

## OXYGEN CLUB OF CALIFORNIA

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2002 WORLD CONGRESS

### OXIDANTS AND ANTIOXIDANTS IN BIOLOGY

### **PROGRAM**

March 6–9, 2002 Fess Parker's Double Tree Resort Santa Barbara, California

### **O**RGANIZERS

### Lester Packer

DEPARTMENT OF MOLECULAR PHARMACOLOGY & TOXICOLOGY SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA

### Enrique Cadenas

DEPARTMENT OF MOLECULAR PHARMACOLOGY & TOXICOLOGY SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA

### SCIENTIFIC PROGRAM CHAIR

### Helmut Sies

Institut für Physiologische Chemie I, Heinrich-Heine-Universität Düsseldorf, Germany

## SCIENTIFIC PROGRAM COMMITTEE

### Kelvin J.A. Davies

ETHEL PERCY ANDRUS GERONTOLOGY CENTER, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA, USA

### Balz Frei

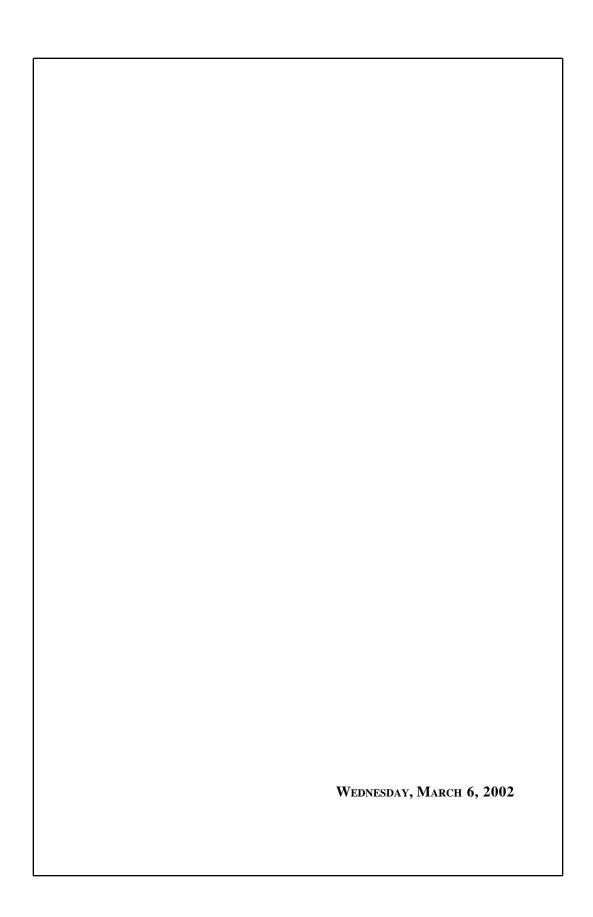
LINUS PAULING INSTITUTE, OREGON STATE UNIVERSITY, CORVALLIS, OR

### Catherine Rice-Evans

CENTRE FOR AGE-RELATED DISEASES, GKT SCHOOL OF BIOMEDICAL SCIENCES, KING'S COLLEGE, LONDON, UK

### Junji Yodoi

DEPARTMENT OF BIOLOGICAL RESPONSES, INSTITUTE FOR VIRUS RESEARCH,
KYOTO UNIVERSITY, KYOTO, JAPAN



REGISTRATION
Registration will take place from 10 AM to 8 PM on Wednesday, March 6.
4

### 02:00 – 05:30 FORUM: MEET THE YOUNG INVESTIGATORS

Organized by

Jason Eiserich

DEPARTMENT OF INTERNAL MEDICINE, DIVISION OF NEPHROLOGY, UNIVERSITY OF

CALIFORNIA, DAVIS, CA, USA

Albert van der Vliet

DEPARTMENT OF INTERNAL MEDICINE, UNIVERSITY OF CALIFORNIA, DAVIS

### CHAIRPERSONS Jason P. Eiserich

Department of Internal Medicine, Division of Nephrology, University of California, Davis, CA, USA

### Albert van der Vliet

DEPARTMENT OF INTERNAL MEDICINE, UNIVERSITY OF CALIFORNIA, DAVIS

Antioxidant activity of isolated polyphenols from a tropical pitcher plant

Ma Hnin Hnin Aung

NANYANG TECHNOLOGICAL UNIVERSITY (hnin@hotmail.com)

Down regulation of the LON protease causes impairment of mitochondrial morphology and function, and results in cell death

Daniela Bota

University of Southern California, Los Angeles (dbota@yahoo.com)

Myeloperoxidase and the endothelium: binding of the enzyme to heparin

Anna L.P. Chapman

University of California, Davis (alchapman@ucdavis.edu)

Modulation of neutrophil apoptosis by lipid oxidation products

Erik Finkelstein

University of California, Davis (erifin@ucdavis.edu)

CHAIRPERSON Kishor Gohil

UNIVERSITY OF CALIFORNIA, DAVIS

How do dietary phenolic compounds affect vitamin E and cholesterol in the body?

