HOW THE ENVIRONMENT IMPACTS THE PHENOTYPE

THE WORLD WRITES ON THE BODY:

HOW THE ENVIRONMENT IMPACTS THE PHENOTYPE

MAY 24th-25th 2018

VENUE:
PALAZZO XIMENÈS PANCIATICHI, FLORENCE (ITALY)

 Presidents of the Meeting:
MARIANNE J. LEGATO
The Foundation for Gender-Specific Medicine
Columbia University
New York, United States of America

GILLIAN EINSTEIN
Wilfred and Joyce Posluns Chair in Women’s Brain Health and Aging
University of Toronto
Toronto, Canada
The 21st century began with the finalization of the description of the structure of the human genome, ushering in a profound change in our understanding what makes us what we are. We now have unprecedented power to understand the mechanisms and impact of genetic activity and the factors that modulate and control its expression. We are in the process of deciphering how age, hormones and the environment all modify behavior.

This symposium was constructed to set out the most exciting and significant science in the new field of epigenetics which is concerned with the factors that collaborate to modify genetic activity and thus mold the phenotype. Our expanding appreciation of the nature and complexity of epigenetics has produced a revolution in biomedical investigation and no less importantly, in how sociologists, anthropologists and psychologists among others consider the mechanisms of how experience changes behavior, susceptibility to disease and perhaps most importantly, how epigenetic modification of genetic activity is transmitted to future generations. Hopefully, the symposium will amplify the collaboration between biomedical investigators and social scientists by describing the final common pathway that explains how the environment modifies function.

Professors
Marianne J. Legato and Gillian Einstein
Presidents of the Meeting
Congress Venue:
PALAZZO XIMENÈS PANCIATICHI, FLORENCE (ITALY)

UNDER THE AUSPICES OF

Congress Venue:
PALAZZO XIMENÈS PANCIATICHI, FLORENCE (ITALY)

WITH AN UNRESTRICTED GRANT BY

Fondazione Internazionale Menarini
Centro Direzionale Milanofiori
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Phone: +39 02 55308110 - Fax: +39 02 55305739
E-mail: milan@fondazione-menarini.it - www.fondazione-menarini.it

PROFESSIONAL CONGRESS ORGANIZATION

Congress Lab Srl
Bastioni di Porta Volta, 10 – 20121 Milano (Italy)
Project Leader: Alessia Foti
Phone: +39 02 81838120 - Cell: +39 3209066533 - Fax: +39 02 87181580
E-mail: fondazione@congresslab.it
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PRESIDENTS OF THE MEETING

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UNDER THE AUSPICES OF

THE FOUNDATION FOR GENDER-SPECIFIC MEDICINE

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## OPENING CONGRESS

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.00 a.m.</td>
<td>Registration of the participants</td>
</tr>
</tbody>
</table>

### Session I – Epigenetics, Sex and Gender

<table>
<thead>
<tr>
<th>Time</th>
<th>Chairperson(s)</th>
<th>Session Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.00 a.m.</td>
<td><strong>M. Legato</strong> (New York, US)</td>
<td>Overview: mechanism and consequences of epigenetic modification of DNA</td>
</tr>
<tr>
<td>09:30 a.m.</td>
<td><strong>G. Einstein</strong> (Toronto, CA)</td>
<td>The world writes on the body: does the experience of gender contribute to sex differences?</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td><strong>F. Franconi</strong> (Potenza, IT)</td>
<td>Influences of drugs and foods on the body: are they sex and gender dependent?</td>
</tr>
<tr>
<td>11.00 a.m.</td>
<td></td>
<td>Questions</td>
</tr>
</tbody>
</table>

10.00 a.m. Coffee break
## Session II – Molecular Biology of Epigenetics I

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.30 a.m.</td>
<td><strong>M. Sokolowski</strong> (Toronto, CA)</td>
<td>Gene-environment interplay in behaviour</td>
</tr>
<tr>
<td>12.00 p.m.</td>
<td><strong>E. Borrelli</strong> (Irvine, US)</td>
<td>Dopamine and epigenetics</td>
</tr>
<tr>
<td>12.30 p.m.</td>
<td>Questions</td>
<td></td>
</tr>
<tr>
<td>01.00 p.m.</td>
<td>Lunch</td>
<td></td>
</tr>
</tbody>
</table>

