UNIVERSITÀ DEGLI STUDI DI PALERMO

promise
Dipartimento di Promozione della Salute, Materno-Infantile, Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro"

DIPARTIMENTO DI PROMOZIONE DELLA SALUTE, MATERNO-INFANTILE, MEDICINA INTERNA E SPECIALISTICA DI ECCELLENZA "G. D'ALESSANDRO"

Direttore: Prof. Antonio Craxì

Allegato 2. Programma generale dell'iniziativa

1st INTERNATIONAL CONFERENCE

Perinatal Origins of Neuropsychiatric Disorders:
from molecular mechanisms to therapeutic perspectives

MAY 29 – 31, 2019

Sala Gialla, Palazzo dei Normanni
Palermo, ITALY

INVITED SPEAKERS

Antonello Bonci - National Institute on Drug Abuse, USA
Marco Bortolato - Utah University, USA
Omry Koren - Bar Ilan University, Israel
Yasmine Hurd - Mount Sinai, USA
Sophie Laye - National Institute for Agricultural Research, France
Guido Mannaioni - University of Florence, Italy
Olivier Manzoni - Institute de Neurobiologie de la Méditerranée, France
Tania Marcourakis - Universidade de Sao Paulo, Brazil
Michela Matteoli - Institute of Neuroscience, CNR, Italy
Eva Redei - Northwestern University, USA
Carolyn Salafia – Institute for Basic Research, USA
Roh-Yu Shen - University at Buffalo, USA
Viviana Trezza - University of Rome, Italy

ORGANIZERS

Carla Cannizzaro – University of Palermo
Miriam Melis – University of Cagliari

http://sites.unica.it/perinatal/ palermo.conference2019@gmail.com

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The perinatal temporal window is a highly vulnerable time in which environmental factors, such as nutrients, drugs, infections, chemicals and stress, experienced by the mother can be communicated to the offspring and produce lasting consequences on the new-born brain, thus contributing the evolutionary origin of non-communicable neuropsychiatric diseases.

Most of these disorders are preventable, since they are due to modifiable risk factors such as lifestyle and the environment.

Nevertheless, the increase in perinatal exposure to drugs, substances of abuse, pathogens, nutritional deficits and in immune over-reactivity can partly explain the high prevalence of neuropsychiatric disorders over recent decades. They include teratogenesis, dysfunction of the reproductive, neurocognitive and immune systems, autism, and addiction, all of which may have a substantial economic and societal impact.

It is therefore necessary to take stock of the latest evidence regarding the underlying molecular mechanisms of epigenetics leading to vulnerability - or resilience - to neuropsychiatric diseases.
On this basis the major experts in the field will gather in Palermo from May 29 to 1 June in order to share the most recent findings with the academic, the medical and the health practitioners.

Covering the topic of the perinatal origins of neuropsychiatric disorders will have worldwide implications to orient the healthcare professionals towards a broader awareness, effective prevention and successful therapeutic strategies.

Carla Cannizzaro, MD, University of Palermo
Miriam Melis, PhD, University of Cagliari

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Venue

Sala Mattarella
(Sala Gialla)
Palazzo dei Normanni
Palermo, Italy

Social Events

The welcome cocktail will be held on the evening of May 29th . The social dinner will be held on the evening of May 31st. at Alle Terrazze (Mondello). A guided tour along the Arab-Norman Palermo, UNESCO World Heritage Site, will take place on the morning of June 1st .

Organizers

Carla Cannizzaro – University of Palermo
Miriam Melis – University of Cagliari

Secretariat

Anna Brancato
Valentina Castelli

Email: palermo.conference2019@gmail.com

Website: sites.unica.it/perinatal/

Continuing Medical Education

The attendees will receive 18 CME credits.
Provider: Centro Formazione Sanitaria Sicilia

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SCIENTIFIC PROGRAM

May 29, 2019

15:00 – 17:00- Registration (Sala Gialla, Palazzo dei Normanni, Palermo, Italy)

17:00 – 18:00- Preliminary Address: Carla Cannizzaro Miriam Melis

Opening Cerimony: (invited) Gianfranco Miccichè (President Sicilian Parliament); Nello Musumeci (President Sicilian government); Ruggero Razza (Head Regional Health Department) Fabrizio Micari (Rector of the University of Palermo); Francesco Vitale (President of the School of Medicine); Antonio Crax' (Head of PROMISE Department); Toti Amato (President of the Association of Medical Doctors of Palermo)

18:00 – 19:00 - Liana Fattore, Cagliari (Italy), introducing Carolyn Salafia, New York (USA)
Lectio magistralis: Placenta as a marker /mediator of fetal origins of lifelong health risks

19:00- Welcome cocktail

May 30, 2019

8:30 – 10:00- Session 1: *Glial-immuno activation from the mother to the foetus*
Chaired by: Antonello Bonci, USA- Patrizia Romualdi, Italy

