



FONDAZIONE  
INTERNAZIONALE  
MENARINI

**University of Pisa**  
*Department of Reproduction and Ageing*

## **MULTIDISCIPLINARY CONFERENCE**

# **Lifestyle and Ageing**

Pisa, October 4-5, 2010

**Pisa, Camera di Commercio, Piazza Vittorio Emanuele II, 5**

*Organized by*

Insegnamento di Semeiotica e Metodologia Clinica Department of Reproduction and Ageing  
Fondazione Internazionale Menarini

*Under the Patronage of*

**Presidenza della Repubblica Italiana**  
**Presidenza del Consiglio dei Ministri, Repubblica Italiana**  
**Provincia di Pisa**  
**Comune di Pisa**  
**Wessex Institute of Technology (UK)**  
**Società Italiana di Biomateriali (SIB)**  
**Accademia Italiana della Cucina (Del. Pisa Valdera)**

Informations: Prof. A. Carpi

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## **PRESIDENT**

A. Carpi (Italy)

## **SCIENTIFIC AND ORGANIZING SECRETARIES**

N. Abraham (USA)

A. Carpi (Italy)

G. Ladu (Italy)

J. Mechanick (USA)

M.A. Russo (I)

## **LOCAL ORGANIZER COMMITTEE**

Convento, Parrocchia, Misericordia, Fratres e AIDO, San Romano, Consociazione Nazionale Fratres, Firenze

La Comunità Franciscana (San Romano) A. Lotti, V. Tinghi, I. Zingoni, M. Parentini, N. Mastroberti

Centro Studi e Ricerche Calabresi 'G. Righi' di Lucca, Sezione Speciale Istituto Storico Lucchese (Presidente Dr. C. De Gaudio), Associazione 'Amici del Cuore' di Lucca

## **COLLABORATIONS**

**Wessex Institute of Technology (UK)**



**PROVINCIA DI PISA**

## **GENERAL ORGANIZATION**

### ***FONDAZIONE INTERNAZIONALE MENARINI***

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**CREDITI MINISTERIALI PER MEDICI-CHIRURGHI E BIOLOGI (ECM): 6**

## **Welcome.**

Ageing remains a physiological controversy. As we begin to understand the molecular basis of disease, we also discover the molecular basis of normal ageing. More importantly in clinical medicine, we appreciate the important differences between the phenotype of ageing and the underlying “-genomics”.

Many examples from our own clinical experiences have served to enlighten us and stimulate our asking and examining provocative research questions. Is hypertension merely the result of atherosclerosis or another vascular pathology, or could it be genomically programmed to confer some evolutionary advantage? At what point is perimenopause truly differentiated from premature ovarian failure; why does this point change over time in human evolution; and why are the effects of estrogen distributed across all physiological systems? What accounts for the age-related differences in clinical expression of certain malignancies, such as thyroid and breast cancer? Can human ageing be expressed using new model system biology and can we grasp the extent of complexity associated with it?

To study ageing is also to study the effects of lifestyle. This is accomplished at the molecular, cellular, and organismal level. The study of lifestyle and its effects on physiology may hold the key to understanding the various links among obesity, diabetes, and chronic degenerative diseases that compromise human longevity and make us feel “old”. From a global perspective, we are growing older and the imperative to understand mechanisms of healthy aging is much greater. The 2010 University of Pisa Multidisciplinary Conference will address Lifestyle and Aging. Our program covers many diverse hot topics including the role of stem cells, hormones and the cardiovascular system in ageing and addresses many medical (cancer) and social (nutrition, physical activity) issues. We thank all of you for participating in this Conference and we look forward to meeting you as well as collaborating with you in future initiatives.

