

# XXXIV Reunião Anual

9 A 13 • SETEMBRO • 2019



# FeSBE

FEDERAÇÃO  
DE SOCIEDADES  
DE BIOLOGIA  
EXPERIMENTAL



Campos do Jordão - SP  
[www.fesbe.org.br](http://www.fesbe.org.br)

Program Schedule					
	Mon - Sept 09 (seg)	Tue - Sept 10	Wed - Sept 11	Thu - Sept 12	Fri - Sept 13
8:00-9:00 h			Courses I (1st class)	Courses I (2nd class)	Courses I (3rd class)
9:00-9:30 h			Coffee break	Coffee break	Coffee break
9:30-11:30 h	Australia-Brasil-Chile(ABC) Regenerative Medicine & Developmental Biology Symposium	Sessions/ABC Symposium	Sessions	Sessions	Sessions / Awards
11:30-12:30 h		Plenary Lecture	Plenary Lecture	Plenary Lecture	Closing Ceremony and Awardees announcement
12:30-14:00 h	Almoço				
14:00-16:00 h	ABC Symposium / Courses/ "Escola de Ciências"	Sessions/ABC Symposium	Sessions	Sessions	
16:00-18:00 h		Poster Session I	Poster Session II	Poster Session III	
18:00-19:00 h	Opening Ceremony	Lectures	Lectures	Lectures	
19:15-20:00 h		Courses II (1st class)	Courses II (2nd class)	Courses II (3rd class)	
20:00-21:00 h			General FeSBE Assembly		



## PROGRAM SCHEDULE

### Monday - Sept.09.2019

9:00 - 17:30 - 3rd Australia-Brazil-Chile Regenerative Medicine and Developmental Biology Symposium  
13:00 - 17:30 - "Escola de Ciências na FeSBE"  
18:00 - 18:30 - Opening Ceremony  
18:30 - 19:30 - Opening Lecture

### Tuesday - Sept.10.2019

9:00 - 11:30 - 3rd Australia-Brazil-Chile Regenerative Medicine and Developmental Biology Symposium  
9:30 - 11:30 - Sessions  
11:30 - 12:30 - Plenary Lecture  
12:30 - 14:00 - Lunch  
14:00 - 16:00 - Sessions  
14:30 - 16:00 - 3rd Australia-Brazil-Chile Regenerative Medicine and Developmental Biology Symposium  
16:00 - 18:00 - Poster Session I  
18:00 - 19:00 - Lectures  
19:10 - 20:00 - Courses II (1st class)

### Wednesday - Sept.11.2019

8:00 - 9:00 - Courses I (1st class) / "FeSBE Jovem - 25 anos"  
9:00 - 9:30 - Coffee Break  
9:30 - 11:30 - Sessions / "FeSBE Jovem - 25 anos"  
11:30 - 12:30 - Plenary Lecture  
12:30 - 14:00 - Lunch  
14:00 - 16:00 - Sessions / "FeSBE Jovem - 25 anos"  
16:00 - 18:00 - Poster Session II  
18:00 - 19:00 - Lectures  
19:10 - 20:00 - Courses II (2nd class)  
20:00 - 21:00 - FeSBE General Assembly

### Thursday - Sept.12.2019

8:00 - 9:00 - Courses I (2nd class) / "FeSBE Jovem - 25 anos"  
9:00 - 9:30 - Coffee Break  
9:30 - 11:30 - Sessions / "FeSBE Jovem - 25 anos"  
11:30 - 12:30 - Plenary Lecture  
12:30 - 14:00 - Lunch / Technical Lecture  
14:00 - 16:00 - Sessions / "FeSBE Jovem - 25 anos"  
16:00 - 18:00 - Poster Session III  
18:00 - 19:00 - Lectures  
19:10 - 20:00 - Courses II (3rd class)

### Friday - Sept.13.2019

8:00 - 9:00 - Courses I (3rd class) / "FeSBE Jovem - 25 anos"  
9:00 - 9:30 - Coffee Break  
9:30 - 11:30 - Sessions / Affiliated Societies Awards / "FeSBE Jovem - 25 anos"  
11:30 - 13:30 - Closing ceremony and Awardees announcement



**09/09 - Monday**

9:00-17:00 h

**3rd Australia-Brazil-Chile Regenerative Medicine and Developmental Biology Symposium**

13:00-17:30 h

**Escola de Ciências**

14:00-17:00 h - Cursos

***Marketing para cientistas: da bancada a concursos***

Coordenador: **Helder Nakaya** (USP-SP)

Aula 1 - Mitos e fatos na carreira científica

**Helder Nakaya** (USP-SP)

Aula 2 - Escrita científica e fazendo figuras impactantes

**Helder Nakaya** (USP-SP)

Aula 3 - Desenvolvendo sua carreira científica

**Helder Nakaya** (USP-SP)

***Aspectos fisiológicos e comportamentais nas pesquisas com fêmeas***

Coordenadora: **Fabiana C. Vilela Giusti** (UNIFAL-MG)

