitive and Vascular effects of Exercise in patients with Alzheimer's Disease**

Pedrinolla A, Fonte C, Smania N, Schena F, Venturelli M

University of Verona, Verona, Italy

PP.129 **Physical exercise prior to hindlimb unloading protects gastrocnemius from disuse atrophy**

Brocca L[1], Pezzini C[1], Rossi M[1], Bottinelli R[1,3,4], Pellegrino MA[1,2,3]

[1]Department of Molecular Medicine, University of Pavia, Italy; [2]Interdipartimental Centre for Biology and Sport Medicine, University of Pavia, Italy; [3]Interuniversity Institute of Myology; [4]Fondazione Salvatore Maugeri (IRCCS), Scientific Institute of Pavia, Italy

PP.130 **Effect of whole-body vibrations on muscular activation during walking**

Bazzucchi I[3], Nicolò A[3], Chadefaux D.[4], Marchetti E.[1], Fattorini L[2], Tarabini M[4], Di Giovanni R[1], Tirabasso A[1], Felici F[3]

[1]Italian National Institute for Insurance against Accidents at Work, Department of medicine, epidemiology, workplace and environmental hygiene, Monte Porzio Catone (RM), Italy; [2]Sapienza University of Roma, Department of Physiology and Pharmacology "V. Erspamer", Rome, Italy; [3]University Foro Italico of Roma, Department of Movement, Human and Health Sciences, Italy; [4] Politecnico di Milano, Department of Mechanics, Polo Territoriale di Lecco, Italy

PP.131 **Effect of pedalling cadence on respiratory frequency during different exercise intensity domains**

Nicolò A, Girardi M, Bazzucchi I, Felici F, Sacchetti M

Department of Movement, Human and Health Sciences, University of Rome "Foro Italico", Rome, Italy

PP.132 **The physiological impact of a short-term cardiac rehabilitation program on activities of daily living in elderly patients with chronic heart failure**

Paneroni M[1,2], Scalvini S[1], Simonelli C[1], Rivadossi F[1], Lovagnini M[1], La Rovere M[1], Venturelli M[2], Ambrosetti M[1], Pedretti R[1]

[1]Department of Cardiology, ICS Maugeri Pavia; [2]Department of Neurosciences, Biomedicine and Movement Sciences

PP.133 **The role of mTOR dependent autophagy pathway on chronic resistance exercise induced muscular hypertrophy in rats**

Altınoluk T[1], Kuntsal Dertsiz E[2], Arslan S[3], Şirvancı S[2], Karademir B[3], Yıldırım A[1]

1Marmara University, School of Medicine, Department of Physiology, Istanbul, Turkey; 2Marmara University, School of Medicine, Department of Histology & Embryology, Istanbul, Turkey; 3Marmara University, School of Medicine, Department of Biochemistry, Istanbul, Turkey

PP.134 **The force of the myosin motor modulates the cooperativity in thin filament activation**

Caremani M, Gallart C, Pertici I, Piazzesi G, Lombardi V, Linari M

PhysioLab, Department of Biology, University of Florence, Florence, Italy

Poster session IV (3/4) - Respiratory Physiology

PP.135 **Carotid Body as a model for aging studies: the hypoxia-hyperoxia aging interaction**

Di Giulio C

Department of Neurosciences, University of Chieti-Pescara, Italy

PP.136 **The effects of PDE5 inhibitor sildenafil on inflammation and apoptosis in experimental ARDS model**

Kosutova P[1], Mikolka P[1], Balentova S[2], Mokra D[1]

[1]Department of Physiology and Biomedical Center Martin, Comenius University, Slovakia; [2]Department of Histology and Embryology, Comenius University, Slovakia

PP.137 **Treatment of meconium aspiration syndrome by recombinant human superoxide dismutase and n-acetylcysteine added to exogenous surfactant**

Kopincova J[1,2], Kolomaznik M[2], Mikolka P[2], Kosutova P[2], Topercerova J[1], Calkovska A[1,2], Mokra D[1,2]

[1]Department of Physiology, Comenius University, Slovakia; [2]Biomedical Center Martin, Comenius University, Slovakia