Angelo Carpi

Jeffrey Mechanick

Nader Abraham

# **PROGRAM**

**OCTOBER 3, 2010**

**Hystorical Building, Museo dell'Ordine dei Cavalieri di Santo Stefano,  
Piazza dei Cavalieri, 1**

**18.30 Welcome Reception**

**OCTOBER 4, 2010**

**Pisa, Camera di Commercio, Piazza Vittorio Emanuele II, 5**

8.00 Registration

8.45 Opening Ceremony

U. Scapagnini (I), Commissione Affari Sociali e Sanità, Parlamento Italiano

## **THEORIES AND MODELS**

Chairpersons: R. Giardino (I), J. Mechanick (USA)

9.30 S. Hauptman (D)

Theories of Ageing and relation with tumour genesis

9.50 R. Giardino (I)

Models for studying osteoporotic and aged bone in animals

10.10 A. Cellerino (I)

Effects of resveratrol in animal models

10.25 Discussion

## **MICROGRAVITY AND AGEING**

Chairpersons: F. Ongaro, G. Biolo (I)

10.30 F. Ongaro (I)

Microgravity and accelerated aging: from space research to anti-aging medicine. Introductory remarks.

10.35 M.Heer (D)

Impact on bone metabolism and acid-base balance in microgravity and analog studies

10.55 G. Biolo (I)

Modulation of muscle disuse atrophy and insulin resistance by energy balance and protein intake in ageing and microgravity

11.15 Discussion

## **PROJECTS AND PERSPECTIVES**

### ***Session I***

Chairpersons: M. Collins (UK), D. De Rossi (I)

11.20 C. Koenig, E. Van den Heuvel, F. Jowitt, M. W. Collins, M. Gilhooly (UK)

Ageing and Lifestyle: some UK approaches

11.40 D. De Rossi (I)

Wearables for phealth and mhealth: an overview on current EU research activities

12.00 E. van den Heuvel, F. Jowitt, M. Gilhooly (UK)

Ageing and Lifestyle: tackling ageing continence through theory tools and technology

12.10 Discussion

### ***Session II***

Chairpersons: S. Hauptman (D), M. Russo (I)

12.15 L. Scarzella, E. Bologna (I)

Multidimensional approach to physiological and pathological brain aging: clinical utility of the brainer software

12.25 J.P. de Magalhaes (UK)

Dietary manipulation of ageing by caloric restriction: genes, pathways and prospects for extending human healthspan

12.35 E. Bergamini (I)

New frontiers of antiaging medicine

12.55 Discussion

13.00 Lunch

## **AGEING AND STEM CELLS**

Chairpersons: N.Abraham (USA), F. Frassoni (I)

14.00 S. Ikehara (Japan)

Factors involved in aging: mesenchymal stem cells and thymus

14.20 M. Petrini (I)

Stem cells and osteoporosis

14.40 G. Sambuceti (I)

Diabetes, ageing and recruitment of stem cell

14.55 M. Li (J), M. Shi (J), N. G. Abraham (USA), S. Ikehara (J)

Amelioration of cognitive ability in senescence-accelerated mouse prone 8 (SAMP 8) by intra-bone marrow-bone marrow transplantation

15.05 Discussion

## **METABOLISM AND HORMONES (I)**

Chairpersons: S. Ikehara

15.10 J. I. Mechanick (USA)

A trans-cultural approach to healthy eating and aging

15.30 J. I. Mechanick (USA)

Nutrition and Diabetes: From Molecules to Whole Foods

15.50 Discussion

## **MODERN NUTRITION: COUPLING TRADITION AND QUALITY**

Chairperson: G. Ladu (I)

15.55 S. Del Prato (I)

Healthy food

16.10 F. Giardina (I)

Food: safety, quality and civil liability

16.25 A. Alpi (I)

OGM: towards which agriculture?

