

“New Horizons for Early Life Exposome Research”

**Scientific Symposium
Barcelona – 30-31 October 2017**

Programme

Day 1

9.00-9.15 Welcome

9.15-11.00 Session 1. Setting the scene - the Exposome projects (chair: Mark Nieuwenhuijsen) – 10 minutes each

- The global, societal and policy challenge - Manolis Kogevinas
- EU Project Officer's overview of Exposome research - Tuomo Karjalainen
- What have we learnt in HELIX and why does it matter? Martine Vrijheid
- What have we learnt in Exposomics and why does it matter? Paolo Vineis
- What have we learnt in HEALS and why does it matter? Dennis Sarigiannis
- Update on US exposome efforts – Hercules. Gary Miller
- Update on US exposome efforts – NIEHS. Gwen Collman
- Discussion

11.00-11.30 Coffee

11.30-13.00 Session 2. Describing the early life Exposome and its determinants and variability across Europe (chair: Leda Chatzi) – part 1

- **Keynote:** The chemical exposome, determinants & variability – Cathrine Thomsen (NIPH) (30 mins)
- Estimating the early-life exposure to two perfluorinated compounds (PFOS and PFOA) using PBPK modeling and biomarker measurements – Celine Brochet (10 mins)
- Diet as a source of exposure to environmental contaminants for pregnant women and children - Eleni Papadopoulou (10 mins)
- **Keynote:** The urban exposome, determinants & variability – Mark Nieuwenhuijsen (ISGlobal) (30 mins)
- ExpoApp: the integrative system to assess the external exposome & Personal exposure to the external exposome in pregnancy and childhood in Europe – David Donaire (10 mins)

13.00-14.00 Lunch & Posters

14.00-14.30 Session 2. Describing the early life Exposome and its determinants and variability across Europe (chair: Leda Chatzi) – part 2

- Early life exposome patterns in 6 countries – Xavier Basagaña (10 mins)
- Discussion of summary statement: “achievements and challenges” (20 mins)

14.30-15.45 Session 3. Omics signatures related to multiple early-life environmental exposures (chair: Muireann Coen) Part 1

- **Keynote** – Cataloguing omics signatures of many environmental exposures – HELIX results (Mariona Bustamente / Lea Maitre ISGlobal) (30 mins)
- The urinary and serum metabolome in children from six European populations - Chung-Ho E. Lau (10 mins)
- Epigenetic marks of early life exposure to particulate matter – Michelle Plusquin (10 mins)
- Smoking and methylation – Marta Vives (10 mins)
- The exposome and telomere length – Diana Clemente (10 mins)

15.45-16.15 Coffee

16.15-17.30 Session 3. Omics signatures related to multiple early life environmental exposures (chair: Hector Keun) Part 2

- **Keynote** - Biostatistical/bioinformatics challenges – Marc Chadeau (ICL) (30 mins)
- RExposome and exposome & cross-omics analyses - Juan Ramon Gonzalez (10 mins)
- Molecular signatures time variability in HELIX panel paired-samples - Carles Hernandez (10 mins)
- Discussion of summary statement: “achievements and challenges”

Meeting Dinner

Day 2

9.00-10.45 Session 4. Assessing health effects of the early life Exposome (chair: Martine Vrijheid)

- **Keynote** - Systematically associating multiple exposures with child health: Methodological challenges & HELIX results – Rémy Slama (INSERM) (30 mins)
- Selection of short presentations with HELIX results
 - Exposome and cognitive and behavioural development – Léa Maitre (7 mins)
 - Exposome and allergies – Berit Granum (7 mins)

- Exposome and lung function – Lydiane Agier (7 mins)
- Exposome and blood pressure - Charline Warembourg (7 mins)
- Exposome and obesity - Martine Vrijheid (7 mins)
- Discussion (10 mins)
- Beyond bioinformatics: contributions from health informatics to exposome research – Fernando Martín-Sánchez (ISCI) (10 mins)
- Discussion of summary statement: “achievements and challenges”

10.45-11.15 Coffee

11.15-12.30 Session 5. Translation of Exposome results to policy (chair: John Wright)

- **Keynote** - Health impact assessments related to the early life exposome - David Rojas (ISGlobal) (30 mins)
- Development of Mobile App – John Wright (10 mins)
- Discussion of policy and societal implications of results (based on last slide of each presentation) – John Wright / Peter van den Hazel (20 mins)

12.30-13.30 Session 6. Networking between Exposome-related projects in and outside Europe – “building an exposome toolbox” (chair: Cathrine Thomsen)

- Short presentation on each project’s match with “exposome toolbox”: HBM4EU (Marika Kolossa), LifeCycle (Martine Vrijheid), LifePath (Paolo Vineis), DynaHealth (Marjo-Riitta Jarvelin), US projects (Gary Miller, Gwen Collman), HEALS (Denis Sarigiannis), Exposomics (Paolo Vineis), others...
- Project ‘Speed-date’ (Diana van Gent)
- Discussion on networking, complementarities, gaps, future ...
- Discussion of summary statement: “achievements and challenges”

13.30-14.30 LUNCH – networking continued + posters

14.30-16.00 Session 7. Reflections on the Future of (early life) Exposome Research (chair: Remy Slama)

- Toxicologist's view: Thomas Hartung (Human Toxome project) (30 mins)
- Epidemiologist's view: Roel Vermeulen (IRAS) (30 mins)
- SAB statement (SAB members)
- Closure