PP.138 **Effect of endotoxin on human lung carcinoma A549 cells producing pulmonary surfactant**

Nova Z[1], Skovierova H[2], Strnadel J[2], Halasova E[2,3], Calkovska A[1]

[1]Department of Physiology, Comenius University, Slovakia; [2]Division of Molecular Medicine, Biomedical Center Martin, Comenius University, Slovakia; [3]Department of Medical Biology, Comenius University; Slovakia

PP.139 **Pulmonary surfactant with polymyxin B attenuates endotoxin-induced lung injury**

Kolomaznik M, Kopincova J, Topercerova J, Zila I, Kosutova P, Mikolka P, Mokra D, Calkovska A

Biomedical Center Martin and Department of Physiology, Comenius University, Slovakia

Poster session IV (4/4) - Blood physiology

PP.140 **Sex differences in pH and blood respiratory gases in zoletil-anaesthetized rats in the dependence on LD cycle**

Švorc PJ[1,3], Petrasova D[2], Svorc Jr P[3]

[1]Department of Physiology, Safarik's University, Slovak Republic; [2] Medical Faculty Safarik's University, Slovak Republic; [3]Department of Physiology and Pathophysiology, Ostrava University, Czech Republic

PP.141 **Platelet-stored antibodies potently diminish viral infection *in vitro* and *in vivo***

Schrottmaier WC[1,2], Salzmann M[1], Badrnya S[1], Morava S[1], Luik A-L[3], Kral-Pointner JB[1], Mussbacher M[1], Karlsson M[3], Forsell M[2], Assinger A[1]

[1]Institute for Vascular Biology and Thrombosis Research, Medical University of Vienna, Austria; [2]Department of Clinical Microbiology, Umeå University, Sweden; [3]Department of Microbiology, Tumor and Cell Biology, Karolinska Institute, Sweden

PP.142 **Effects of ginkgo biloba on some hematological, biochemical and histopathological alterations in rats with acute copper toxicity**

Cinar M[1], Yildirim E[2], Duru O[1], Ekici H[2], Kabakci R[3], Sumer T[4], Senel Y[5]

[1]Department of Biochemistry, Kirikkale, Turkey; [2]Department of Pharmacology and Toxicology, Kirikkale, Turkey; [3]Department of Physiology, Kirikkale, Turkey; [4]Department of Pathology Kirikkale, Turkey; [5]Department of Animal Nutrition and Nutritional Diseases, Kirikkale, Turkey

PP.143 **Association of PAI-1 4G/5G polymorphism and IVF outcome in patients using low-molecular weight heparin**

Milenkovic J[1], Milojkovic M[1], Mitic D[2], Jevtovic Stoimenov T[3], Smelcerovic Z[4], Djindjic B[1], Jovic M[4], Kundalic J[4]

[1]Department of Pathophysiology, University of Nis, Serbia; [2]Gynecology and Obstetrics Clinic, Clinical Center in Nis, Serbia; [3]Department of Biochemistry, University of Nis, Serbia; [4]Scientific Research Center for Biomedicine, University of Nis, Serbia

PP.144 **Inherited thrombophilia in patients with unexplained infertility**

Milojkovic M[1], Milenkovic J[1], Mitic D[2], Jevtovic Stoimenov T[3], Smelcerovic Z[4], Stevan Vujic S[4], Dunjic O[1]

[1]Department of Pathophysiology, University of Nis, Serbia; [2]Gynecology and Obstetrics Clinic, Clinical Center in Nis, Serbia; [3]Department of Biochemistry, University of Nis, Serbia; [4]Scientific Research Center for Biomedicine, University of Nis, Serbia

PP.145 **Band 3 protein function in oxidative and inflammatory diseases**

Morabito R[1], Remigante A[1,2], Spinelli S[1], Vitale G[1], Loddo S[3], Trichilo V[3], Dossena S[2], Marino A[1]

[1]Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy; [2]Institute of Pharmacology and Toxicology, Paracelsus Medical University, Austria; [3]Department of Clinical and Experimental Medicine, AOU Policlinico Universitario G. Martino, Italy

PP.146 **Role of antioxidants in preventing H2O2-induced damage on Band 3 protein**