- Sophie Laye, French National Institute for Agricultural Research: *Perinatal lipid nutrition role in brain development and later-life emotional behavior and cognition.*
- Michela Matteoli, Humanitas University, Italy: *Immune-synaptopathies: when the immune system affects synapse development and function*
- Tania Marcourakis, Universidade de São Paulo, Brazil:*Tobacco smoke exposure during pregnancy increases the offspring susceptibility to a neuroinflammatory process*
- Paola Bezzi, University of Lausanne, Switzerland: *Dysfunction of homeostatic control of dopamine by astrocytes in the developing prefrontal cortex induces core features of neurodevelopmental disorders*

10:00 – 10:30 - Coffee break

10:30 – 12:15 – Session 2: *Prenatal exposure to substance of abuse as a risk factor for neuropsychiatric disorders*
Chaired by: Yasmin Hurd, USA – Miriam Melis, Italy

- Roh Yu Shen, Buffalo, USA: *Prenatal ethanol exposure leads to persistent cognitive, emotional, and behavioral deficits rescued by environmental enrichment*
- Olivier Manzoni, Institute de Neurobiologie de la Méditerranée, France: *Effects of perinatal cannabinoids during lifetime*
- Sarah Beggiato, University of Ferrara, Italy: *Prenatal THC exposure permanently disturbs kynurenic acid and glutamate levels and amplifies the responsivity to an acute kynurenine challenge in the rat prefrontal cortex.*
- Elisabetta Gerace, University of Florence, Italy: *Chronic Ethanol and Ethanol withdrawal differentially affect the neuronal circuits in immature and mature hippocampal slice cultures.*
- Aranza Wille Bille, University of Cordoba, Argentina: *Prenatal Ethanol Exposure induces an anxiety phenotype, enhances voluntary ethanol consumption and alters both DNA methylation and gene expression of kappa opioid system.*

12:15- 13:35 - Platform presentation I chaired by Claudio D'Addario, Italy.

Serena Stamatakos, Italy – *Alterations of BDNF and class I HDAC enzymes induced by repeated MDMA ("ecstasy") exposure could favour the onset of psychiatric disorders*
Laura Rullo, Italy- *Striatal antioxidant machinery and nigral dopaminergic neurons after MDMA binge intoxication in the mouse: age and gender influence*
Valeria Serra, Italy – *Mao-A Hypomorphic Mice And Their Vulnerability Traits*
Luisa Ponzoni , Italy- *Perinatal Deletion Of Shank3 Gene In Pv Positive Neurons Induces Neurological Alterations Which Are Rescued By Ganaxolone Treatment*
Silvia Bussone, Italy – *Early-life Stress, Global Methylation and Psychopathology*
Lucia Caffino, Italy– *Activity – based anorexia alters the glutamate synapses in adolescent female rats: focus on the prefrontal cortex*
Filippo Mirabella, Italy - *Inflammation and synaptogenesis: The role of Interleukin-6 in developing neurons*
Francesco Traccis, Italy – *Psychotic-like endophenotype induced by prenatal THC exposure is rectified by pregnenolone*
Antonia Manduca, France- *Sex-dependent effects of in utero cannabinoid exposure on behavioral and cortical function*

Fabio Bellia, Italy – *Prenatal alcohol exposure and postpartum alcohol use patterns: preliminary data on the effects of environment enrichment on transcriptional regulation of relevant key genes*
Andrew Scheyer, France- *Enduring effects of perinatal cannabis exposure*
Mihaela Bobić Rasonja, Croatia – *Transcriptome analysis of the human fetal anterior cingulate gyrus*
Francesca Manuella, Switzerland – *The impact of early life trauma can be reversed by environmental enrichment*

13:35 – 14:30- Light lunch

14:40-15:30- Tour of the Palatine Chapel

15:30 – 17:10 - Session 3: *Perinatal exposure to prescription drugs: consequences on neurodevelopment*
Chaired by: Carla Cannizzaro, Italy – Olivier Manzoni, France

- Viviana Trezza, Roma Tre University, Italy: *Prenatal valproate in rodents as a tool to identify underlying molecular mechanisms and new therapeutic targets for Autism Spectrum Disorder*
- Guido Mannaioni, University of Florence, Italy: *Functional investigation of the reward striatal system in the valproic acid model of autism*
- Tim F. Oberlander, University of British Columbia: *Prenatal exposure to SSRI antidepressants and the perinatal origins of neuropsychiatric disorders*
- Jodi L. Pawluski, University of Rennes, Inserm, France: *Perinatal SSRI exposure effects on social behaviors and neuroplasticity: role of fetal sex*
- Erica Zamberletti, Insubria University, Italy: *Cannabinoid treatment rescues autism-like behaviors and dampens hippocampal microglia activation induced by prenatal valproic acid exposure in rats*

17:10 – 17:30- Group photo/Coffee break

17:30 – 18:30 - Gaetano Di Chiara, Cagliari (Italy), introducing: Antonello Bonci, Johns Hopkins University, Baltimore (USA)
Lectio magistralis: Therapeutic potential of transcranial magnetic stimulation during pregnancy