### Thursday, May 24th 2018 - Afternoon

## Session III – Molecular Biology of Epigenetics II

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.00 p.m.</td>
<td><strong>P. Sassone-Corsi</strong> (Irvine, US)</td>
<td>Epigenetic and metabolism: the clock link</td>
</tr>
<tr>
<td>02.30 p.m.</td>
<td><strong>R. Feil</strong> (Montpellier, FR)</td>
<td>Genomic imprinting: regulation, roles and environmental influences</td>
</tr>
<tr>
<td>03.00 p.m.</td>
<td><strong>M. Fraga</strong> (Asturias, ES)</td>
<td>Epigenetic changes during lifetime: the effect of environment</td>
</tr>
<tr>
<td>03.30 p.m.</td>
<td>Questions</td>
<td></td>
</tr>
<tr>
<td>04.00 p.m.</td>
<td>Coffee break</td>
<td></td>
</tr>
</tbody>
</table>
### Session IV – Early Experience: Health Outcomes

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>04.30 p.m.</td>
<td>C. Heim (Berlin, DE)</td>
<td>Understanding and mitigating the impact of early life adversity on disease risk</td>
</tr>
<tr>
<td>05.00 p.m.</td>
<td>L. Schmitz (Michigan, US)</td>
<td>Using Gene-Environment interactions to interrogate the impact of the social environment on smoking behavior</td>
</tr>
<tr>
<td>05.30 p.m.</td>
<td>B. Fallon (Toronto, CA)</td>
<td>Opportunities for prevention &amp; intervention in child protection services: lessons from Canada</td>
</tr>
<tr>
<td>06.00 p.m.</td>
<td></td>
<td>End of the day</td>
</tr>
</tbody>
</table>

Friday, May 25th 2018 - Morning

### Session V – Early Experience: Maternal Behaviour

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30 a.m.</td>
<td>A. Fleming (Toronto, CA)</td>
<td>Mothering begets mothering across generations: effects of early experience</td>
</tr>
<tr>
<td>09.00 a.m.</td>
<td>M. Szyf (Montreal, CA)</td>
<td>Epigenetic programming by maternal behavior</td>
</tr>
<tr>
<td>09.30 a.m.</td>
<td>A. Duchesne (British Columbia, CA)</td>
<td>The developmental origin of health and disease: a sex and gender perspective</td>
</tr>
<tr>
<td>10.00 a.m.</td>
<td></td>
<td>Questions</td>
</tr>
<tr>
<td>10.30 a.m.</td>
<td></td>
<td>Coffee break</td>
</tr>
</tbody>
</table>
### Session VI – Early Experience: Socio-economic Status

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.00 a.m.</td>
<td><strong>M. Farah</strong> (Philadelphia, US)</td>
<td>Intergenerational transmission of socioeconomic disadvantage: what are the biological mechanisms?</td>
</tr>
<tr>
<td>11.30 a.m.</td>
<td><strong>A. Öst</strong> (Linköping, SE)</td>
<td>Small RNAs transmit big epigenetic message: Intergenerational reprogramming of metabolism</td>
</tr>
<tr>
<td>12.00 p.m.</td>
<td><strong>M. Glezerman</strong> (Tel Aviv, IL)</td>
<td>The impact of maternal stress on the fetus and its future life</td>
</tr>
<tr>
<td>12.30 p.m.</td>
<td>Questions</td>
<td></td>
</tr>
<tr>
<td>01.00 p.m.</td>
<td>Lunch</td>
<td></td>
</tr>
</tbody>
</table>

Friday, May 25th 2018 - Afternoon

### Session VII – Experience Over the Lifetime

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.00 p.m.</td>
<td><strong>G. Einstein</strong> (Toronto, CA)</td>
<td>Using olfaction to study multi-generational imprints of stress</td>
</tr>
<tr>
<td>02.30 p.m.</td>
<td><strong>C. Fernandez</strong> (Boston, US)</td>
<td>Epigenetics of cardiovascular disease: “Peeling the onion” to identify the missing link between gene-environment interaction and disease expression</td>
</tr>
<tr>
<td>03.00 p.m.</td>
<td><strong>R. P. Juster</strong> (New York, US)</td>
<td>Sex/gender correlates of glucocorticoid functioning and allostatic load</td>
</tr>
<tr>
<td>03.30 p.m.</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>04.30 p.m.</td>
<td>Take home messages</td>
<td></td>
</tr>
<tr>
<td>05.00 p.m.</td>
<td>Concluding remarks</td>
<td></td>
</tr>
</tbody>
</table>
Meeting venue
The venue for the Meeting will be:
Palazzo Ximenè Panciatichi (www.palazzoximenes.com)
Borgo Pinti, 68 – 50121 Florence (Italy)