Spinelli S[1], Vitale G[1], Remigante A[1], Morabito R[1], Marino A[1]

[1]Deptartment of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy

PP.147 **Complete blood count in neonates**

Satti S

Department of physiology, Al-Neelain University, Khartum, Sudan

PP.148 **Anti-inflammatory effectiveness of daidzein in experimental knee osteoarthritis-induced with monosodium iodoacetate in rats**

Gundogdu G[1], Gundogdu K[2], Yilmaz Tasci S[3], Demirkaya Miloglu F[4], Cetïn M[5]

[1]Department of Physiology, Pamukkale University, Turkey; [2]Department of Orthopedics and Traumatology, Erzurum Regional Training and Research Hospital, Turkey; [3]Department of Pharmacology, Ataturk University, Turkey; [4]Department of Analytical Chemistry, Ataturk University, Turkey; [5]Department of Pharmaceutical Technology, Ataturk University, Turkey

PP.149 **Frequency of ABO and Rhesus (RH D) blood group alleles among students of demonstration secondary school, Ahmadu Bello University, Zaria**

Baraka Akor-Dewu M[1], Lami Ciroma F[2], Sunday Adeyemo Simon S[1]

[1]Department of Human Physiology, Ahmadu Bello University, Nigeria; [2]Department of Human Physiology, Kaduna State University, Nigeria

20.30 **SOCIAL DINNER**

Palazzo Isolani - Via Santo Stefano 16, Bologna

Room 1 - Morning (09.00 - 11.00)

Symposium - Neurophysiology 3 (Supported by SIF): From whole-cell to single synapse engrams - Breaking the code for memory formation, storage and recall

Organizer: **Marco Mainardi (Pisa, Italy)**

Invited Speakers

9.00 **Distinct granule cell populations are uniquely engaged in odor learning**

Alonso M

Laboratory for Perception and Memory, Institut Pasteur and Centre National de la Recherche Scientifique, Unité Mixte de Recherche 3571, France

9.30 **Two-photon calcium imaging of memory engrams throughout the hippocampal formation in behaving mice**

Hainmueller T[1,2,3], Bartos M[1]

[1]Institute for Physiology I, Systemic and Cellular Neurophysiology, University of Freiburg, Germany; [2]Spemann Graduate School of Biology and Medicine (SGBM), University of Freiburg, Germany; [3]Faculty of Biology, University of Freiburg, Germany

10.00 **Dendritic contributions to memory engrams: lessons from computational models**

Poirazi P

Institute of Molecular Biology & Biotechnology (IMBB), FORTH, Greece

Oral Presentations

10.30 **Oligomeric amyloid-beta at physiological concentrations rescues the impairment of hippocampal synaptic plasticity and memory in aged Amyloid Precursor Protein knockout mice**

Tropea MR[1], Gulisano W[1], Teich A[2], Arancio O[2], Palmeri A[1], Puzzo D[1,3]

[1]Department of Biomedical and Biotechnological Sciences, Section of Physiology, University of Catania, Italy; [2]Department of Pathology and Cell Biology, Taub Institute, Columbia University, USA; 3Oasi Research Institute (IRCCS), Italy

10.45 Discussion

Room 2 - Morning (09.00 - 11.00)

Symposium - Cardiovascular Physiology 3: Walking the last mile: current strategies and challenges in the maturation of novel cardiomyocytes for myocardial repair

Organizer: **Nina Ullrich (Heidelberg, Germany)**

Invited Speakers

9.00 **Patient-specific human hearth-on-chip to study mechanotransduction**

Elvassore N

Department of Industrial Engineering University of Padova Via Marzolo 9 35131 Padova, Italy

9.30 **Cardiovascular diseases and drugs: where are we with hiPSC models?**

Mummery CL, Bellin M, Giacomelli E, van Meer V, Orlova V, Sala L, Tertoolen LGJ

Dept. Anatomy and Embryology, Leiden University Medical Centre, The Netherlands

10.00 **Engineered human myocardium for enhanced maturation of pluripotent stem cell-derived cardiomyocytes**

Tiburcy M[1,2], Liaw N[1,2], Schlick S[1,2], Zimmermann W-H[1,2]