Jan Frank

SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES, SWEDEN (Jan.Frank@lmy.slu.se)

Topology of superoxide and hydrogen peroxide production in mitochondria

Derick Han

University of Southern California, Los Angeles (derickh@hsc.usc.edu)

The effects of mild cigarette smoke exposure on NF-B activation and apoptosis in human lymphocytes

Erez Hasnis

TECHNION-I SRAEL INSTITUTE OF TECHNOLOGY, ISRAEL (erezzzha@hotmail.com)

CHAIRPERSON Claude Saliou

JOHNSON & JOHNSON, SKILLMAN, NJ

Metabolism of vitamin E; A single dose-response study

Yvonne Jeanes

 $University\ of\ Surrey,\ Surrey,\ UK\ (yjeanes\@\ yahoo.com)$ 

Antioxidant capacity of apple polyphenols *Silvina B. Lotito* 

LINUS PAULING INSTITUTE, OR (silvina.lotito@orst.edu)

A prospective *Drosophila* model of FALS *Robin Mockett* 

University of Southern California, Los Angeles (mockett@hsc.usc.edu)

### CHAIRPERSON Gerald Rimbach

THE UNIVERSITY OF READING, WHITEKNIGHTS, READING, UNITED KINGDOM

Estrogen-mediated neuroprotection: Mitochondrial mechanisms

Jon Nilsen

University of Southern California, Los Angeles (jnilsen@hsc.usc.edu)

The effects of genistein on T47D breast cancer cells *Dominique Nguyen* 

University of Southern California, Los Angeles (dominiqn@hsc.usc.edu)

Chemoprevention by carotenoids in lung and prostate?

Ute Obermüller-Jevic

University of California, Davis (obermueller-jevic@gmx.de)

### CHAIRPERSON Jeremy Spencer

Centre for Age-Related Diseases, King's College,  $\ensuremath{\mathsf{U}} \ensuremath{\mathsf{K}}$ 

Modulation of matrix metalloproteinase-9 expression in pulmonary epithelial cells by nitric oxide

Tatsuya Okamoto

University of California, Davis (tokamoto@ucdavis.edu)

Pectins and pectic-oligosaccharides in colon cancer *Estibaliz Olano-Martin* 

University of California, Davis (estibalizolano@hotmail.com)

Redox regulation of -tubulin Tyrosination by Nox1 *Anh D. Phung* 

 $University\ of\ California,\ Davis\ (adphung@ucdavis.edu)$ 

### CHAIRPERSON Anna L.P. Chapman

UNIVERSITY OF CALIFORNIA, DAVIS

Antioxidant action of selenium compounds against lipid peroxidation

Violeta Raneva

TEIKYO UNIVERSITY SCHOOL OF MEDICINE, JAPAN (villy@med.teikyo-u.ac.jp)

iNOS-induction by LPS is attenuated in -tocopherol transfer protein knockout mice

Bettina C. Schock

University of California, Davis (bcshock@ucdavis.edu)

Proteasome can degrade oxidized proteins in cells lacking ubiquitin-conjugating activity

Reshma Shringarpure

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES (shringar@usc.edu)

### CHAIRPERSON Estibaliz Olano-Martin

UNIVERSITY OF CALIFORNIA, DAVIS

Carotenoid uptake and stability delivered as waterdispersible beadlets in cell cultures

Siranoush Shahrzad

University of Southern California, Los Angeles (shahrzad@hsc.usc.edu)

Ozone: environmental stress to the skin barrier *Giuseppe Valacchi* 

UNIVERSITY OF CALIFORNIA, DAVIS (gvalacchi@ucdavis.edu)

Metal-independent HO $\cdot$  production by halogenated quinones and H<sub>2</sub>O<sub>2</sub>: What is the mechanism?