Aula 1 - Aprendendo a trabalhar com fêmeas

**Bruna Kalil** (UNIFAL-MG)

Aula 2 - Lactação e comportamento materno

**Fabiana C. Vilela Giusti** (UNIFAL-MG)

Aula 3 - O funcionamento do sistema circadiano em fêmeas

**Maristela de Oliveira Poletini** (UFMG)

18:00-18:30 h

**FeSBE Opening Ceremony**

18:30-19:30 h - Opening Lecture

***"Understanding skeletal muscle regeneration using zebrafish models"***

**Peter Currie** (Australian Regenerative Medicine Institute, Australia)



## 10/09 - Tuesday

9:00-11:30 h

### 3rd Australia-Brazil-Chile Regenerative Medicine and Developmental Biology Symposium

9:30-11:30 h - Sessions

### *Pharmacological changes in cell senescence and consequences for the aging process and neurodegenerative diseases*

Chair: **Tânia Viel** (USP)

Mass spectrometric technology to understand molecular mechanisms that underlie aging

**Birgit Schilling** (Buck Institute for Research on Aging)

Cellular senescence is induced by the environmental neurotoxin paraquat and contributes to neuropathology linked to Parkinson's disease

**Julie Kay Andersen** (Buck Institute for Research on Aging)  
Bradykinin treatment increased the longevity of hippocampal organotypic cultures from old mice

**Hudson de Sousa Buck** (FCMSCSP)

### *Heart failure-induced cardiorenal diseases: potential targets.*

Chair: **Adriana C. C. Girardi** (InCor- HC-FMUSP)

Cardioprotection conferred by antidiabetic drugs in heart failure: a renal proximal tubule perspective.

**Adriana C. C. Girardi** (InCor-HC-FMUSP)

The potential benefits of exercise training on vascular disorders induced by heart failure

**Luciana V. Rossoni** (ICB-USP)

Oral presentation 1: TBD

Oral presentation 2: TBD

### *Balance control and visual function: basic and applied approaches*

Chair: **Givago da Silva Souza** (UFPA)

The role of the visual information in balance control

**Ana Francisca Rozin Kleiner** (UFSCar)

Balance control in low-vision patients

**Givago da Silva Souza** (UFPA)

Oral presentation 1: TBD

Oral presentation 2: TBD

### *Advances in endocrine pancreas physiology and metabolic programming*

Chair: **Everardo Magalhães Carneiro** (UNICAMP)

Advances and future perspectives for the study of the human pancreas

**Alejandro Caicedo** (University of Miami)

Metabolic programming and obesity

**Patrícia Cristina Lisboa** (UERJ)

Oral presentation 1: TBD

Oral presentation 2: TBD

### *Mechanotransduction in biological systems*

Chair: **Ayumi Aurea Miyakawa** (InCor-USP)

Mechanotransduction at the cell-matrix interface

**Christoph Ballestrem** (The University of Manchester)

Crp3 and vascular remodeling by mechanical stress

**Ayumi Aurea Miyakawa** (InCor-USP)

Oral presentation 1: TBD

Oral presentation 2: TBD

11:30-12:30 h - Plenary Lecture

### *What lies ahead of the frontier in cardiac development and evolution?*

Chair: **Hernandes F. Carvalho** (UNICAMP)

Speaker: **José Xavier-Neto** (UFC)

12:30-14:00 h - Lunch

14:00-16:00 h - Sessions

### *Neuroscience of learning and Brazilian education*

Chair: **Camilo Lellis-Santos** (UNIFESP)

Universal design for learning: accommodating individual learning differences

**Claudia Berlim de Mello** (UNIFESP)

The day that elementary school students have built a pH meter themselves

**Eduardo Galembek** (UNICAMP)

Oral presentation 1: TBD

Oral presentation 2: TBD



10/09 - Tuesday

### ***Therapies with stem cells and extracellular vesicles in chronic degenerative diseases***

Chair: **Pedro Leme** (UFRJ)/ **Patricia Rocco** (UFRJ)

Therapies with stem cells and extracellular vesicles in respiratory diseases

**Patricia Rocco** (UFRJ)

Extracellular vesicles therapy in kidney diseases

**Danilo Cândido de Almeida** (UNIFESP/USP)

Stem cells therapy in pulmonary arterial hypertension – a new perspective

**Pedro Leme** (UFRJ)

Challenges for cardiac repair and regeneration after myocardial infarction

**José Eduardo Krieger** (Incor-HC-USP)

### ***Several aspects of zebrafish as a research model***

Chair: **Maria Izabel Chiamolera** (UNIFESP)

Unraveling microRNAs function in zebrafish: strategies and advances

**Danillo Pinhal** (UNESP-Botucatu)

Hipopituitarismo congênito e suas múltiplas faces nas diferentes espécies Homo Sapiens, Mus músculus e Danio Rerio.