[1]Institute of Pharmacology and Toxicology, University Medical Center Göttingen, Germany; [2]DZHK - German Center for Cardiovascular Research, Germany

Oral Presentations

10.30 **The functional expression of the Lamin A mutant Q517X leads to nuclear and cytoskeleton remodeling with reduced action potentials frequency in HL1 cardiomyocytes**

Gerbino A[1], De Zio R[1], Forleo C[2], Milano S[1], Procino G[1], Favale S[2], Svelto M[1], Carmosino M[3]

[1]Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari "Aldo Moro", Italy; [2]Department of Emergency and Organ Transplantation, University of Bari "Aldo Moro", Italy; [3]Department of Sciences, University of Basilicata, Italy

11.10 **Loss of full-length dystrophin alters calcium handling in response to substrate stiffness during maturation of human induced pluripotent stem cell-derived cardiomyocytes**

Pioner JM[1], Coppini R[1], Santini L[1], Palandri C[1], Lupi F[1], Langione M[1], Martella D[1], Benzoni P[2], Landi S[2], Barbuti A[2], Kim DH[3], Tesi C[1], Sacconi L[1], Mack DL[3], Regnier M[3], Parmeggiani C[1], Cerbai E[1], Poggesi C[1], Ferrantini C[1]

[1]University of Florence, Italy; [2]University of Milan, Italy; [3]University of Washington, Seattle, USA

Room 3 - Morning (09.00 - 11.00)

Symposium - Exercise Physiology: The pathophysiology of exertional dyspnoea: from physiology to clinical applications

Organizers: **Pierantonio Laveneziana (Paris, France) and Georges Leftheriotis (Nice, France)**

Invited Speakers

9.00 **The physiological and clinical interest of Cardiopulmonary Exercise Testing**

Laveneziana P

MCU-PH de Physiologie, Pneumologue, AP-HP.Sorbonne Université, Paris, France

9.30 **The mechanisms of dyspnoea: from physiology to clinical applications**

Morelot-Panzini C

UMRS 1158 and Unité ambulatoire d'Appareillage Respiratoire de Domicile, Service de Pneumologie, Médecine Intensive et Réanimation, Hôpital Pitié-Salpêtrière, Paris, France

10.00 **The relative strength of common synaptic input to motor neurons is not a determinant of the maximal rate of force development in humans**

Felici F[1], Bazzucchi I[1], Casolo A[1,2], Falla D[3], Farina D[2], Del Vecchio A[1,2]

[1]Department of Movement, Human and Health Sciences, University of Rome "Foro Italico", Rome, Italy; [2]Department of Bioengineering, Imperial College London, SW7 2AZ, London, UK; [3]School of Sport, Exercise and Rehabilitation Sciences, University of Birmingham, Birmingham, UK

Oral presentation

10.30 **Respiratory muscle activity as a potential mechanism of adaptation to high altitude hypoxia**

Matytsin VO, Avdiushenko SA, Ganapolsky VP

Research Center, Military Medical Academy named after S.M. Kirov, St. Petersburg, Russia

10.45 **Effects of recovery interval positioning on the work above critical power in humans**

Vinetti G[1], Taboni A[1,2], Ferretti G[1,2]

[1]Department of Molecular and Translational Medicine, University of Brescia, Italy; [2]Department of Anaesthesiology, Pharmacology and Surgery Intensive Care, University of Geneva, Switzerland

Room 4 - Morning (09.00 - 11.00)

Workshop 7: Reproductive Physiology

Chairs: **Luana Ricci Paulesu (Siena, Italy) and Susan Wray (Liverpool, UK)**

Oral Presentations

9.00 **Role of acupuncture in female infertility. A pilot study**

Aloisi AM, Fiorenzani P, Ghiandai G, Martini N, Tian Fu Bao

Department of Medicine, Surgery and Neuroscience, University of Siena, Italy

9.15 **Placental adaptations to altered maternal glucose supply**

Benincasa L, Ietta F, Manzan-Martins C, Passaponti S, Romagnoli R, Cresti L, Paulesu L