Benny Zhu

 $Linus\ Pauling\ Institute,\ Oregon\ State\ University\ (benzhan.zhu@orst.edu)$ 

06:00-07:00 **Keynote Lecture** 

Introduction Kelvin J.A. Davies

ETHEL PERCY ANDRUS GERONTOLOGY CENTER, UNIVERSITY OF SOUTHERN

CALIFORNIA, LOS ANGELES, CA, USA

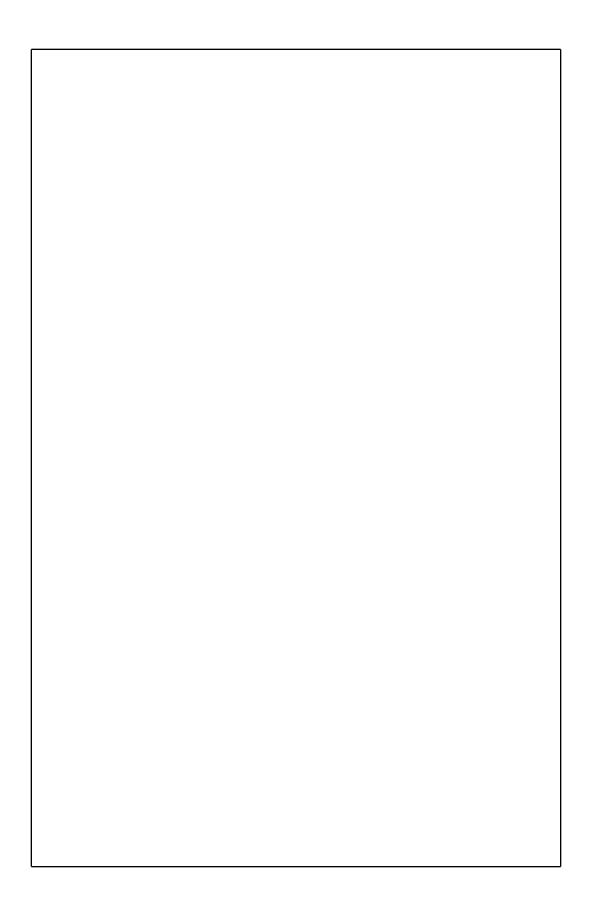
Barry Halliwell

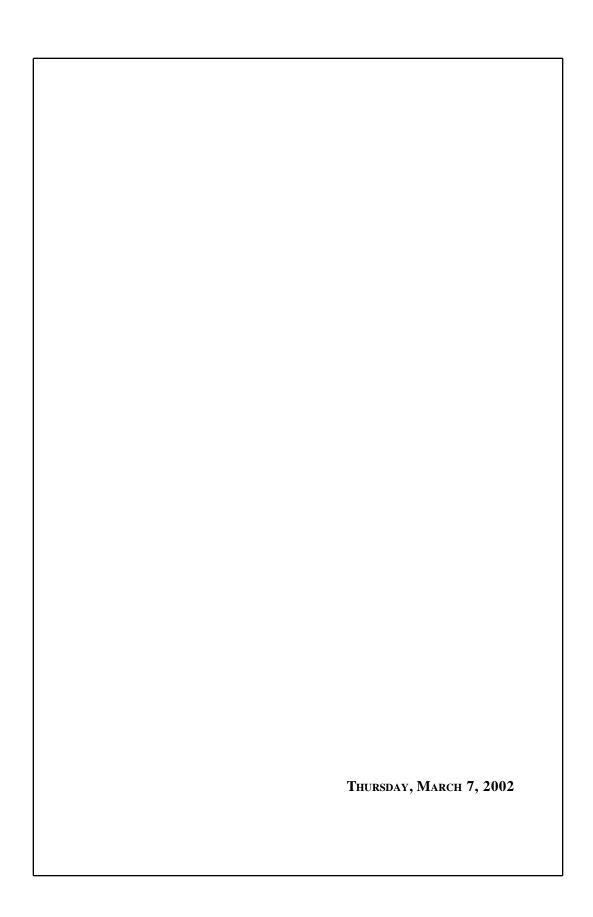
DEPARTMENT OF BIOCHEMISTRY, NATIONAL UNIVERSITY OF SINGAPORE,

SINGAPORE

Abnormal proteins and hydrogen peroxide:

Major cytotoxic factors to neurones?





SESSION I NITRIC OXIDE

CHAIRPERSONS Willem H. Koppenol

ETH HÖNGGERBERG, ZÜRICH, SWITZERLAND

Jim Hurst

DEPARTMENT OF CHEMISTRY, WASHINGTON STATE UNIVERSITY, PULLMAN, WA,

USA

09:00 – 09:20 Few radicals from the adduct between ONOO<sup>-</sup> and

 $CO_2$ 

Willem H. Koppenol

ETH HÖNGGERBERG, ZÜRICH, SWITZERLAND

09:20 – 09:40 Quantitation with fluorescent particles of reactive

oxidants produced by phagocytes

Jim Hurst

 $\label{eq:constraint} Department of Chemistry, Washington State \ University, Pullman, WA,$ 

