

## WP 2 Training Workshop Lifelong Health and Well-Being EDUC-SHARE

**Advancing healthcare using the Research Infrastructure CeSAR of UniCa:  
Nutrition during the first two years of life**

**Date:** 23-24 November 2023

**Main venue:** University of Cagliari, Classroom 204, Block F, Cittadella di Monserrato  
Google Direction: [Str. interna Policlinico Universitario, 09042 Monserrato CA](#)

### Abstract

Human breast milk is a complex biofluid containing many components, including macronutrients, hormones, and bioactive molecules, each potentially responsible for neonatal outcome, growth, and health. In addition, human breast milk is an important source of commensal bacteria for newborns and represents a dynamic ecosystem for multiple hubs that change during lactation and may influence development and future disease onset. The composition of human breast milk may therefore have important consequences for the short and long-term development of the newborn.

The University of Cagliari has human resources and analytical tools such as NMR, GC/MS, LC/MS, and Ion Mobility MS.

During the training workshop, CeSAR staff will present the analytical tools available at UniCA and their potential to perform metabolomic and microbiomic milk analyses and interpret the results. The Life Sciences Core Facilities at Masaryk University will be also presented.

**Keywords:** nutrition, health, human milk, metabolomics, microbiome, lipidomic, NMR facility; MS facility.



## Agenda

Thursday, 23 November 2023

| time         | title  | Speaker   |
|--------------|--|---|
| 14:45 -15:00 | Welcome coffee   |   |
| 15:00 -15:20 | <i>Presentation of the Research Infrastructure CeSAR and its facilities</i>  | <b>Sabrina Rita Giglio</b><br>Director of CeSAR, UniCa  |
| 15:20-15:40  | <i>Presentation of NMR facility</i>  | <b>Sandrina Lampis</b> NMR<br>Facility, UniCa   |
| 15:40 –16:00 | <i>The metabolomic profiles of infant´s stool and milk – project in cooperation with the NMR facility of CeSAR</i> | <b>Eliška Pivrcová</b><br>Environmental Genomics,<br>Faculty of Science Masaryk<br>University   |
| 16:00 –16:20 | <i>Life Sciences Core Facilities at Masaryk University – case of CEITEC and RECETOX</i>                            | <b>Hana Seličová</b><br>Human Exposome –<br>Faculty of Science<br>Masaryk University<br><b>Eliška Pivrcová</b><br>Environmental Genomics,<br>Faculty of Science Masaryk<br>University |
|              | <i>Q&amp;A session</i>   | All   |
| 16:30-17:30  | <i>On-site visit at CeSAR facilities: presentation of Mass Spectrometry lab</i>                                    | <b>Giulio Ferino</b> Mass<br>Spectrometry Facility,<br>UniCa  |



Friday, 24 November 2023

| time        | title  | Speaker  |
|-------------|--|--|
| 09:00-09:15 | <i>Welcoming and introduction of works</i>   | <b>Alessandra Carucci</b><br>Vice-Rector for International Affairs -UniCa                              |
| 09:15-09:55 | <i>Metabolomics in the clinical practice</i>                                       | <b>Luigi Atzori</b><br>Full Professor - Biomedical Sciences Dept. UniCa                                |
| 09:55-10:35 | <i>Lipidomics and its applications in the clinic and nutrition</i>                 | <b>Pierluigi Caboni</b><br>Full Professor - Life and Environmental Sciences Dept. UniCa                |
| 10:35-11:15 | <i>Use of NMR facilities in the clinic and study of infant milk</i>                | <b>Flaminia Cesare Marincola</b><br>Associate Professor - Chemical and Geological Sciences Dept. UniCa |
| 11:15-11:30 | <i>Coffee break</i>  |  |
| 11:30-12:10 | <i>Microbiome in health and disease</i>  | <b>Vanessa Palmas</b><br>Researcher - Biomedical Sciences Dept. UniCa                                  |
| 12:10-13:00 | <i>Nutrition during pregnancy and infant feeding: a key role for future health</i> | <b>Roberta Pintus</b><br>PostDoc- Surgical Sciences Dept. UniCa  |
| 13:00-13:15 | <i>Conclusions and Collaboration Opportunities</i>                                 |  |
| 13:15       | <i>Light lunch</i>   |  |

The seminar is open to researchers, professors, PostDocs, and Ph.D. candidates of the EDUC Alliance universities.

Microsoft Teams link to follow remotely: [click to join](#)