Department of Life Sciences, University of Siena, Italy

9.30 **Does diet induce obesity changes the contribution of RhoA/Rho kinase pathway to myometrial contraction in pregnant rats?**

Demeli M[1], Bayrak S[2], Korkmaz H[1,2], Pehlivanoğlu B[1]

[1]Department of Physiology, Hacettepe Universityì, Turkey; [2]Formerly Department of Physiology, Hacettepe University, Turkey; [3]Department of Physiology, Gazi University, Turkey

9.45 **Pre-eclampsia and intrauterine growth restriction: manifestations of oxidative stress during pregnancy**

Raina G[1], Farruggio S[1], Surico D[2], Bordino V[2], Cantaluppi V[3], Mary D[1], Melluzza C[2], Grossini E[1]

[1]Department of Translational Medicine, University East Piedmont, Italy; [2]Department of Translational Medicine, University East Piedmont and Azienda Ospedaliera Universitaria Maggiore della Carità, Novara, Italy; [3]Department of Translational Medicine, University East Piedmont and Azienda Ospedaliera Universitaria Maggiore della Carità, Italy

10.00 **Glycodelin at the maternal-fetal interface**

Ietta F[1], Benincasa L[1], Pavone V[1], Passaponti S[1], Ermini L[1], Luddi A[2], Piomboni P[2], Paulesu L[1]

[1]Department of Life Sciences, University of Siena, Italy; [2]Department of Molecular and Developmental Medicine, University of Siena, Italy

10.15 **Is alarin really a novel hormone for reproduction?**

Solak Gormus ZI, Ozen Koca R, Solak H, Sahin Z, Kutlu S
Department of Physiology, University of Necmettin Erbakan, Meram Medical School, Turkey

10.30 **Bisphenol A Compromises Uterine Arterial Remodeling and Function During Pregnancy and Reduces Placental Growth**

Barberio L[1], Bertoli S[2], Colciago A[3], Pallottini V[4], Paulesu L[5], Rolfo A[6], Mandalà M[1]
[1]Department of Biology, Ecology & Earth Science, University of Calabria, Italy; [2]Department of Food, Environmental, & Nutritional Sciences, University of Milan, Italy; [3]Department of Pharmacological & Biomolecular Sciences, University Milan, Italy; [4]Department of Science, Biomedical Sciences & Technologies, University Roma Tre, Italy; [5]Department of Life Sciences, University Siena, Italy; [6]Department of Surgical Sciences, OIRM S. Anna Hospital, Italy

10.45 **Ω3 Fatty Acids Administration During Pregnancy and Lactation Induces a Long-lasting Modulation of Mevalonate Pathway in the rat brain**

Tonini C[1], Schiavi S[1], Macca F[1], Segatto M[2], Trezza V[1], Pallottini V[1]
[1]Department of Science, University Roma Tre, Italy; [2]Department of Biosciences and Territory University of Molise, Italy

11.00 *Coffee break*

Room 1 - Morning (11.30 - 12.30)

Closing SIF Lecture

The Human Brain Project: insight into brain physiology

Egidio D'Angelo
University of Pavia, Italy
Introduced by: **Byram Yilamz (Istanbul, Turkey)**

12.30 - 13.00

Closing Ceremony FEPS Prizes

Authors Index

Authors Index

C

Authors Index

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

Authors Index

BIOPAC® Systems, Inc.

MEASURE LIFE SCIENCE DATA

Powerful Tools for Research and Education

Record & Analyze Metabolic Data and more!

