



IVTH INTERNATIONAL SYMPOSIUM
NUTRITION, OXYGEN BIOLOGY, AND MEDICINE

FREE RADICALS, NUTRITION, AND AGING

FROM FUNDAMENTAL ASPECTS TO CLINICAL APPLICATIONS

15-17 JUNE 2011
CAMPUS DES CORDELIERS, PARIS, FRANCE

A JOINT MEETING OF THE
SOCIÉTÉ FRANÇAISE DE RECHERCHES SUR LES RADICAUX LIBRES
AND
OXYGEN CLUB OF CALIFORNIA

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CAMPUS DES CORDELIERS, PARIS, FRANCE

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JOSÉ VIÑA (VALENCIA)

WEDNESDAY, 15 JUNE

- 14:00 – 15:45 REGISTRATION
- 15:45 – 16:00 WELCOME
Josiane Cillard
FACULTÉ DE PHARMACIE, UNIVERSITY OF RENNES 1, RENNES, FRANCE
Maret G. Traber
LINUS PAULING INSTITUTE, OREGON STATE UNIVERSITY, CORVALLIS, OREGON, USA
Nesrin Özer
DEPARTMENT OF BIOCHEMISTRY, FACULTY OF MEDICINE, MARMARA UNIVERSITY, ISTANBUL, TURKEY
Bertrand Friguet
LABORATOIRE DE BIOLOGIE CELLULAIRE DU VIEILLISSEMENT, UR4, UNIVERSITÉ PIERRE ET MARIE CURIE-
PARIS 6, PARIS, FRANCE
- 16:00 – 16:45 OPENING LECTURE
CHAIRPERSON *Josiane Cillard*
FACULTÉ DE PHARMACIE, UNIVERSITY OF RENNES 1, RENNES, FRANCE
Latent microbial infections
Luc Montagnier
UNESCO, WORLD FOUNDATION AIDS RESEARCH AND PREVENTION, PARIS, FRANCE
- 16:45 – 17:30 KEYNOTE LECTURE
CHAIRPERSON *Malcolm J. Jackson*
PATHOPHYSIOLOGY RESEARCH UNIT, SCHOOL OF CLINICAL SCIENCES, UNIVERSITY OF LIVERPOOL,
LIVERPOOL, UK
Exercise, calorie restriction and insulin sensitivity in aging
John O. Holloszy
DIVISION OF GERIATRICS AND NUTRITIONAL SCIENCES, DEPARTMENT OF MEDICINE,
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, ST. LOUIS, MISSOURI, USA
- 17:30 – 18:15 KEYNOTE LECTURE
CHAIRPERSON *Lester Packer*
PHARMACOLOGY & PHARMACEUTICAL SCIENCES, SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN
CALIFORNIA, LOS ANGELES, CALIFORNIA, USA
**Nutrition, aging, and longevity: the strategy of the new EU large project
NU-AGE (2011-2016)**
Claudio Franceschi
DEPARTMENT OF EXPERIMENTAL BIOLOGY AND L. GALVANI INTERDEPARTMENTAL CENTER, UNIVERSITY OF
BOLOGNA, BOLOGNA, ITALY
- 18:30 *Welcome Reception*

THURSDAY, JUNE 16

SESSION I NUTRIENTS AND AGING

Chairpersons

César G. Fraga

PHYSICAL CHEMISTRY, SCHOOL OF PHARMACY AND BIOCHEMISTRY, UNIVERSITY OF BUENOS AIRES,
BUENOS AIRES, ARGENTINA

Fabio Virgili

NATIONAL RESEARCH INSTITUTE FOR FOOD AND NUTRITION, ROME, ITALY

09:00 – 09:30 Understanding the mechanisms of calorie restriction

Su-Ju Lin

DEPARTMENT OF MICROBIOLOGY, COLLEGE OF BIOLOGICAL SCIENCES, UNIVERSITY OF CALIFORNIA, DAVIS,
CALIFORNIA, USA

09:30 – 10:00 Transcriptional biomarkers of calorie restriction and their modulation by dietary
interventions

