

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Hypoxia: Molecules, Mechanisms and Disease (A3)

January 19-23, 2020 • Keystone Resort • Keystone, Colorado, USA

Scientific Organizers: José López-Barneo, Sarah R. Walmsley, Hesham A. Sadek and Jacques Pouyssegur

Supported by the Directors' Fund

Abstract & Scholarship Deadline: September 25, 2019 / Abstract Deadline: October 16, 2019 / Discounted Registration Deadline: November 19, 2019

SUNDAY, JANUARY 19

Arrival and Registration

MONDAY, JANUARY 20

Keynote Address

Randall S. Johnson, University of Cambridge, UK
Hypoxia: New Views on Adaptation, Pathogenesis and Therapeutics

Hypoxia Signaling: Acute Oxygen Sensing

José López-Barneo, Hospital Universitario Virgen del Rocío, Spain
Acute Oxygen Sensing by Arterial Chemoreceptors: A Mix of Mitochondria, Metabolism and Ion Channels

Alexander Gourine, University College London, UK
Acute Oxygen Sensing in the Brain

Natascha Sommer, Justus Liebig University, Germany
Oxygen Sensing in the Lung Vasculature: Role in Pulmonary Hypertension

Short Talk(s) Chosen from Abstracts

Pathophysiology of Hypoxia and Ischemia

Thomas Park, University of Illinois at Chicago, USA
Tolerance to Anoxia in Mammals

Michael P. Murphy, University of Cambridge, UK
Metabolic Remodeling during Heart Ischemia/Reperfusion Injury

Silvia V. Conde, CEDOC- Centro de Estudos de Doenças Crónicas, Portugal

Novel Therapies in Carotid Body-Mediated Sympathetic Over-Activation Syndromes

Jennifer V. Potter, University of Virginia, USA
Pharmacology of Peripheral and Central Chemoreceptors: The Respiratory Depression Epidemics

Short Talk(s) Chosen from Abstracts

Poster Session 1

TUESDAY, JANUARY 21

Hypoxia Signaling: Hydroxylases and the Hypoxia Inducible Factors

Peter J. Ratcliffe, University of Oxford, UK
Regulation of the PHD/HIF Hypoxic Response

Joseph A. Garcia, Columbia University Medical Center, USA
Stress Signaling and the Hypoxia Response

Massimiliano Mazzone, KU Leuven – VIB, Belgium
Novel Targets of Prolyl Hydroxylases

E. Erquan Zhang, National Institute of Biological Sciences, China
Toward Understanding the Mutual Regulation of Hypoxia Signaling and the Circadian Clock

Short Talk(s) Chosen from Abstracts

Redox Signaling in Hypoxia Responses

Paul T. Schumacker, Northwestern University, USA
Role of Mitochondria in Regulation of Cell Stress Responses

Vamsi K. Mootha, Massachusetts General Hospital, USA
Hypoxia in Mitochondrial Disease

Agnes Görlach, German Heart Center Munich, TU Munich, Germany
ROS and Epigenetics in the Cardiovascular System

Short Talk(s) Chosen from Abstracts

Poster Session 2

WEDNESDAY, JANUARY 22

Hypoxia and Cancer

Gregg L. Semenza, Johns Hopkins University School of Medicine, USA

HIFs: Executors of the Lethal Cancer Phenotype

Fatima Mechta-Grigoriou, Curie Research Institute, France
Role of Chronic Oxidative Stress in Cancer Development

Jacques Pouyssegur, University of Nice, France
Exploiting Acidic, Nutrient and Oxidative Stresses in Hypoxic Tumors

Silvia Pastorekova, Biomedical Research Center, Slovak Academy of Sciences, Slovakia

Hypoxia-Regulated Carbonic Anhydrase: Role in Tumor Cells and Chemotherapy

Short Talk(s) Chosen from Abstracts

New Trends and Techniques in Hypoxia Research

Speaker to be Announced

Clinical Trial/Direct Medical Translation

Speaker to be Announced

Monitoring Oxygen Levels in Tissues

Speaker to be Announced

Chemical Biology/Quantitative Approaches to the Study of Hypoxia

Short Talk(s) Chosen from Abstracts

Poster Session 3

THURSDAY, JANUARY 23

Hypoxia in Stem Cells, Cell Reprogramming, and Regeneration

Yoshinori Yoshida, Center for iPS Cell Research and Application, Kyoto University, Japan

Hypoxia in Cell Reprogramming

Michaela Frye, Deutsches Krebsforschungszentrum, Germany
Post-Transcriptional Modifications in Development and Stem Cells

Hesham A. Sadek, University of Texas Southwestern Medical Center, USA

Role of Hypoxia in Cardiac Regeneration

Silvia Martin-Puig, Fundación Centro Nacional de Investigaciones Cardiovasculares, Spain

Hypoxia, Cardiac Development and Disease

Short Talk(s) Chosen from Abstracts

Hypoxia and Inflammation

Sarah R. Walmsley, University of Edinburgh, Queen's Medical Research Institute, UK

Hypoxic Reprogramming of Neutrophil Metabolism

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Hypoxia: Molecules, Mechanisms and Disease (A3)

January 19-23, 2020 • Keystone Resort • Keystone, Colorado, USA

Scientific Organizers: José López-Barneo, Sarah R. Walmsley, Hesham A. Sadek and Jacques Pouysségur

Supported by the Directors' Fund

Abstract & Scholarship Deadline: September 25, 2019 / Abstract Deadline: October 16, 2019 / Discounted Registration Deadline: November 19, 2019

Cormac Taylor, University College Dublin, Ireland

Hypoxia, Immunity and Inflammation

Alberto Pascual, Instituto de Biomedicina de Sevilla, Spain

Hypoxia, Endothelium, and Microglia in Alzheimer Disease's Pathogenesis

Short Talk Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

FRIDAY, JANUARY 24

Departure