USA

09:40 – 10:00 The complex roles of nitric oxide in airway

inflammation

Albert van der Vliet

DEPARTMENT OF INTERNAL MEDICINE, UNIVERSITY OF CALIFORNIA, DAVIS

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Session II	NITRIC OXIDE

CHAIRPERSONS Jason Eiserich

DEPARTMENT OF INTERNAL MEDICINE, DIVISION OF NEPHROLOGY, UNIVERSITY OF

CALIFORNIA, DAVIS, CA, USA Albert van der Vliet

DEPARTMENT OF INTERNAL MEDICINE, UNIVERSITY OF CALIFORNIA, DAVIS

10:20 - 10:40Nox1, a redox-based regulatory switch for inducible

nitric oxide synthase

Jason Eiserich

DEPARTMENT OF INTERNAL MEDICINE, DIVISION OF NEPHROLOGY, UNIVERSITY OF

CALIFORNIA, DAVIS, CA, USA

Effects of gender on reduced-size liver ischemia and 10:40 - 11:00

reperfusion injury in mice: Role of nitric oxide

Matthew Grisham

DEPARTMENT OF MOLECULAR AND CELLULAR PHYSIOLOGY, LOUISIANA STATE

University Health Sciences Center, Shreveport, LA, USA

11:00 - 11:20S-Nitrosothiol biochemistry and the normal response

to hypoxia

Benjamin Gaston

DEPARTMENT OF PEDIATRICS, DIVISION OF RESPIRATORY MEDICINE, UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE, CHARLOTTESVILLE, VIRGINIA, USA

11:20 - 11:40Regulation of apoptosis by cytochrome c nitrosylation

Joan Mannick

DEPARTMENT OF MEDICINE, UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL,

SHREWSBURY, MA, USA

Conference Photo 11:40 - 12:00

Organized by John Maguire

12:00 - 01:00Lunch

SESSION III	THE ANTIOXIDANT VITAMINS C AND E
CHAIRPERSONS	Balz Frei
	Linus Pauling Institute and Department of Biochemistry & Biophysics, Oregon State University, Corvallis, OR, USA
	Regina Brigelius-Flohé
	DEPARTMENT OF VITAMINS AND ATHEROSCLEROSIS, GERMAN INSTITUTE OF HUMAN NUTRITION, BERGHOLZ-REHBRÜCKE, GERMANY
01:00 - 01:20	Vitamin E kinetics in pregnancy and lactation. 2:1
	Preference for <i>RRR</i> - compared with all <i>rac</i>
	tocopherols
	Maret Traber
	LINUS PAULING INSTITUTE, OREGON STATE UNIVERSITY, CORVALLIS, OR, USA
01:20 - 01:40	Mechanisms of vitamin E metabolism
	Regina Brigelius-Flohé
	DEPARTMENT OF VITAMINS AND ATHEROSCLEROSIS, GERMAN INSTITUTE OF HUMAN NUTRITION, BERGHOLZ-REHBRÜCKE, GERMANY
01:40 - 02:00	-Tocopherol metabolism and its relationship with -
	tocopherol in humans
	Frank J. Kelly
	LUNG BIOLOGY, THE RAYNE INSTITUTE, ST THOMAS' HOSPITAL, KING'S COLLEGE, LONDON, UNITED KINGDOM
02:00 - 02:20	Bioavailability and biopotency of vitamin E in
	humans: An ongoing controversy
	Peter Hoppe
	BASF NUTRITION RESEARCH STATION, OFFENBACH, GERMANY
02:20 - 02:40	Vitamin C pharmacokinetics in healthy humans
	Mark A. Levine
	MOLECULAR AND CLINICAL NUTRITION SECTION, DIGESTIVE DISEASES BRANCH, NIDDK, NATIONAL INSTITUTES OF HEALTH, BETHESDA, MD, USA
02:40 - 03:00	Vitamin C: transport and new biology
	David Golde
	MEMORIAL SLOAN-KETTERING CANCER CENTER, NEW YORK, NY, USA

## SESSION IV THE ANTIOXIDANT VITAMINS C AND E

#### Chairpersons Lester Packer

DEPARTMENT OF MOLECULAR PHARMACOLOGY & TOXICOLOGY, SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA, USA

### Maret Traber

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

### 03:00 – 03:20 Effect of selenium and vitamin E on differential gene

expression in vitro and in vivo

Gerald Rimbach

Hugh Sinclair Human Nutrition Unit, School of Food Bioscience, The University of Reading, Whiteknights, Reading, United Kingdom

### 03:20 – 03:40 Vitamin E in cell signalling

Angelo Azzi

Institute of Biochemistry and Molecular Biology, University of Bern, Bern, Switzerland

