



G E M M A

Multi-Omics Research in Autism

gemma-project.eu

1st YEAR ANNUAL GENERAL MEETING

7th - 9th FEBRUARY 2020

Fondazione Ebris

Via De Renzi 50, 84125, Salerno IT

ebris.eu

Registration at: ebris.eu/gemma-annual-assembly

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement N° 825033





GEMMA is an interdisciplinary consortium of international researchers who have been awarded € 14.2M of research funding from the EU (Grant Agreement Nr 825033), in order to further the understanding of Autism Spectrum Disorder and its possible treatment/prevention.

PROJECT PARTNERS

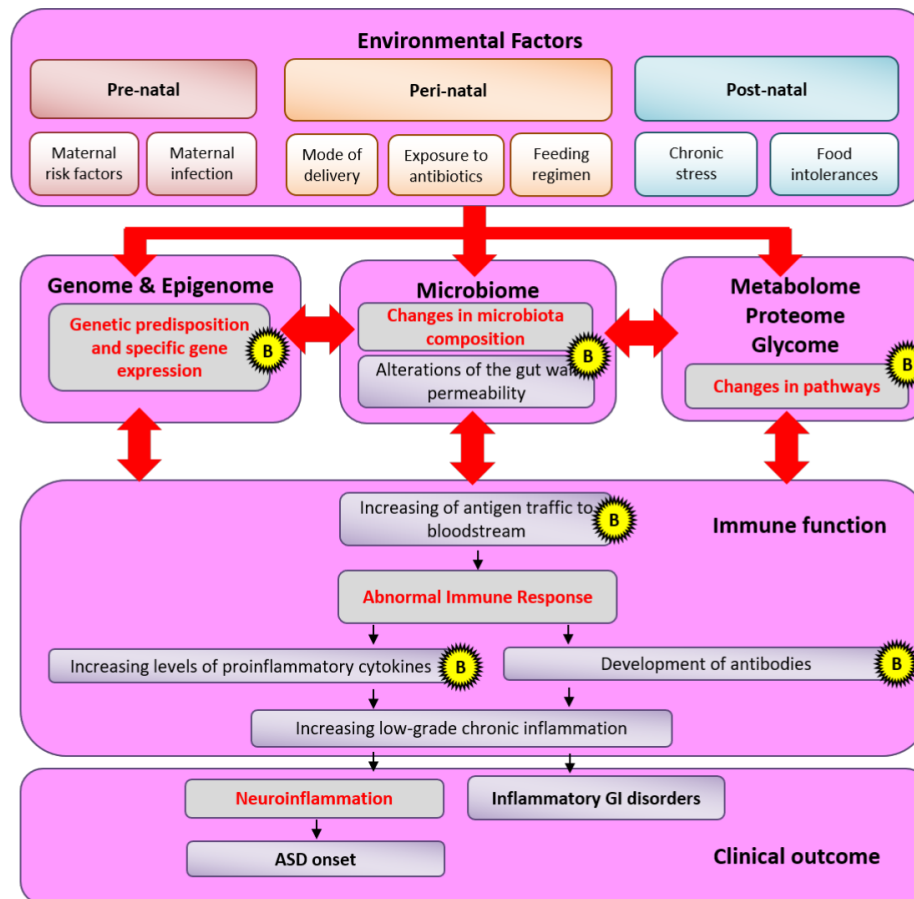


Universiteit Utrecht



PROJECT APPROACH

To tackle this urgent and major public health issue GEMMA combines a multi-omic approach with robust environmental data to exploit the analysis of the composition and function of the microbiome for personalized treatment and, ultimately, disease interception in at-risk infants.






Interplay between environment, genome, epigenome, microbiome, metabolome, proteome, glycome and immune function

Biomarkers targeted by the pre-clinical and clinical studies



GEMMA RECRUITMENT SITES

GEMMA ground-breaking research will, for the first time, follow children who are at risk of developing autism from 0-6 months of age and during the project 600 at-risk infants will be recruited across 3 recruitment sites.