**Luciani Renata Silveira de Carvalho** (HC-FMUSP)

Sanitary control in zebrash and its implication in experimental results

**Bianca Ventura** (FMUSP-SP)

### ***Transgenics and Biosafety***

Chair: **Anibal E. Vercesi** (UNICAMP)

Impacts of adopting OMGs

**Edivaldo Velini** (UNESP)

OGMs: a mobile target

**Carlos Orsi** (Instituto Questão de Ciência)

The risk of miscommunicating risks

**Natalia Pasternak** (Instituto Questão de Ciência)

History and importance of the Brazilian biosafety law

**Walter Colli** (IQ-USP)

### ***New challenges to blindness treatment***

Chair: **Hilda Petrs-Silva** (UFRJ)

Modulation of Endocannabinoid system induce neuroprotection in a murine model of retinitis pigmentosa

**Lucianne Fragel Madeira** (UFF)

Micro-RNAs and the regulation of stem cells and retinal degeneration

**Carolina Beltrame Del Debbio** (USP)

Non-viral vectors for retinal degeneration gene therapy

**Armando da Silva Cunha Junior** (UFMG)

Gene therapy for retinal ganglion cells - is it feasible?

**Hilda Petrs-Silva** (UFRJ)

14:30-16:00 h

### ***3rd Australia-Brazil-Chile Regenerative Medicine and Developmental Biology Symposium***

16:00-18:00 h - Poster Session I and coffee break

18:00-19:00 h - Lectures

### ***A Chimera Named Pollution***

Chair: **Patricia Rocco** (UFRJ)

Speaker: **Walter Araujo Zin** (UFRJ)

### ***The wide spectrum of hypothalamic abnormalities in obesity***

Chair: **Everardo M. Carneiro** (UNICAMP)

Speaker: **Licio A. Velloso** (UNICAMP)

### ***Hypertensive neuropathy: a new clinical disease?***

Chair: **Ana Carolina T. Takakura** (ICB-USP)

Speaker: **Valéria Paula S. Fazan** (FMRP-USP)



**10/09 - Tuesday**

19:10-20:00 h - Curso II (1<sup>a</sup>aula) / Courses II (1<sup>st</sup> class)  
(will be held in Portuguese or English)

***Desreguladores endócrinos***

Coordenadora: **Maria Izabel Chiamolera** (UNIFESP)  
Aula 1 - Introdução aos Desreguladores Endócrinos  
**Andrea Claudia Freitas Ferreira** (UFRJ)

***Ritmos Biológicos: mais próximo da sua pesquisa que você imagina***

Coordenadora: **Fernanda Gaspar do Amaral** (UNIFESP)  
Aula 1 - Análises Rítmicas na Pesquisa Experimental  
**Fernanda Gaspar do Amaral** (UNIFESP)

***Avaliação cardiovascular: adequando o método à hipótese***

Coordenadora: **Luciana V. Rossoni** (ICB- USP)  
Aula 1 - Avaliando a função cardíaca  
**Dalton Valentim Vassallo** (UFES/ EMESCAM)

***How to make the most of optical microscopy***

Chair: **Manoel Luis Costa** (UFRJ)  
Class 1 - Identifying the major variables in optical microscopy  
**Manoel Luis Costa** (UFRJ)

***Modelagem animal: o que preciso fazer para ter resultados precisos***

Coordenador: **Marcel Frajblat** (UFRJ)  
Aula 1 - Ciência e modelagem animal  
**Marcel Frajblat** (UFRJ)

***Molecular pathways in cell death subroutines***

Chair: **Giselle Zenker Justo** (UNIFESP)  
Class 1 - Overview of cell death: Regulated and accidental cell death; classification of cell death subroutines  
**Giselle Zenker Justo** (UNIFESP)

***Proteomics for everyone***

Chair: **Giuseppe Palmisano** (ICB-USP)  
Class 1 - Proteomics tools and applications to biology  
**Giuseppe Palmisano** (ICB-USP) / **Jose Cesar Rosa** (USP-RP)



## 11/09-Wednesday

8:00-9:00 h - Curso I (1<sup>a</sup>aula) / Courses I (1<sup>st</sup> class)  
(will be held in Portuguese or English)

### ***Redação Científica: Artigos, Projetos e Ética***

Coordenador: **Walter Araujo Zin** (UFRJ)  
Aula 1 - Redação de Artigo Científico  
**Walter Araujo Zin** (UFRJ)

### ***Revisiting the Physiology Teaching***

Chair: **Maria Tereza Nunes** (ICB- USP)  
Class 1 - Who am I?" a game-based teaching tool to promote endocrine physiology learning  
**Maria Tereza Nunes** (ICB- USP) e **João Kleber Neves Ramos** (ICB- USP)

### ***Imagens de Bases Moleculares***

Coordenador: **Valbert Nascimento Cardoso** (UFMG)  
Aula 1 - Imagens cintilográficas (SPECT e PET)  
**Simone Odilia Antunes Fernandes** (UFMG)