## 03:40 – 04:00 -Tocopherol transfer protein and familial isolated vitamin E deficiency

Hiroyuki Arai

DEPARTMENT OF HEALTH CHEMISTRY, GRADUATE SCHOOL OF PHARMACEUTICAL SCIENCES, UNIVERSITY OF TOKYO, TOKYO, JAPAN

# 04:00 – 04:20 Vitamin C-induced decomposition of lipid hydroperoxides to endogenous genotoxins

Ian Blair

CENTER FOR CANCER PHARMACOLOGY, UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE, PHILADELPHIA, PA, USA

## 04:20 – 04:40 Vitamin C does not act as a pro-oxidant towards lipid and proteins in human plasma exposed to the

complete Udenfriend system

Balz Frei

LINUS PAULING INSTITUTE AND DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS, OREGON STATE UNIVERSITY, CORVALLIS, OR, USA

### 04:40 – 05:00 Vitamin C and endothelial nitric oxide synthesis

Regine Heller

CENTER OF VASCULAR BIOLOGY AND MEDICINE, FRIEDRICH-SCHILLER-UNIVERSITY OF JENA, ERFURT, GERMANY

SESSION V THE ANTIOXIDANT VITAMINS C AND E

CHAIRPERSONS Barry Halliwell

DEPARTMENT OF BIOCHEMISTRY, NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

Regine Heller

CENTER OF VASCULAR BIOLOGY AND MEDICINE, FRIEDRICH-SCHILLER-

University of Jena, Erfurt, Germany

05:00 – 05:20 The vitamin E atherosclerosis prevention study

(VEAPS): Reduction in LDL oxidation without effects

on atherosclerosis progression rates?

Alex Sevanian

DEPARTMENT OF MOLECULAR PHARMACOLOGY & TOXICOLOGY, SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA

atherosclerosis?

Roland Stocker

BIOCHEMISTRY GROUP, HEART RESEARCH INSTITUTE, CAMPERDOWN, NSW,

AUSTRALIA

05:40 – 06:00 Randomised trial of cholesterol-lowering therapy and

of antioxidant vitamins in 20,536 people at increased

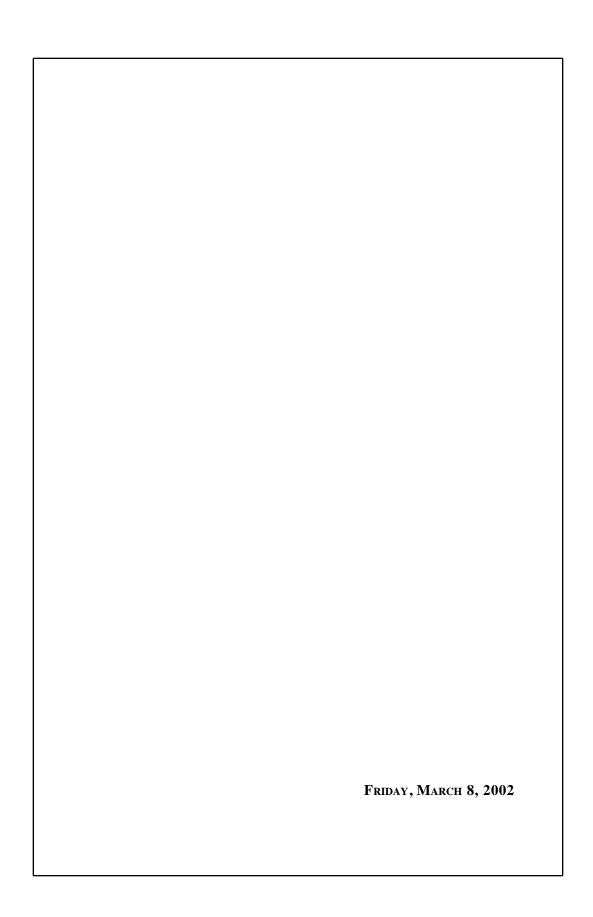
risk of coronary heart disease death

Rory Collins

CLINICAL TRIAL SERVICE UNIT AND EPIDEMIOLOGICAL STUDIES UNIT, RADCLIFFE

INFIRMARY, OXFORD, UNITED KINGDOM

06:00 Refreshments and Poster Discussion



### SESSION VI THE ANTIOXIDANT VITAMINS C AND E

### Chairpersons Roland Stocker

BIOCHEMISTRY GROUP, HEART RESEARCH INSTITUTE, CAMPERDOWN, NSW, AUSTRALIA

### Mark Levine

MOLECULAR AND CLINICAL NUTRITION SECTION, DIGESTIVE DISEASES BRANCH, NIDDK, NATIONAL INSTITUTES OF HEALTH, BETHESDA, MD, USA

## 09:00 – 09:20 Vitamin E and enhancement of the immune response

in the aged: Cellular and molecular mechanisms

Simin Meydani

JEAN MAYER USDA HUMAN NUTRITION RESEARCH CENTER, NUTRITION IMMUNOLOGY LABORATORY, BOSTON, MA, USA

## 09:20 – 09:40 -Tocopherol, oxidative stress, inflammation and

diabetes

Kenny Jialal

CENTER FOR HUMAN NUTRITION, DEPARTMENT OF CLINICAL NUTRITION THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS DALLAS, TEXAS