Jamie L. Barger

LIFEGEN TECHNOLOGIES, LLC, MADISON, WISCONSIN, USA

10:00 – 10:30 Flavonoids and brain function: multiple effects underpinned by common
mechanisms

Jeremy P.E. Spencer

HUGH SINCLAIR HUMAN NUTRITION UNIT, DEPARTMENT OF FOOD BIOSCIENCES, UNIVERSITY OF READING,
READING, UK

10:30 – 11:00 *Coffee break*

11:00 – 11:30 A diet for health and longevity. How do we get there?

Bruce N. Ames

CHILDREN'S HOSPITAL OAKLAND RESEARCH INSTITUTE, NUTRITION AND METABOLISM CENTER, OAKLAND,
CALIFORNIA, USA

11:30 – 12:00 Cellular stress responses, mitostress and carnitine insufficiencies as critical
determinants in aging and neurodegenerative disorders: role of hormesis and
vitagenes

Vittorio Calabrese

DEPARTMENT OF CHEMISTRY, UNIVERSITY OF CATANIA, CATANIA, ITALY

12:30 – 12:45 Group photo

12:45 – 13:30 *Lunch and Poster Viewing*

SESSION II REDOX CONTROL OF AGING

CHAIRPERSONS *João Laranjinha*

CENTER FOR NEUROSCIENCES AND CELL BIOLOGY, UNIVERSITY OF COIMBRA, COIMBRA, PORTUGAL

Patricia I. Oteiza

DEPARTMENT OF NUTRITION, UNIVERSITY OF CALIFORNIA, DAVIS, CALIFORNIA, USA

13:30 – 14:00 Promoting lifespan and metabolic health by transiently increasing oxidative stress

Michael Ristow

DEPARTMENT OF HUMAN NUTRITION, INSTITUTE OF NUTRITION, FRIEDRICH-SCHILLER-UNIVERSITY OF JENA, JENA, AND DEPARTMENT OF CLINICAL NUTRITION, GERMAN INSTITUTE OF HUMAN NUTRITION, POTSDAM-REHBRUECKE, GERMANY

14:00 – 14:30 Redox systems biology: Mapping the metabolic and proteomic networks

Dean P. Jones

DEPARTMENT OF MEDICINE, DIVISION OF PULMONARY, ALLERGY AND CRITICAL CARE MEDICINE, EMORY UNIVERSITY, ATLANTA, GEORGIA, USA

14:30 – 15:00 Redox regulation of muscle-nerve interactions in age-related loss of muscle function

Malcolm J. Jackson

PATHOPHYSIOLOGY RESEARCH UNIT, SCHOOL OF CLINICAL SCIENCES, UNIVERSITY OF LIVERPOOL, LIVERPOOL, UK

15:00 – 15:30 An ectopic source of reactive oxygen species in skin aging and atherosclerosis

D. James Morré

DEPARTMENT OF MEDICINAL CHEMISTRY AND MOLECULAR PHARMACOLOGY, PURDUE UNIVERSITY, WEST LAFAYETTE, IN, USA

15:30 – 16:00 *Coffee break*

SESSION III PROTEIN QUALITY CONTROL AND AGING

CHAIRPERSONS *Bertrand Friguet*

LABORATOIRE DE BIOLOGIE CELLULAIRE DU VIEILLISSEMENT, UR4, UNIVERSITÉ PIERRE ET MARIE CURIE-
PARIS 6, PARIS, FRANCE

Arlette Gratas-Delamarche

LABORATORY MOUVEMENT SPORT SANTÉ, UNIVERSITY OF RENNES 2, ENS CACHAN, UFR-APS,
RENNES CEDEX, FRANCE

16:00 – 16:30 Proteasome activation as a novel anti-ageing strategy

Efstathios S. Gonos

NATIONAL HELLENIC RESEARCH FOUNDATION, INSTITUTE OF BIOLOGICAL RESEARCH AND BIOTECHNOLOGY,
ATHENS, GREECE

16:30 – 17:00 Ageing, proteolysis, and stress adaptation

Kelvin J.A. Davies

SCHOOL OF GERONTOLOGY AND DIVISION OF MOLECULAR AND COMPUTATIONAL BIOLOGY,
UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CALIFORNIA, USA