16.40 D. Gianfaldoni (I)  
Feeding chain: autochthonous breeds and brands

16.55 A. Pelle (I)  
Love cookery: elements of evolution

17.10 G. Ballarini (I)

17.25 Conclusions

18.30 Bus Departure to Lucca  
Social Dinner

## **OCTOBER 5, 2010**

### **PHYSICAL ACTIVITY**

Chairpersons: P. Evans (UK), J. Shapiro (USA)

9.00 M. Tafani, B. Pucci, A. Carpi, M. Fini, A. Russo (I)  
Anti-ageing effects of physical activity: a possible key-role of sirtuins and mechanosensor proteins

9.20 M. Rossi, A. Carpi, G. Santoro (I)  
Lifestyle and vasomotion: focus on physical activity, smoking and obesity

9.30 Discussion

9.35 F. Franzoni, F. Galetta, G. Santoro (I)  
Sport and sudden death

9.45 Discussion

### **CARDIOVASCULAR SYSTEM**

#### ***Session I***

Chairpersons: A. Maseri (I), M. Laniado Schwartzman (USA)

9.50 M. Laniado Schwartzman (USA)  
Diabetes-specific increase in systemic and cardiac inflammatory lipid mediators correlates with obesity

10.00 S. Peterson, N. G. Abraham (USA)

Natural peptides and effect of high fat on blood pressure, vascular function, NO bioavailability in male and female and cardiovascular risk factors in Ob/ob mice

10.20 M.K. Raizada (USA)

Ageing-ACE2 and cardioprotection in Diabetes

10.40 J. Shapiro (USA)

Dietary sodium, ageing and cardiovascular/renal disease

11.00 P.C. Evans (UK)

Sulforaphane, a dietary antioxidant, protects arteries

11.20 Discussion

## ***Session II***

Chairpersons: R. Autschbach (D), M. Glauber (I)

11.30 S. Kaempf (D)

Lifestyle and rising number of aging, vascular diseased patients requires the new biomimetic NonWoTecc graft: does autologous vascular reconstruction depend on aging?

11.40 R. Autschbach (D)

Heart surgery in the octogenerian: does it make sense?

12.00 N. Abraham (USA)

Epicardial Visceral fat regulates endothelial stem cells function in diabetic patients with Coronary artery bypass.

12.20 M. Glauber (I)

Minimally invasive heart valve procedures in the elderly

12.40 Discussion

## **CANCER**

Chairpersons: M. Pontieri, F. Bonino

12.45 F. Bonino (I)

Lifestyle and hepatocellular carcinoma

13.05 A. Gadducci (I)

Lifestyle and cervical cancer

13.25 A.Carpi, A. Nicolini (I)

A new pharmacologic schedule for the treatment of postmenopausal endocrine dependent metastatic breast cancer

13.35 Discussion

13.40 Lunch

## **SEXUAL DYSFUNCTION**

Chairpersons: E. Goossens (B), G. Balercia (I)

15.00 E. Goossens (B)

Fertility preservation in male childhood cancer

15.15 P.G. Artini, F. Papini, C. Tatone, P. Monteleone, A.R. Genazzani (I)

Follicle and oocytes aging

15.30 G. Balercia, A. Carpi (I)

Erectile dysfunction, hypogonadism and metabolic-vascular diseases

15.45 Discussion

## **METABOLISM AND HORMONES II**

Chairpersons: M.K. Raizada (USA), B. Biondi (I)

15.50 B. Biondi (I)

Thyroid function and Ageing

16.10 N. Sorgato (I)

Ageing and cardiovascular risk in primary hyperparathyroidism (PHPT): improvement of coronary microvascular dysfunctions after parathyroidectomy

16.20 Discussion

16.25 G. Scapagnini (I)

Modulation of multiple brain targets by food polyphenols: a nutritional neuroprotective strategy for brain ageing and cognitive disorders

16.40 R. Gruber (D)

MCPH1 maintains mammalian brain size by regulating the neuroprogenitor division mode

16.50 Discussion

16.55 M. Camici, A. Carpi, G. Cini, F. Galetta (I)  
Obesity related glomerulopathy (ORG) and podocyte injury

17.05 M. Camici, A. Carpi, G. Cini, F. Galetta (I)  
The podocyte dysfunction in aging - related glomerulosclerosis:  
pathogenesis and possible interventions

17.15 Ela Akay (UK)  
The role of Ubiquitin associated protein 1 in neurodegenerative diseases

17.25 E. Bologna (I)  
Physical activity and metabolic syndrome in elderly people

17.35 Discussion

**SOCIAL DEMAND FOR IMPLANT SUPPORTED  
PROSTHESES IN THIRD AGE PATIENT**

Chairpersons: S. Benedicenti, A. Carpi (I)