### 09:40 – 10:00 Potential adverse effects of vitamins C and E

Carol S. Johnston

Department of Nutrition, Arizona State University East, Mesa, AZ, USA

### 10:00 – 10:20 Serum ascorbic acid and disease prevalence: The third

national health and nutrition examination survey

(NHANES III)

Joel A. Simon

Medical Service, Veterans Affairs Medical Center, San Francisco, CA, USA

### 10:20 – 10:40 Vitamin C status and mortality in US adults

Catherine Loria

NHLBI, NATIONAL INSTITUTES OF HEALTH, BETHESDA, MD, USA

### 10:40 – 11:00 *Coffee break*

#### SESSION VII NEW HORIZONS ON CAROTENOID RESEARCH

CHAIRPERSONS Helmut Sies

> INSTITUT FÜR PHYSIOLOGISCHE CHEMIE I, HEINRICH-HEINE-UNIVERSITÄT DÜSSELDORF, DÜSSELDORF, GERMANY

Norman I. Krinsky

DEPARTMENT OF BIOCHEMISTRY, TUFTS UNIVERSITY SCHOOL OF MEDICINE,

BOSTON, MA, USA

11:00 -: 11:20 Conversion of carotenoids to vitamin A: New insights

on the molecular level

Johannes von Lintig

INSTITUTE OF BIOLOGY I, NEUROBIOLOGY AND ANIMAL PHYSIOLOGY, UNIVERSITY OF FREIBURG, FREIBURG, GERMANY

The role of carotenoids in age-related macular 11:20 - 11:40

degeneration: Where are we now, and where do we go

from here?

Paul Bernstein

MORAN EYE CENTER, UNIVERSITY OF UTAH, SALT LAKE CITY, UT, USA

11:40 - 12:00Roles of antioxidants and DNA repair in regulating

oxidative DNA damage

Andrew Collins

DNA Instability Laboratory, Rowett Research Institute, Aberdeen,

UNITED KINGDOM

12:00 - 12:20-Carotene and lycopene in oral sun protection

Wilhelm Stahl

INSTITUTE OF PHYSIOLOGICAL CHEMISTRY I, HEINRICH-HEINE UNIVERSITY OF DÜSSELDORF, DÜSSELDORF, GERMANY

### SPECIAL LECTURE

12:20 – 01:00 Historical critical evaluation of free radical and antioxidant research

Norman I. Krinsky

Department of Biochemistry, Tufts University School of Medicine, Boston, MA, USA

01:00 - 02:00 Lunch

### SESSION VIII REDOX REGULATION OF SIGNAL TRANSDUCTION

### CHAIRPERSONS Junji Yodoi

DEPARTMENT OF BIOLOGICAL RESPONSES, INSTITUTE FOR VIRUS RESEARCH, KYOTO UNIVERSITY, KYOTO, JAPAN

### Hadi Moini

DEPARTMENT OF MOLECULAR PHARMACOLOGY & TOXICOLOGY, SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA

### 02:00 – 02:20 Thioredoxin targets involved in subcellular traffic

Junji Yodoi

DEPARTMENT OF BIOLOGICAL RESPONSES, INSTITUTE FOR VIRUS RESEARCH, KYOTO UNIVERSITY, KYOTO, JAPAN

## 02:20 – 02:40 Diversity of redox activation pathways for NF B in response to environmental injuries

John F. Engelhardt

GENE THERAPY CENTER FOR CYSTIC FIBROSIS AND OTHER GENETIC DISEASES, DEPARTMENT OF ANATOMY AND CELL BIOLOGY, UNIVERSITY OF IOWA, IOWA CITY, IOWA, USA

## 02:40 – 03:00 Sptrx-1, a novel thioredoxin expressed during

mammalian sperm tail elongation

Antonio Miranda Vizuete

DEPARTMENT OF BIOSCIENCES AT NOVUM, CENTER FOR BIOTECHNOLOGY, KAROLINSKA INSTITUTE, HUDDINGE, SWEDEN

## 03:00 – 03:20 Cystine/glutamate exchange transporter: occurrence

and redox regulation of its expression

Shiro Bannai

DEPARTMENT OF BIOCHEMISTRY, INSTITUTE OF BASIC MEDICAL SCIENCES, UNIVERSITY OF TSUKUBA, TSUKUBA, IBARAKI, JAPAN

SESSION IX OXYGEN, ANTIOXIDANTS, AND REDOX SIGNALING

CHAIRPERSONS Chandan K. Sen

THE OHIO STATE UNIVERSITY MEDICAL CENTER, COLUMBUS, OH, USA

Joe M. McCord

Webb-Waring Institute, University of Colorado Health Sciences Center, Denver, CO, USA