17:00 – 17:30 Role of protein repair in aging and protection against oxidative damage

Isabelle Petropoulos

LABORATOIRE DE BIOLOGIE ET BIOCHIMIE CELLULAIRE DU VIEILLISSEMENT, UNIVERSITÉ PARIS-DIDEROT-
PARIS, PARIS, FRANCE

19:00 *Gala Dinner*

FRIDAY, JUNE 17

SESSION IV BIOENERGETICS, SIGNALING, AND GENETICS

CHAIRPERSONS *Alberto Boveris*

PHYSICAL CHEMISTRY, SCHOOL OF PHARMACY AND BIOCHEMISTRY, UNIVERSITY OF BUENOS AIRES,
BUENOS AIRES, ARGENTINA

Giuseppe Valacchi

DIPARTIMENTO DI SCIENZE BIOMEDICHE, UNIVERSITÀ DEGLI STUDI DI SIENA, SIENA, ITALY

08:30 – 09:00 The role of mitochondrial oxidative stress and Bak-mediated apoptosis in age-related hearing loss

Tomas A. Prolla

DEPARTMENT OF GENETICS, UNIVERSITY OF WISCONSIN, MADISON, WISCONSIN, USA

09:00 – 9:30 Regulation of mitochondrial function, ROS and yeast chronological life span by TOR signaling pathway

Gerald S. Shadel

DEPARTMENT OF PATHOLOGY, YALE UNIVERSITY SCHOOL OF MEDICINE, NEW HAVEN, CONNECTICUT, USA

09:30– 10:00 Decline in mitochondrial bioenergetics and shift to ketogenic profile in brain during reproductive senescence

Roberta Díaz Brinton

PHARMACOLOGY & PHARMACEUTICAL SCIENCES, SCHOOL OF PHARMACY,
UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CALIFORNIA, USA

10:00– 10:30 ApoE genotype, diet, oxidative stress, inflammation, and disease risk

Gerald Rimbach

INSTITUTE OF HUMAN NUTRITION AND FOOD SCIENCE, CHRISTIAN ALBRECHTS UNIVERSITY KIEL,
KIEL, GERMANY

10:30– 11:00 *Coffee break*

SESSION V ENVIRONMENT AND LIFESTYLE IN AGING

CHAIRPERSONS *Jean Cadet*

LABORATOIRE "LÉSIONS DES ACIDES NUCLÉIQUES", INSTITUT NANOSCIENCES ET CRYOGÉNIE,
CEA/GRENOBLE, GRENOBLE, FRANCE

Giuseppe Poli

DEPARTMENT OF CLINICAL AND BIOLOGICAL SCIENCES, UNIVERSITY OF TURIN, SAN LUIGI HOSPITAL,
TURIN, ITALY

11:00– 11:30 Neurotrophic interactions with diet and oxidative stress in the aging brain

Ignacio Torres-Aleman

CAJAL INSTITUTE, CSIC AND CIBERNED, MADRID, SPAIN

11:30– 12:00 Up-regulation of longevity-associated genes by moderate wine consumption is conserved from drosophila to human beings

José Viña

DEPARTMENT OF PHYSIOLOGY, SCHOOL OF MEDICINE, UNIVERSITY OF VALENCIA, VALENCIA, SPAIN

12:00 – 12:30 Environmental stress, sirt1, and lung aging

Irfan Rahman

DEPARTMENT OF ENVIRONMENTAL MEDICINE, LUNG BIOLOGY AND DISEASE PROGRAM,
UNIVERSITY OF ROCHESTER MEDICAL CENTER, ROCHESTER, NEW YORK, USA