### ***O tecido muscular esquelético: da estrutura a aspectos adaptativos***

Coordenador: **Anselmo Moriscot** (ICB- USP)  
Aula 1 - Aspectos estruturais do músculo estriado esquelético e correlações com função  
**Anselmo Moriscot** (ICB- USP)

### ***Canais para íons em membranas celulares***

Coordenador: **Antônio Carlos Cassola** (ICB- USP)  
Aula 1 - Técnicas para a observação experimental de canais unitários: "Patch Clamp" e Análise de Ruído  
**Antônio Carlos Cassola** (ICB- USP)

### ***Advanced tissue-based techniques in drug development, with emphasis on toxicologic pathology and safety pharmacology applications***

Chair: **Gilberto De Nucci** (UNICAMP/USP)  
Class 1 - Formalin-fixed paraffin-embedded (FFPE) tissue blocks/sections: review of molecular pathology techniques (relevance and limitations)  
**Frédéric Gervais** (Citoxlab, France)

### ***Bioimpressão 3D na Medicina Regenerativa***

Coordenadora: **Marimelia Porcionatto** (UNIFESP)  
Aula 1 - Imprimindo tecidos e órgãos: biotintas e células  
**Marimelia Porcionatto** (UNIFESP)

9:30-11:30 h - Sessions with abstract oral presentations

### ***Advances in muscle physiology***

Chair: **Flavia Bloise** (UFRJ)  
Skeletal muscle physiology during the nonthyroidal illness syndrome  
**Flavia Bloise** (UFRJ)  
Muscle mitochondrial function in a model of dystrophic mice  
**Claudia Mermelstein** (UFRJ)  
Oral presentation 1: TBD  
Oral presentation 2: TBD

### ***Mechanisms conditioning the beneficial effects of exercise in cardiovascular diseases***

Chair: **Lisete Compagno Michelini** (ICB-USP)  
Autonomic dysfunction in heart and cerebral ischemic diseases: Effects of exercise  
**Bruno Rodrigues** (FEF-UNICAMP)  
Molecular mechanisms in the genesis of hypertension: Exercise benefits  
**Gustavo Santos Masson** (ICB-USP)  
Oral presentation 1: TBD  
Oral presentation 2: TBD

### ***Use of noise to mask color and luminance contrast***

Chair: **Eliza M. C. Brito Lacerda** (CEUMA University)  
Detection of luminance noise: influence of the stimulus parameters  
**Eliza M. C. Brito Lacerda** (CEUMA University)  
Color and luminance discrimination masked by luminance noise  
**Terezinha M. Gonçalves de Loureiro** (UFPA)  
Oral presentation 1: TBD  
Oral presentation 2: TBD

### ***New insights into thyroid hormones and TSH actions***

Chair: **Rodrigo Soares Fortunato** (UFRJ)  
Is there a role of TSH on thyroid and breast cancer?  
**Rodrigo Soares Fortunato** (UFRJ)  
Autocrine actions of thyroid hormone  
**Rafael Benjamin Araújo Dias** (UNINOVE)  
Oral presentation 1: TBD  
Oral presentation 2: TBD



## 11/09-Wednesday

11:30-12:30 h - Plenary lecture

### **The cholesterol war: fake news vs. scientific based evidences**

Chair: Helena Coutinho F. Oliveira (UNICAMP)

Speaker: Eder C. R. Quintão (FMUSP)

12:30-14:00 h - Lunch

14:00-16:00 h - Sessions

### **Microenvironment and cell behavior**

Chair: Patricia Gama (USP)

Mechanotransduction in tumor cells

Marcelo Lazzaron Lamers (UFRGS)

Hyperglycemic environment and cell behavior

Marinilce Fagundes dos Santos (ICB-USP)

Scaffolds and brain injury

Marimelia A Porcionatto (UNIFESP)

### **New aspects of endocrine disruptors**

Chair: Maria Izabel Chiamolera (UNIFESP)

Experience with the European Commission for Endocrine Disruptors

Maria Tereza Nunes (ICB-USP)

Zebrafish as an alternative method for toxicity assessment of emerging environmental contaminants

Lilian Cristina Pereira (UNESP-Botucatu)

Endocrine disruptors and intrauterine programming of thyroid dysfunctions

Caroline Serrano do Nascimento (Hospital Albert Einstein)

Endocrine disruptors and the brain

Gisele Giannocco (UNIFESP-Diadema)

### **Purinergic Signaling in Development and Disease**

Chair: Henning Ulrich (IQ-USP)

Ecto-5-nucleotidase/CD73 contributes to the radiosensitivity of bladder cancer cells

Ana Maria de Oliveira Battastini (UFRGS)

Purinergic signaling in sepsis-induced liver injury

Robson Coutinho-Silva (UFRJ)

Purinergic Signaling in the Developing Retina

Ana Lucia Marques Ventura (UFF)