Trusted Worldwide

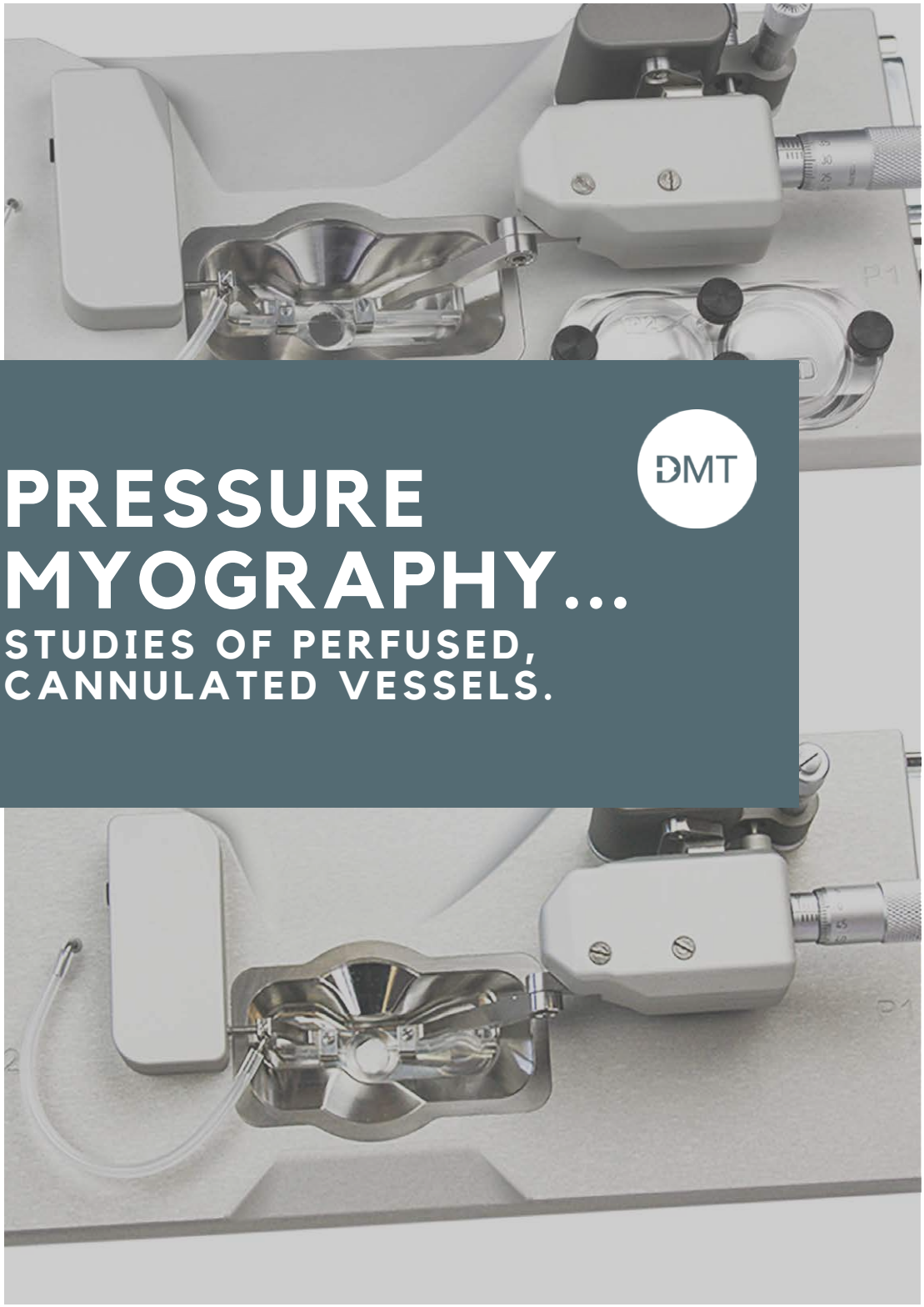
BIOPAC solutions for physiology data acquisition, stimulus delivery, and analysis are used by over 99% of the top 100 universities in the world and commercial users from Global Fortune 500 companies across industries.

- *New!* GASSYS3 delivers high-quality, low-cost metabolic data with flexible data display & automatic calculation of VO_2, VCO_2, RER, RMR, EE, REE
- *New!* BioNomadix Smart Center portable data system with wearable devices for high-quality biometric data and freedom of movement.
- Biopac Student Lab easy-to-implement teaching solution enables students to gather data from their own bodies, animals, or tissue preps.

Request a Demo Today!

www.BIOPAC.com

Inspiring People & Enabling Discovery About Life



PRESSURE MYOGRAPHY...

STUDIES OF PERFUSED, CANNULATED VESSELS.