12:30 – 13:00 Micronutrient intake – a global perspective

Manfred Eggersdorfer

RESEARCH AND DEVELOPMENT, DSM NUTRITIONAL PRODUCTS, BASEL, SWITZERLAND

13:00 – 13:30 Skin aging: role of UV and infrared radiation

Tilman Grune

INSTITUTE OF NUTRITION, DEPARTMENT OF NUTRITIONAL TOXICOLOGY,
FRIEDRICH-SCHILLER UNIVERSITY JENA, JENA, GERMANY

13:30 – 14:30 *Lunch and Poster Viewing*

SESSION VI YOUNG INVESTIGATORS PRESENTATIONS

14:30 – 16:00

CHAIRPERSONS *Giovanni Mann*

CARDIOVASCULAR DIVISION, BRITISH HEART FOUNDATION CENTRE OF RESEARCH EXCELLENCE,
SCHOOL OF MEDICINE, KING'S COLLEGE LONDON, LONDON, UK

Nesrin Özer

DEPARTMENT OF BIOCHEMISTRY, FACULTY OF MEDICINE, MARMARA UNIVERSITY, ISTANBUL, TURKEY

JURY OF YOUNG INVESTIGATOR AWARD : *John Maguire - President*

SESSION VII ROUND TABLE DISCUSSION: NUTRITION AND CELL SIGNALING IN AGING

16:00 – 17:30

COORDINATORS *Gerald S. Shadel*

DEPARTMENT OF PATHOLOGY, YALE UNIVERSITY SCHOOL OF MEDICINE, NEW HAVEN, CONNECTICUT, USA

Maret G. Traber

LINUS PAULING INSTITUTE, OREGON STATE UNIVERSITY, CORVALLIS, OREGON, USA

PANEL MEMBERS *Vittorio Calabrese*

DEPARTMENT OF CHEMISTRY, UNIVERSITY OF CATANIA, CATANIA, ITALY

Tomas A. Prolla

DEPARTMENT OF GENETICS, UNIVERSITY OF WISCONSIN, MADISON, WI 53706, USA

Irfan Rahman

DEPARTMENT OF ENVIRONMENTAL MEDICINE, LUNG BIOLOGY AND DISEASE PROGRAM,
UNIVERSITY OF ROCHESTER MEDICAL CENTER, ROCHESTER, NEW YORK, USA

Gerald Rimbach

INSTITUTE OF HUMAN NUTRITION AND FOOD SCIENCE, CHRISTIAN ALBRECHTS UNIVERSITY KIEL,
KIEL, GERMANY

Michael Ristow

DEPARTMENT OF HUMAN NUTRITION, INSTITUTE OF NUTRITION, FRIEDRICH-SCHILLER-UNIVERSITY OF
JENA, D-07743 JENA, AND DEPARTMENT OF CLINICAL NUTRITION, GERMAN INSTITUTE OF HUMAN
NUTRITION, POTSDAM-REHBRUECKE, GERMANY

CONCLUDING REMARKS – SUMMARY

17:30 – 18:00 *Helmut Sies*

INSTITUT FÜR BIOCHEMIE UND MOLEKULARBIOLOGIE I, HEINRICH-HEINE-UNIVERSITÄT DÜSSELDORF,
DÜSSELDORF, GERMANY

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HORPHAG RESEARCH

JARROW FORMULAS

MINISTÈRE DE L'ENSEIGNEMENT SUPERIEUR

MINISTÈRE DU TRAVAIL, DE L'EMPLOI, ET DE LA SANTÉ

NUSKIN PHARMANEX

OSATO RESEARCH INSTITUTE

SCIENCE ET TECHNOLOGIE

UNIVERSITÉ PIERRE ET MARIE CURIE