17.40 S. Benedicenti, L. Lancieri (I)  
A new guided bone regeneration technique for the elderly people:  
biological and clinical aspects

18.00 G. Di Santi, L. Lancieri, D. Manda, C. Di Santi (I)  
Edentulism in elderly: more than a local disease

18.10 Discussion

18.30 Bus departure to San Romano  
Social dinner

The program can be subject to changes, even 'last minute'. The changes will be indicated in this document

### **CALL FOR PAPERS**

The scientific programme will consist of **lectures, oral communications and poster presentations**. A limited number of posters will be accepted; the instructions will be provided. Abstracts of works on the principal topics of the meetings (lifetsyle, ageing) or all the related topics can be submitted before June 10, 2010 to Prof. A. Carpi, Dipartimento di Medicina della Procreazione e dell' Età Evolutiva, Via Roma 67, 56126, Pisa, Italy. E-mail [a.carpi@med.unipi.it](mailto:a.carpi@med.unipi.it).

### **INSTRUCTION FOR ABSTRACT SUBMISSION**

Abstracts should be written in English.

The abstract, 1 page, in the typed form and within a computer disc, must be received before June 10, 2010 by Prof. Angelo Carpi, Dipartimento di Medicina della Procreazione e dell' Età Evolutiva, Spedali Riuniti Santa Chiara, Via Roma, 67, 56126 PISA; Tel-Fax: 050/992955

Abstract must be sent also by e-mail to [a.carpi@med.unipi.it](mailto:a.carpi@med.unipi.it) by June 10, 2010.

Abstracts without registration fee will not be examined. The registration fee concerning abstracts not accepted will be refunded if the registered author immediately cancels his participation.

The abstracts accepted will be selected for oral communications or poster presentations and will be published in a medical Journal or as a separate booklet.

All accepted contributions will be available at the meeting. The Scientific Secretaries will decide the journal in which to publish the accepted full papers.

## GENERAL INFORMATION

### Meeting Date and Venue

October 4 and 5, 2010: Auditorium della Camera di Commercio, P.zza Vittorio EmanueleII, 5 -Pisa

### Exhibitions

A small space is available for a few exhibitors.

Contact Prof. A. Carpi a.carpi@med.unipi.it

### Official Language

The official language is English

### Presentations

Computer projection will be available

### Registration and Secretariat

The "Welcome Desk" will be open at the Auditorium Camera di Commercio, P.zza Vittorio Emanuele, II, 5 - 56125 Pisa, during the meeting.

### Registration Fees

Before May 31, 2010

- active participant 280 euro
- accompanying person 110 euro
- postgraduate school attendant 200 euro
- students 100 euro

After May 31, 2010

- active participant 350 euro
- accompanying person 160 euro
- postgraduate school attendant 280 euro
- students 150 euro

***The 20% Italian IVA tax must be added to the above mentioned registration fee.***

All active participants and accompanying persons are entitled to:

- admission to scientific session
- congress kit
- abstracts
- participation in the social events
- light lunch at the meeting place

## **Social Events**

### **October 3, 2010**

18.30, Welcome Reception

Hystorical Building, Museo dell'Ordine dei Cavalieri di Santo Stefano, Piazza dei Cavalieri, 1

### **October 4, 2010**

20:00 Social dinner, Lucca

### **October 5, 2010**

20:00 Social dinner at the Franciscan Convent, San Romano

## **Payment:**

- from Italy: Dipartimento di Medicina della Procreazione e dell' Età Evolutiva c/o Cassa di Risparmio di Lucca, Pisa, Livorno Agenzia n 3, P.zza Duomo, 56126 Pisa  
IBAN IT53M0620014011000000030695
- from other countries: Dipartimento di Medicina della Procreazione e dell' Età Evolutiva c/o Cassa di Risparmio di Lucca, Pisa, Livorno Agenzia n 3, P.zza Duomo, 56126 Pisa  
IBAN IT53M0620014011000000030695  
BIC (Swift) BPALIT3P
- by cheque to: Dipartimento di Medicina della Procreazione e dell' Età Evolutiva
- During the meeting: at the registration desk

The Registration Form should be sent to:

Prof. Angelo Carpi  
Dipartimento di Medicina della Procreazione e dell' Età Evolutiva  
Ospedale Santa Chiara Via Roma, 67, 56126 Pisa (Italy)  
Fax: +39 050/992955  
E-mail: a.carpi@med.unipi.it.