Therapeutic effects of purinergic receptors in neurodegenerative diseases

Henning Ulrich (IQ-USP)

### **Inflammation-induced alterations of the neurovascular unit**

Chair: Daniel Adesse (Fiocruz)

Microvessel alterations in Toxoplasma gondii infected-mice

Daniel Adesse (Fiocruz)

Alcohol exposure during gestation impairs endothelial-astrocyte interactions in the embryonic cerebral cortex

Joice Stipursky (UFRJ)

Zika virus hampers blood vessels development in a murine model of congenital infection

Patrícia Pestana Garcez (UFRJ)

The role of TLR4 in the microvascular cerebral dysfunction in a model of metabolic syndrome

Vanessa Estato (Fiocruz)

### **Why scientists should share their discoveries through different media not only by publishing papers?**

Chair: Camilo de Lellis Santos (UNIFESP)

Science and Citizenship

Natália Pasternak (ICB-USP)

Podcasts, a simple way to connect scientists and public

Leandro A. Lobo (UFRJ)

Who's afraid of media exaggeration?

Carlos Orsi (Instituto Questão de Ciência)

Science in the media, science in the classrooms: the fight against misconceptions

Camilo de Lellis Santos (UNIFESP)

16:00-18:00 h – Poster Sessions II and coffee break

18:00-19:00 h - Lectures

### **Discussing the Relationship (DR): The bi-directional communication between tumor and stroma**

Chair: Patricia Gama (ICB-USP)

Speaker: Christina Barja-Fidalgo (UERJ)

### **Melatonin as a Hormone: New Physiological and Clinical Insights**

Chair: Fernanda Gaspar do Amaral (UNIFESP)

Speaker: José Cipolla Neto (ICB-USP)

### **Non-coding RNAs: pathophysiological role and clinical application in the cardiovascular system**

Chair: Alice Cristina Rodrigues (ICB-USP)

Speaker: Da-Zhi Wang (Harvard Medical School)



**11/09-Wednesday**

19:10-20:00h - Cursos II (2<sup>a</sup> aula) / Courses II (2<sup>nd</sup> class)

***Desreguladores endócrinos***

Coordenadora: **Maria Izabel Chiamolera** (UNIFESP)

Aula 2 - Contaminantes Organoestânicos e o Sistema Endócrino e Reprodutor

**Jones B. Graceli** (UFES)

***Ritmos Biológicos: mais próximo da sua pesquisa que você imagina***

Coordenadora: **Fernanda Gaspar do Amaral** (UNIFESP)

Aula 2 - Análises Rítmicas na Pesquisa Clínica

**Maria Paz Hidalgo** (UFRGS)

***Avaliação cardiovascular: adequando o método à hipótese***

Coordenadora: **Luciana V. Rossoni** (ICB- USP)

Aula 2 - Avaliando a função vascular

**Luciana Venturini Rossoni** (ICB- USP)

***How to make the most of optical microscopy***

Chair: **Manoel Luis Costa** (UFRJ)

Class 2 - Choosing the best procedure for each inquiry in optical microscopy

**João Ricardo Lacerda de Menezes** (UFRJ)

***Modelagem animal: o que preciso fazer para ter resultados precisos***

Coordenador: **Marcel Frajblat** (UFRJ)

Aula 2 - Fatores que afetam os resultados de uma pesquisa

**Marcel Frajblat** (UFRJ)

***Molecular pathways in cell death subroutines***

Chair: **Giselle Zenker Justo** (UNIFESP)

Class 2 - Molecular pathways of major regulated cell death modalities.

**Giselle Zenker Justo** (UNIFESP)

***Proteomics for everyone***

Chair: **Giuseppe Palmisano** (ICB-USP)

Class 2 - Mass spectrometry and bioinformatics for protein identification and quantification

**Giuseppe Palmisano** (ICB-USP) / **Jose Cesar Rosa** (USP-RP)

20:00-21:00 h

**FeSBE General Assembly**



**12/09 - Thursday**

8:00-9:00 h - Curso I (2<sup>a</sup> aula) / Courses I (2<sup>nd</sup> class)

### ***Redação Científica: Artigos, Projetos e Ética***

Coordenador: **Walter Araujo Zin** (UFRJ)

Aula 2 - Ética na Redação e Publicação de um Artigo

**Walter Araujo Zin** (UFRJ)

### ***Revisiting the Physiology Teaching***

Chair: **Maria Tereza Nunes** (ICB-USP)

Class 2 - Dramatization in Physiology teaching: date to do different

**Lucila Ludmila Paula Gutierrez** (UFCSPA)

### ***Imagens de Bases Moleculares***

Coordenador: **Valbert Nascimento Cardoso** (UFMG)

Aula 2 - Nanoformulações para diagnóstico por imagens

**Valbert Nascimento Cardoso** (UFMG)

### ***O tecido muscular esquelético: da estrutura a aspectos adaptativos***

Coordenador: **Anselmo Moriscot** (ICB-USP)