-  National University of Ireland Galway (NUIG)
Irish Centre for Autism & Neurodevelopmental Research (ICAN)
Department: School of Psychology
GALWAY, Ireland
Person in charge of the project: *Dr. Geraldine Leader*
-  Azienda Sanitaria Locale Salerno (ASL)
Salerno, Italy
Person in charge of the project: *Dr. Giulio Corrivetti*
-  The General Hospital Corporation
Mucosal Immunology and Biology Research Centre and Lurie Centre
Massachusetts General Hospital for Children (MGHfC or MGH)
Charlestown, MA, United States
Person in charge of the project: *Dr. Sarah Kadzielski*



GEMMA OBJECTIVES

GEMMA is expected to lead to earlier diagnosis than is currently possible and help researchers to understand why some children develop autism and others do not.

- Identify whether specific biomarkers linked to multi-omics patterns trigger ASD in a subset of genetically pre-disposed individuals in order to elucidate mechanisms behind gut dysbiosis, neuro-inflammation and ASD
- Identify whether specific patterns of gut dysbiosis increase the risk of ASD to elucidate mechanisms of disease and its GI comorbidities
- Assess & validate whether biomarkers-based stratification to correct gut dysbiosis via experimental interventions improve ASDs and related comorbidities



PROJECT COORDINATOR

Prof. Alessio Fasano (M) is Director of EBRIS, Vice Chair of Basic, Translational, and Clinical Research and Division Chief of Paediatric Gastroenterology and Nutrition at the Mass General Hospital for Children in Boston. He also serves as the Director of the Mucosal Immunology and Biology Research Centre and Director of the Centre for Celiac Research at the same Institution.





AGENDA OF 7th FEBRUARY 4.00 pm - 7.00 pm

ALESSIO FASANO
MANUEL GEA
E. LE-CHATELIER - C. ROOS
ELAINE HOLMES
REIJA AUTIO
ALETTA D KRANEVELD
ANTONIO GIORGI

7.00 PM

Welcome

WP1-Mechanistic Pathway Hypotheses

WP2-Improving the omnomicsNGS tool

WP3-Metabolome, Proteome, Glycome & Immune Function Profiling

WP4-Multi-omics Analysis

WP5-Pre-Clinical Trials

WP8-Exploitation, Standardization & Upscaling

DINNER AT EBRIS





AGENDA OF 8th FEBRUARY

9.30 am - 7.30 pm

MORNING

ALESSIO FASANO
DEVANE SAMANTHA - KADZIELSKI SARAH
GERALDINE LEADER-STEPHEN CUNNINGHAM
C. BRAVACCIO - G. CORRIVETTI - M. RICCIO
ALESSANDRA MEZZELANI
SYLVIE RABOT

12.00 AM

WP6-Clinical Trials

MGH on the started recruiting process

NUIG on the started recruiting process

ASL SA on the started recruiting process

WP7-Community Building & Project Dissemination

Open research data pilot

LIGHT LUNCH AT EBRIS

AFTERNOON

2.00 PM - 4.00 PM

4.30 PM - 6.00 PM

6.30 PM - 7.30 PM

7.30 PM

VISIT OF THE ARCHAEOLOGICAL AREA OF PAESTUM

VISIT OF THE MUSEUM

SCIENTIFIC ADVISORY BOARD AT HOTEL NETTUNO

DINNER AT RESTAURANT NETTUNO



AGENDA OF 9th FEBRUARY

9.30 am - 12.30 pm

GEMMA meets national and local non-profit organizations whose mission is to share an experience of social solidarity between families, institutions and operators in the social-health sector

ALESSIO FASANO
CORRADO VECCHI
GIULIO CORRIVETTI
ILARIA TAMBURRO

CARMELA BRAVACCIO - MARIAPIA RICCIO

JACOPO TROISI

Introduction to GEMMA Project
The role of EBRIS in GEMMA
The role of ASL Salerno in GEMMA
Our first experience: the recruitment for pre-clinical studies
ASL SA is now recruiting for clinical studies

OPEN DISCUSSION

Visiting EBRIS Labs & Facilities