03:20 – 03:40 Superoxide dismutases and cancer: Evidence for two

distinct types of lung cancer

Joe McCord

Webb-Waring Institute, University of Colorado Health Sciences Center, Denver, CO, USA

 $03:40-04:00 \quad \ Translational \ regulation \ of \ MnSOD \ by \ an \ RNA-$ 

binding protein: Role of tyrosine phosphorylation

Linda Clerch

LUNG BIOLOGY LABORATORY, GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE, WASHINGTON, DC, USA

04:00 – 04:20 Revisiting the neuroprotective properties of vitamin E

Chandan K. Sen

THE OHIO STATE UNIVERSITY MEDICAL CENTER, COLUMBUS, OH, USA

04:20 – 04:40 Multiple and tissue specific actions of tocopherol

transfer-protein gene in vivo

Kishor Gohil

DEPARTMENT OF INTERNAL MEDICINE, DIVISION OF PULMONARY MEDICINE, UNIVERSITY OF CALIFORNIA DAVIS, CA

04:40 - 05:00 Coffee break

05:00 - 06:30

SESSION X SCIENCE & HUMANITY PRIZE

Presented by Madame Osato and Osato Research Institute

CHAIRPERSON Alex Sevanian

DEPARTMENT OF MOLECULAR PHARMACOLOGY & TOXICOLOGY, SCHOOL OF PHARMACY, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA, USA

POSTER PRESENTATIONS

Catherine Rice-Evans

Centre for Age-Related Diseases, GKT School of Biomedical Sciences, King's College, London, UK