Aula 2 - Mecanismos celulares e moleculares controladores da massa muscular esquelética

**Dawit A. Pinheiro Goncalves** (EEFFTO-UFMG)

### ***Canais para íons em membranas celulares***

Coordenador: **Antônio Carlos Cassola** (ICB-USP)

Aula 2 - Análise estocástica de canais unitários

**Antônio Carlos Cassola** (ICB-USP)

### ***Advanced tissue-based techniques in drug development, with emphasis on toxicologic pathology and safety pharmacology applications***

Chair: **Gilberto De Nucci** (UNICAMP/USP)

Class 2 - Advanced in situ hybridization techniques: RNAscope

**Frédéric Gervais** (Citoxlab, France)

### ***Bioimpressão 3D na Medicina Regenerativa***

Coordenadora: **Marimelia Porcionatto** (UNIFESP)

Aula 2 - Bioimpressão 3D como ferramenta para recapitular o desenvolvimento e doenças

**Marimelia Porcionatto** (UNIFESP)

9:30-11:30 h - Sessions

### ***Noncoding RNAs in health and disease***

Chair: **Alice Cristina Rodrigues** (ICB-USP)

Modulation of Muscle Development and Disease by Non-coding RNAs

**Da-Zhi Wang** (Harvard Medical School)

Integration of Transcriptomics and MicroRNA Analyses in Cancer Cachexia

**Robson Francisco Carvalho** (UNESP)

MicroRNAs mediate beneficial effects of exercise on the cardiovascular system

**Edilamar Menezes de Oliveira** (EEFE-USP)

Exosomal microRNAs as mediators of intertissue communication in obesity

**Alice Cristina Rodrigues** (ICB-USP)

### ***Pathogenesis of Chagas Disease***

Chair: **João Santana da Silva** (FMRP-USP)

The Yin-and-Yang of the immune response: keeping the balance to decrease the burden of Chagas heart disease

**Walderez O. Dutra** (UFMG)

Consequences of controlling inflammation during Trypanosoma cruzi infection

**Fabiana Simão Machado** (UFMG)

The involvement of lipid kinases in the pathogenesis of Trypanosoma cruzi infection

**Maria Claudia Silva** (FMRP-USP)

Omics analysis in Chagas disease cardiomyopathy: a mitochondrial disease?

**Edecio Cunha Neto** (USP)

### ***Content versus process in modern cell biology teaching***

Chair: **Manoel Luis Costa** (UFRJ)

On the basic concepts in cell biology

**Manoel Luis Costa** (UFRJ)

On the impact of technology in biology teaching methodologies

**Miriam Struchiner** (UFRJ)

The impact of recent process in cell biology teaching

**Mauricio Roberto Pinto da Luz** (Fiocruz)

Survey of major topics in cell biology

**Claudia Mermelstein** (UFRJ)



**12/09 - Thursday**

### ***Influence of microenvironment on tumor development***

Chair: **João Alfredo de Moraes** (UFRJ)

Clues from the tumor-derived extracellular matrix to neighbor cells in the microenvironment

**Christina Barja-Fidalgo** (UERJ)

Neutrophil extracellular traps (NETs) as mediators of tumor progression

**Robson de Queiroz Monteiro** (UFRJ)

Adipose tissue derived extracellular vesicles modify tumoral cells behavior

**Mariana Renovato Martins** (UFF)

Effect of melanoma extracellular vesicles on neutrophil polarization

**João Alfredo de Moraes** (UFRJ)

### ***Immunomodulators and intestinal homeostasis***

Chair: **Valbert Nascimento Cardoso** (UFMG)

Probiotic Bacteriophages- A novel strategy to control infection and inflammation.

**Belchiorina Beatriz Fonseca** (UFU)

Use of lactic acid bacteria genetically modified as immunomodulators to promote intestinal homeostasis

**Vasco Ariston Carvalho de Azevedo** (UFMG)

Lipids as immunomodulatory agents

**Tatiani Uceli Maioli** (UFMG)

11:30-12:30 h - Plenary Lecture

### ***Pericytes at the intersection between tissue regeneration and pathology***

Chair: **Valbert Nascimento Cardoso** (UFMG)

Speaker: **Alexander Birbrair** (UFMG)

12:30- 13:30 h - Technical Lecture

### ***Como melhorar seu protocolo de purificação de proteínas***

Speaker: **Fellipe Bronze**-Assessor Científico da Sinapse Biotecnologia LTDA.