Cardiovascular Research Instruments

ION OPTIX
enabling discovery

CytoCypher MultiCell System

High throughput Calcium and Contractility measurements

Automated data collection

Greater statistical power

Fast batch analysis software

Providing all of the precision of our standard Calcium and Contractility System, the MultiCell System enables researchers to fully quantify and characterize the speed and amplitude of shortening and calcium

IonOptix MyoStretcher

Attach, Stretch, and Measure Force

Measure absolute force from a single myocyte

Measure shortening and calcium under load

Programmable stretch waveforms

Force Clamp in a Single Myocyte: Work Loops

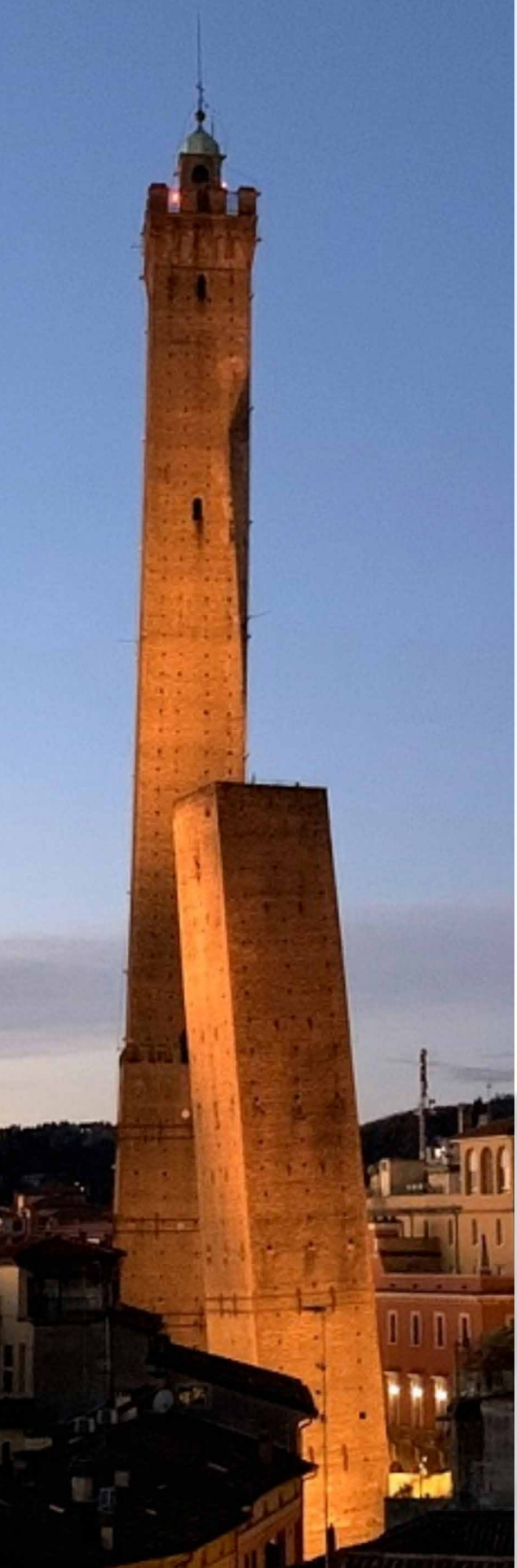
Fast feedback clamp of pre- and after-load forces

Programmable control of pre- and after-load levels

Other IonOptix Products

- Myocyte Calcium & Contractility System
- C-Pace EM Electro-Mechanical Culture Stimulator
- Blood Vessel Calcium & Diameter System
- Whole Tissue Calcium & Force System

www.ionoptix.com



FEPS-SIF 2019

Bologna (Italy)
September 10th-13th, 2019

UNIVERSITY OF BOLOGNA, BELMELORO BUILDINGS

WWW.FEPS-SIF2019.COM

Editing of the Programme Book:
Marco Capolupo, PhD and Gunaalan Kuddithamby, MSc (University of Bologna)

Back Cover Photo:
Prof. Jaroslav Pokorný,
President of the Czech Physiological Society

Organizing Secretariat

Avenue media®
Conference & Expo

Via Riva Reno 61 - 40122 Bologna - Italy
Tel. +39 051 6564300 - Fax +39 051 6564334
congressi@avenuemedia.eu • www.avenuemedia.eu