Norman I. Krinsky

Department of Biochemistry, Tufts University School of Medicine, Boston, MA, USA

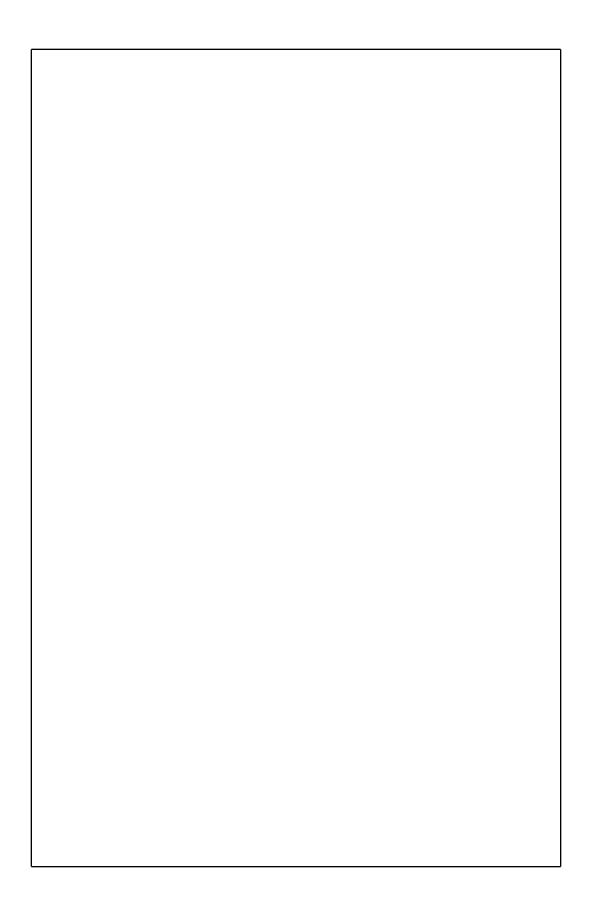
08:00 Yoko Tokue

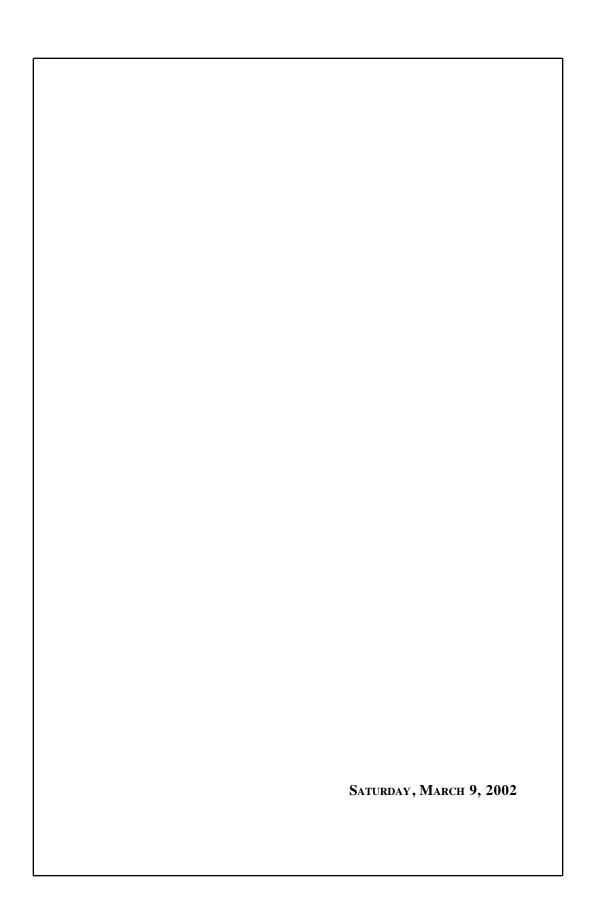
Charity Piano Concert

UNESCO World Foundation AIDS Research and Prevention

Piano courtesy of Bösendorfer

08:30 Banquet





Session XI	Neurodegeneration
CHAIRPERSONS	Catherine Rice-Evans
	CENTRE FOR AGE-RELATED DISEASES, GKT SCHOOL OF BIOMEDICAL SCIENCES, KING'S COLLEGE, LONDON, UK
	Jim Joseph
	Human Nutrition Research Center on Aging at Tufts University, Boston , $\operatorname{MA},\operatorname{USA}$
09:00 - 09:20	Neuroprotective effects of natural extracts and NOS
	inhibitors against -amyloid toxicity
	Stephane Bastianetto
	DOUGLAS HOSPITAL RESEARCH CENTRE, VERDUN, QUEBEC, CANADA
09:20 - 09:40	Signaling oxidative stress in Alzheimer's disease
	Xiongwei Zhu
	Institute of Pathology, Case Western Reserve University, Cleveland, Ohio, USA
09:40 - 10:00	Flavonoids and protection against neurodegeneration
	Jim Joseph
	Human Nutrition Research Center on Aging at Tufts University, Boston , MA, USA
10:00 – 10:20	Neuroprotective mechanisms of flavonoids against
	oxidative stress-induced cell death involving MAP
	kinase activation
	Hagen Schroeter
	CENTRE FOR AGE-RELATED DISEASES, GKT SCHOOL OF BIOMEDICAL SCIENCES, KING'S COLLEGE, LONDON, UK
10:20 - 10:40	Neurosteroid synthesis in neurodegeneration:
	An oxidative stress-mediated process
	Vasilios Papadopoulos

Coffee break

10:40 - 11:00

Division of Hormone Research, Department of Cell Biology, Georgetown University Medical Center, Washington, DC, USA

### SESSION XII NEUROBIOLOGY AND NITRIC OXIDE

CHAIRPERSONS Christian Behl

MPG-NACHWUCHSGRUPPE, MAX PLANCK INSTITUT FÜR PSYCHIATRIE, MÜNCHEN, GERMANY

Robert A. Floyd

FREE RADICAL BIOLOGY AND A GING RESEARCH PROGRAM, OKLAHOMA MEDICAL RESEARCH FOUNDATION, OKLAHOMA CITY, OK, USA

11:00 – 11:20 A proteomics approach to study tyrosine nitration of mitochondrial complex I during cardiac ischemia-

reperfusion

Paul S. Brookes

Department of Pathology, University of Alabama at Birmingham, Birmingham, AL 35294, USA

11:20 – 11:40 Oxidative apoptosis and novel targets for

neuroprotection

Christian Behl

MPG-Nachwuchsgruppe, Max Planck Institut für Psychiatrie, München, Germany

11:40 – 12:00 Neurotoxicity of NMDA: Novel therapeutic

approaches

Stuart A. Lipton

Center for Neuroscience and Aging, The Burnham Institute, La Jolla, CA, USA

12:00 – 12:20 Nitric oxide, mitochondria, and neurobiology

Juan José Poderoso

Oxygen Metabolism Laboratory, School of Medicine, University of Buenos Aires, Buenos Aires, Argentina

### KEYNOTE LECTURE

CHAIRPERSON Balz Frei

LINUS PAULING INSTITUTE AND DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS,

OREGON STATE UNIVERSITY, CORVALLIS, OR, USA

12:20 – 01:00 Reversing the mitochondrial decay in aging by a

metabolic tune-up

Bruce Ames

CHILDREN'S HOSPITAL OAKLAND RESEARCH INSTITUTE, OAKLAND, CA, USA

### CONCLUDING REMARKS

Lester Packer

OCC PRESIDENT

Balz Frei / Kelvin J.A. Davies

LPI / OCC 2003

Kelvin J.A. Davies / Balz Frei

OCC / LPI 2004

01:00 Farewell lunch

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