12:30-14:00 h - Lunch

14:00-16:00 h - Sessions

### ***Risks to the environmental and health due to the uranium mining in Brazil***

Chair: **Silvia Maria Velasques de Oliveira** (SBBN)

Nuclear fuel cycle in Brazil

**Aquílio Senra** (COPPE/UFRJ)

Biological effects of chronic exposures in the neighborhood of nuclear fuel cycle facilities

**Carlos Eduardo Brandão** (UNIRIO / UFRJ)

### ***Immunology in health and disease***

Chair: **Marcelo T. Bozza** (UFRJ)

Regulation of CD8 T cell differentiation and function by Polycomb group (PcG) proteins during acute and chronic infections

**Renata Pereira** (UFRJ)

Mucosal inflammation: quantitative vs. qualitative aspects of Treg cell imbalance

**Fábio Barrozo do Canto** (UFF)

Immunological scarring: understanding chronic effects of acute infections

**Denise Moraes da Fonseca** (USP)

Combining in vivo imaging and high dimensional phenotyping to understand immune and metabolic development during life

**Gustavo Batista de Menezes** (UFMG)

### ***Renin, angiotensins, bradykinin, noradrenaline, acetylations and oxidative stress: friends or foes in cardiorenal syndromes? In honor to the memory of Margarida de Mello Aires***

Chair: **Adalberto Vieyra** (UFRJ)

Cardiorenal syndrome: the long road from kidney to heart

**Marcela Sorelli Carneiro Ramos** (UFABC)

Novel role of bradykinin and B2-receptors: regulation of collecting duct renin

**Lucienne da Silva Lara** (UFRJ)

The role of oxidative stress in the renal alterations underlying the onset of hypertension programmed by intrauterine undernutrition

**Leônio Duarte Vieira** (UFPE)

Renin-angiotensin system and acetylations: key elements in the cardiorenal alterations provoked by undernutrition and obesity

**Humberto Muzzi Filho** (UFRJ)



12/09 - Thursday

### ***Regulation of muscle mass: cellular and molecular aspects***

Chair: Claudia Mermelstein (UFRJ)

Calcium and calpain in muscle dystrophy

**Claudia Mermelstein** (UFRJ)

Role of miR-29 family in skeletal muscle mass control

**Anselmo Moriscot** (ICB-USP)

Does insulin/IGF-1 signaling mediate the effects of beta-2-adrenergic agonists on skeletal muscle remodeling and function?

**Dawit A. Pinheiro Goncalves** (EEFFTO-UFMG)

The role of extracellular matrix during myoblast migration

**Ingo Riederer** (FIOCRUZ)

### ***Photobiomodulation and its applications***

Chair: **Marucia Chacur** (ICB-USP)

Application of photobiomodulation in different animal models.

**Marucia Chacur** (ICB-USP)

Effect of photobiomodulation in different models of orofacial pain

**Daniel de Oliveira Martins** (ICB-USP)

Is there room for the use of photobiomodulation in the treatment of pain in medicine?

**Hazem A. Ashmawi** (FMUSP)

Light to treat pain: biophysics of the mechanisms of action and how to perform clinical and experimental procedures

**Marcelo Victor P de Sousa** (Bright Photomedicine)

Photobiomodulation Therapy as a tool to improve the quality of life in patients in different types of pain

**Nathali Cordeiro Pinto** (FMUSP)

16:00-18:00 h - Poster Session III and coffee break

18:00-19:00 h - Lectures

### ***Environmental remediation in uranium mining and naturally occurring radioactive material waste***

Chair: Silvia Maria Velasques de Oliveira (SBBN)

Speaker: Horst Monken-Fernandes (International Atomic Energy Agency-IAEA)

### ***Aerobic exercise training as therapy for skeletal myopathy: relevance to heart failure and cancer***

Chair: Ana Paula C. Davel (UNICAMP)

Speaker: Patricia C. Brum (EEFE-USP)

### ***The Immune-Pineal Axis - a chronopharmacological approach for integrating the timing in Physiology and Pathology***

Chair: André Sampaio Pupo (UNESP)

Speaker: Regina P. Markus (USP)

19:10-20:00 h - Curso II 3ªaula / Courses II (3<sup>rd</sup> class)

### ***Desreguladores endócrinos***

Coordenadora: **Maria Izabel Chiamolera** (UNIFESP)

Aula 3 - Plasticantes, Herbicidas e Metais Pesados

**Glaecir Roseni Mundstock Dias** (UFRJ)

### ***Ritmos Biológicos: mais próximo da sua pesquisa que você imagina***

Coordenadora: **Fernanda Gaspar do Amaral** (UNIFESP)

Aula 3 - Discussão Guiada de Projetos - Onde Estão os Ritmos e Como Lidar Com Eles?

**Maria Paz Hidalgo** (UFRGS)

### ***Avaliação cardiovascular: adequando o método à hipótese***

Coordenadora: **Luciana V. Rossoni** (ICB- USP)

Aula 3 - Avaliando a efetividade dos protocolos de treinamento físico

**Patrícia C. Brum** (EEFE-USP)

### ***How to make the most of optical microscopy***

Chair: **Manoel Luis Costa** (UFRJ)

Class 3 - Demonstration of the possibilities and limitations in optical microscopy and image processing

**Manoel Luis Costa** (UFRJ)

### ***Modelagem animal: o que preciso fazer para ter resultados precisos***

Coordenador: **Marcel Frajblat** (UFRJ)

Aula 3 - Dor e controle da dor em animais de laboratório

**Marcel Frajblat** (UFRJ)

### ***Molecular pathways in cell death subroutines***

Coordenadora: **Giselle Zenker Justo** (UNIFESP)

Aula 3 - Metabolic control of cell death.