19:30- Charming Palermo – food & music in a secret venue

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May 31 ,2019

9:00 – 10:00 - Micaela Morelli, Cagliari, (Italy) introducing: Yasmin Hurd, Mount Sinai Hospital, New York (USA)
Lectio Magistralis – *Unlocking the neurobiological impact of developmental cannabis and psychiatric risk*

10:00 – 11:00 - Session 4: *Role of maternal milieu on offspring vulnerability to develop neuropsychiatric disorders*
Chaired by: Sophie Layé, France – Domenico Pellegrini-Giampietro, Italy

- Muriel Koehl, Neurocentre Magendie, Bordeaux, France: *Vulnerability to PTSD-like memory impairments induced by stress in utero*
- Giuseppe Di Giovanni, University of Malta: *Epileptogenesis and neuropsychiatric comorbidities in absence epilepsy*
- Bice Chini, CNR Neuroscience Institute, Italy: *The Oxytocin system in the developing brain: evidence from mouse models of neurodevelopmental disorders*
- Vincenzo Micale, University of Catania, Italy: *Behavioral and neurochemical alterations induced by perinatal Δ9-THC exposure are counteracted by early cannabidiol treatment*

11:00 – 11:30- Coffee break

11:30 – 13:00 - Session 5: *Perinatal insults and adversities on neurodevelopmental trajectories*
Chaired by: Viviana Trezza, Italy – Christian Chiamulera, Italy

- Marco Bortolato, Health University of Utah, USA: *The interplay of nature and nurture in antisocial behavior: insights from animal models*
- Claire Thornton, Royal Veterinary College, University of London, UK: *Exendin-4: targeting an antidiabetic drug at neonatal hypoxic-ischaemic brain injury*
- Clarissa Catale, Sapienza University of Rome, Italy: *Long-term effects of early-life stressful experiences on brain plasticity: an analysis through perineuronal nets*
- Stefania Schiavone, Foggia University, Italy: *Effects of pharmacological NOX-inhibition on neuropathological alterations induced by ketamine administration in early postnatal life*

13:00 – 14:00- Light lunch

14:00 – 15:30- Platform presentation II chaired by Daniela Parolaro, Italy

Samantha Baglot, Canada- *Inhaled delivery of cannabis during pregnancy: Pharmacokinetics and level of exposure in developing offspring*
Florencia Anunziata, Argentina- *Ethanol's sensory attributes trigger respiratory disruptions and appetitive facial responses in human newborns prenatally exposed to maternal binge drinking episodes*
Juan P. Luaces, Argentina – *Neurorestorative and protective effects of palmitoylethanolamide in perinatal asphyxia: an analysis of the rat striatum*
Julieta P Aguggia, Argentina – *Multiparity dampened the neubehavioral consequences of mother-pup separation stress in dams*
Luca Posa , Canada– TBA
Rafik Marir, Algérie – Fluorescent ligands to determine the distribution of central rat V1B receptors
Jessica Duarte , Brazil- Study of effect of ovariectomy and hormonal replacement on the melanin-concentrating hormone in lactating and non-lactating rats: analysis of the MPOA PVH and IHy
Theresa M. Kisko, Germany-*The effects of Cacna1c haploinsufficiency on maternal behaviour and offspring anxiety levels in rats.*
Salvatore Lecca, Switzerland- *Limiting habenular hyperactivity ameliorates maternal separation-driven depressive-like symptoms*
Gianluca Lavanco, France – *Binge drinking during adolescence as a vulnerability factor for migraine? Focus on Calcitonine gene-related peptide*
Maud Martinat, France– *Role of dietary n-3 polyunsaturated fatty acid in memory and hippocampal synaptic plasticity in male and female mice*
Chiara Boscardin, Switzerland- *Transgenerational inheritance of early life trauma*
Indrek Heinla, Norway–*Perinatal SSRI exposure affects prosocial behavior in adult rats*

15:30 – 16:00- Coffee break

16:00 – 17:30 - Session 6: *Bridging the gap from bench to bed evidence: the emergence of therapeutic strategies*
Chaired by: Marco Bortolato, USA – Marco Diana, Italy

- Eva Redei, Northwestern University, USA: *Endocrine and behavioral characteristics of Fetal Alcohol Spectrum Disorder: treatment strategies*
- Omry Koren, Bar-LLan University, Israel: *A microbiome is born: how microbes contribute to a healthy pregnancy and infancy*

- Chloe J Jordan, NIDA, Baltimore, USA: *Developmental exposure to drugs of abuse: scope of the problem and treatment strategies for impending psychiatric risk*
- Marta Busnelli, CNR Neuroscience Institute, Italy: *Targeting the oxytocin system: novel therapeutic agents for neuropsychiatric disorders*

17:30 – 18:30- Round Table: *Protecting the brain: from scientific evidence to institutional trajectories*

20:30- Social Dinner: Awards ceremony and closing remarks