Secretariat during the Meeting
The Secretariat will be open at the following times:
Thursday, May 24th, from 08.00 a.m. to 07.00 p.m.
Friday, May 25th, from 08.00 a.m. to 06.00 p.m.

Official language
The official language of the Meeting will be English.
Simultaneous translation will not be provided.

Continuing Medical Education (CME)
Congress Lab Srl is a CME provider – identification code no. 2005 – and has assigned to the event no. 4,2 credits for Physicians for the following disciplines: Allergology and clinical immunology, Angiology, Biology, Cardiology, Dermatology and venerology, Hematology, Endocrinology, Gastroenterology, Medical genetics, Geriatrics, Metabolic disease and diabetology, Internal medicine, Neonatology, Neurology, Oncology, Pediatrics, Psychiatry, Rheumatology, Gynecology and obstetrics, Urology, Pathological anatomy, Clinical Biochemistry, Pharmacology and clinical toxicology, Laboratory of medical genetics, Legal medicine, Nuclear medicine, Microbiology and virology, Clinical pathology (chemical-clinical analysis laboratory and microbiology), Occupational medicine and safety in the workplace, General medicine (family doctors), Psychotherapy, Psychology, Therapist of neuro and psychomotricity of the developmental age, Prevention technician in the environment and in the workplace, Organization of basic health services, Epidemiology, Community medicine.

Registration
The Meeting is free to attend.
Please sign up here:  http://congresslab.it/international-symposium_florence2018/

For any question and support please contact the Professional Congress Organization
(Congress Lab Srl: Phone 1: +39 02 81838120 - Cell: +39 3209066533
Fax: +39 02 87181580 - E-mail: fondazione@congresslab.it)

Technical facilities
Facilities will be available for computer presentations and overhead projections.
A business center with PC (Powerpoint for Windows) will be available for check and preview of presentations. It is essential that speakers take their presentation to the business center at least one hour before the session starts.
The center will be open at the following times:
Thursday, May 24th, from 08.00 a.m. to 07.00 p.m.
Friday, May 25th, from 08.00 a.m. to 06.00 p.m.

Lunches and coffee breaks
Lunches and coffee breaks will be served in the Meeting area.

Abstracts book
Participants will receive the Abstract book at the Meeting.
Emiliana Borrelli
School of Medicine
University of California
(Irvine, US)

Brian G. Dias
Emory University School of Medicine
(Atlanta, US)

Annie Duchesne
University of Northern British Columbia
(British Columbia, CA)

Gillian Einstein
Wilfred and Joyce Posluns Chair in Women’s Brain Health and Aging University of Toronto
(Toronto, CA)

Barbara A. Fallon
University of Toronto
(Toronto, CA)

Martha J. Farah
University of Pennsylvania
(Philadelphia, US)

Robert Feil
CNRS And University of Montpellier
(Montpellier, FR)

Camilo Fernandez A.
HeartGEN Institute
(Boston, US)

Alison S. Fleming
University of Toronto
Mississauga
(Toronto, CA)

Mario F. Fraga
University of Oviedo
(Asturias, ES)

Flavia Franconi
Regione Basilicata
(Potenza, IT)

Marek Glezerman
Tel Aviv University
(Tel Aviv, IL)

Christine Heim
Charité Center for Health and Human Sciences
(Berlin, DE)

Robert-Paul Juster
Columbia University
(New York, US)

Marianne J. Legato
Columbia University
(New York, US)

Anita Öst
Linköping University
(Linköping, SE)

Paolo Sassone-Corsi
University Of California
(Irvine, US)

Lauren Schmitz
University of Michigan
(Michigan, US)

Marla B. Sokolowski
University of Toronto
(Toronto, CA)

Moshe Szyf
Mcgill University
(Montreal, CA)
Fondazione Internazionale Menarini
Symposia n. 388