**Giselle Zenker Justo** (UNIFESP)

### ***Proteomics for everyone***

Chair: **Giuseppe Palmisano** (ICB-USP)

Class 3 - Identification of protein phosphorylation by proteomics approaches

**Giuseppe Palmisano** (ICB-USP)/ **Jose Cesar Rosa** (USP-RP)



**13/09 - Friday**

8:00-9:00 h - Curso I (3<sup>a</sup>aula) / Courses I (3<sup>rd</sup> class)

### ***Redação Científica: Artigos, Projetos e Ética***

Coordenador: **Walter Araujo Zin** (UFRJ)

Aula 3 - Elaboração de Projeto de Pesquisa

**Dalton Valentim Vassallo** (UFES/ EMESCAM)

### ***Revisiting the Physiology Teaching***

Chair: **Maria Tereza Nunes** (ICB-USP)

Class 3 - Using arts to foster the learning of scientific concepts

**Camilo Lellis-Santos** (UNIFESP, Diadema – SP)

### ***Imagens de Bases Moleculares***

Coordenador: **Valbert Nascimento Cardoso** (UFMG)

Aula 3 - Nanoformulações para tratamento

**Valbert Nascimento Cardoso** (UFMG)

### ***O tecido muscular esquelético: da estrutura a aspectos adaptativos***

Coordenador: **Anselmo Moriscot** (ICB-USP)

Aula 3 - Mecanismos celulares e moleculares envolvidos na resposta regenerativa muscular

**Anselmo Moriscot** (ICB-USP)

### ***Canais para íons em membranas celulares***

Coordenador: **Antônio Carlos Cassola** (ICB-USP)

Aula 3 - Topologia de canais para cátions assemelhados aos canais dependentes de voltagem

**Antônio Carlos Cassola** (ICB-USP)

### ***Advanced tissue-based techniques in drug development, with emphasis on toxicologic pathology and safety pharmacology applications***

Chair: **Gilberto De Nucci** (UNICAMP/USP)

Class 3 - Core techniques in the development of therapeutic oligonucleotides

**Cécile Sobry** (Citoxlab, France)

### ***Bioimpressão 3D na Medicina Regenerativa***

Coordenadora: **Marimelia Porcionatto** (UNIFESP)

Aula 3 - Desafios e Perspectivas da Bioimpressão 3D

**Marimelia Porcionatto** (UNIFESP)

09:30-11:30 h - Sessions and Awards

### ***A tribute to Margarida de Mello Aires, the leading lady of renal physiology***

Chair: **Maria Oliveira de Souza** (ICB-USP)

Small extracellular vesicles and kidney disease models: a tribute to the leading lady of renal physiology

**Adalberto Vieyra** (IBCCF & CENABIO-UFRJ)

Everything started in the kidney... but ended in the heart... A trajectory through the Renin-Angiotensin System

**Maria Luiza Barreto Chaves** (ICB-USP)

Glucose - an energetic substrate that modifies proximal reabsorption and, in excess, impairs renal function and promotes fetal programming

**Guiomar Nascimento Gomes** (UNIFESP)

Margarida de Mello Aires: Physiologist, scientist, teacher and friend

**Maria Oliveira de Souza** (ICB-USP) and **Gerhard Malnic** (ICB-USP)

### ***New approaches in animal vision research***

Chair: **Leonardo Dutra Henriques** (USP)

Evaluation of New World monkeys color vision with an adaptation of Cambridge Colour Test

**Leonardo Dutra Henriques** (USP)

Suprathreshold chromatic discrimination in tufted capuchin monkeys (*Sapajus apella*)

**Letícia Miquilini de Arruda Farias** (UFPA)

Oral presentation 1: TBD

Oral presentation 2: TBD

### ***Development, aging and cell functions***

Chair: **Patricia Gama** (ICB-USP)

Development, diet and hepatic functions

**Gustavo Batista de Menezes** (UFMG)

Breastfeeding and the priming of gastric cell functions

**Patricia Gama** (ICB-USP)

Oral presentation 1: TBD

Oral presentation 2: TBD



**13/09 - Friday**

**BRAVO Award**

**SBEM Award**

11:30 -13:30 h - **Closing Ceremony**

**"Science Service Award - FeSBE 2019"**

Lecture **Wanderley de Souza** (UFRJ)

**Awardees Announcement:** FeSBE Affiliated Societies -  
"Prêmio Professor de Ciências do Ano FeSBE 2019" - Pos-  
ter Presentation

**Closing Remarks**