



UNIMORE

UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA

Dipartimento di Scienze della Vita



UNIVERSITÀ
DEGLI STUDI
DI TERAMO

Facoltà di Medicina Veterinaria



This project has received funding
from the European Union's Horizon 2020
research and innovation programme
under grant agreement No 734434



September 12, 2019
CONFERENCE
**PHYSIOLOGICAL ASPECTS
OF REVERSIBLE DRYING IN EUKARYOTES**

9.00 **Welcome & Opening Remarks**

Angelo Oreste Andrisano Rector of the University of Modena and Reggio Emilia - Italy

Daniela Quaglino Director of the Department of Life Sciences - University of Modena and Reggio Emilia - Italy

Lorena Rebecchi Department of Life Sciences - University of Modena and Reggio Emilia - Italy

9.15 **Introduction to the work**

Pasqualino Loi Coordinator of the Project Drynet - University of Teramo - Italy

■ **SESSION I** Chair: **Pasqualino Loi** University of Teramo - Italy

9.30 **Tolerance of the freeze-dried mouse sperm nucleus to long-term storage
at room temperature or ranging from LN₂ to 150 °C**

Teruhiko Wakayama Yamanashi University - Japan

10.00 **Seeds and the secrets of survival**

Julia Buitink Institut National de la Recherche Agronomique - France

10.30 **The function of *Arabidopsis* LEA_4 proteins in freezing and desiccation tolerance**

Dirk Hincha Max Planck Institute of Molecular Plant Physiology - Germany

11.00 - *Coffee break*

■ **SESSION II** Chair: **Marta Czernik** University of Teramo - Italy

11.30 **Anhydrobiosis in the sleeping chironomid: clues to develop dry preservation of animal cells**

Takahiro Kikawada National Institute of Agrobiological Sciences - Japan

12.00 **Dry biobanking as a conservation tool**

Joseph Saragusty University of Teramo - Italy

12.30 **Tardigrada: an emerging animal model for discovering the secrets of life without water**

Michele Cesari University of Modena and Reggio Emilia - Italy

13.30 - *Lunch*

SCIENTIFIC COMMITTEE

University of Teramo: **Pasqualino Loi** - **Marta Czernik** - **Luca Palazzese** - **Paola Toschi** - **Debora A. Anzalone**

University of Modena and Reggio Emilia: **Lorena Rebecchi** - **Roberto Guidetti** - **Tiziana Altiero** - **Michele Cesari** - **Ilaria Giovannini**

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September 13, 2019
WORKSHOP
REVERSIBLE DRYING: LESSONS
FROM ANHYDROBIONTES

9.00 Welcome & Opening Remarks

Lorena Rebecchi University of Modena and Reggio Emilia - Italy

Pasqualino Loi Coordinator of the Project Drynet - University of Teramo - Italy

■ **SESSION I Chair: Lorena Rebecchi** University of Modena and Reggio Emilia - Italy

9.30 Involvement of bioprotectants during desiccation and rehydration processes revealed by RNA interference: the case study of tardigrades

Ilaria Giovannini University of Modena and Reggio Emilia - Italy

10.00 Signaling pathways regulating anhydrobiosis in an anhydrobiotic tardigrade, *Hypsibius exemplaris*

Koyuki Kondo Keio University - Japan

10.30 Disordered proteins and desiccation tolerance: lessons from tardigrades

Thomas C. Boothby University of North Carolina at Chapel Hill - USA

11.00 - Coffee break

■ **SESSION II Chair: Roberto Guidetti** University of Modena and Reggio Emilia - Italy

11.30 The molecular mechanisms of protein immobilization in disaccharide glasses: functional and dynamical studies by optical and EPR spectroscopy

Giovanni Venturoli University of Bologna - Italy

12.00 Redox control and the critical role of oxygen in seed storage at low relative humidity

Thomas Roach University of Innsbruck - Austria

12.30 Freeze-dried spermatozoa in endangered species

Luca Palazzese University of Teramo - Italy

13.30 - Lunch

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