## **Hotel Accommodation**

In order to facilitate participation Hotel Accommodation will be made by the local organisers. No fee is required for this service.

The Hotel Accommodation Form should be sent before May 31, 2010 to:

Prof. Angelo Carpi  
Dipartimento di Medicina della Procreazione e dell' Età Evolutiva  
Ospedale Santa Chiara Via Roma, 67, 56126 Pisa (Italy)  
Fax: +39 050/992955  
E-mail: a.carpi@med.unipi.it.

**Rooms are available at the special price of € 110.00 for the double room and € 75.00 for the single room to the first registered participants (4 star Hotel, in the hystorical center, 15-20 minutes walking the Congress Place)**

This special Hotel fare is reserved for the registered participants who will confirm their reservation before May 31, 2010 \*\*

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Hotel category	Double room, with bath	Single room, with bath
<b>**** special offer</b>	<b>110.00</b>	<b>75.00</b>
****	220.00	180.00
***	150.00	120.00
**	130.00	110.00

**HOTEL ACCOMMODATION FORM**

The special Hotel fare is reserved for the registered participants who will confirm their reservation before May 31, 2010

Family name\_\_\_\_\_

First name\_\_\_\_\_

Mailing address\_\_\_\_\_

Postal code\_\_\_\_\_City\_\_\_\_\_

Country\_\_\_\_\_

Telephone\_\_\_\_\_Fax\_\_\_\_\_

e-mail\_\_\_\_\_

Please book:

No\_\_\_\_\_single\_\_\_\_\_double room(s)

Hotel Category \*\* , \*\*\* , \*\*\*\* , \*\*\*\*special offer

date of arrival\_\_\_\_\_

date of departure\_\_\_\_\_

Date\_\_\_\_\_Signature\_\_\_\_\_

Please return this form by May 31, 2010 to: Prof. Angelo Carpi  
Dipartimento di Medicina della Procreazione e dell' Età Evolutiva  
Ospedale Santa Chiara Via Roma, 67, 56126 Pisa (Italy)  
Fax: +39 050/992955  
E-mail: a.carpi@med.unipi.it

# MULTIDISCIPLINARY CONFERENCE Pisa, October 4-5, 2010

## REGISTRATION FORM

Family name \_\_\_\_\_ First name \_\_\_\_\_

Title \_\_\_\_\_ Institute/Organization \_\_\_\_\_

Mailing address \_\_\_\_\_ Postal code \_\_\_\_\_

City \_\_\_\_\_ Country \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

Name of the accompanying person(s) \_\_\_\_\_

I paid the following amounts: \_\_\_\_\_

as registration for active participant \_\_\_\_\_

accompanying person (s) \_\_\_\_\_

by cheque herewith enclosed

by bank transfer

*The invoice must be made out to:*

*Denominazione/Ragione Sociale (Company's name)* \_\_\_\_\_

*Domicilio Fiscale (Company's fiscal address)* \_\_\_\_\_

*Codice Fiscale (for Italians)* \_\_\_\_\_

*Partita IVA (for Italians)* \_\_\_\_\_

*VAT (for other European Community countries)* \_\_\_\_\_

*And sent to the attention to:*

*Date* \_\_\_\_\_ *Signature* \_\_\_\_\_

The registration Form should be sent to:

Prof. Angelo Carpi,  
Dipartimento di Medicina della Procreazione e dell' Età Evolutiva

Ospedale Santa Chiara Via Roma 67, 56126 Pisa, Italy  
Tel. and fax: +39 050/992955  
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