



2nd Meeting of the Italian *C. elegans* Research Community *M.I.C.e.R.Co*

Naples, March 5-6, 2020

Organized by

ISTITUTO SUPERIORE DI SANITÀ
Department of Oncology and Molecular Medicine

and

CONSIGLIO NAZIONALE DELLE RICERCHE
Institute of Biosciences and BioResources

N° ID: 114D20

RELEVANCE

The use of relatively simple model organisms, including the nematode *Caenorhabditis elegans*, is fundamental for the attribution of clinical significance to rare genomic variants, the discovery of basic biological processes conserved during evolution, as well as for ecotoxicology and parasitology studies. The international *C. elegans* community has always encouraged the exchange of information, knowhow and materials. In this perspective, a great effort has been performed to bring together *C. elegans* researchers in a world scientific congress. Over time and with the growth of the community, the organization of an international congress has passed every two years, alternating with a European meeting. Following this tradition and given the recent increase in the number of Italian researchers interested in *C. elegans*, the present event responds to the need of creating an Italian initiative. The first Italian congress took place in 2007, but remained an isolated experience. The 2020 meeting will represent the beginning of a new path for the Italian *C. elegans* community and will lay the basis for the organization of a biennial congress.

OBJECTIVES

Main goals of the congress are (i) to encourage the exchange of ideas and information on the example of the small national meetings hold in Spain, France or the UK, and local US meetings; (ii) to lay the basis for the development of an Italian *C. elegans* community, (iii) to disclose the potential of *C. elegans* to the Italian researchers working with different models, and (iv) to give young people the opportunity to present their data in an informal context.

PROGRAMME – Thursday 5 March

13.30 REGISTRATION

14.30 WELCOMING ADDRESSES
E. Di Schiavi, S. Martinelli, Patron Institutions

14.45 OPENING LECTURE
Defective axon guidance links H3K4 deregulation to neurodevelopmental disorders
A.E. Salcini

15.30 *SESSION I* - MODELLING HUMAN DISEASES I

In vivo analysis of FANCD2 recruitment at meiotic DNA breaks in *C. elegans*
M. Germoglio

Modelling germline mutations affecting *CDC42* in *C. elegans* highlights their differential impact on multiple signaling pathways
M. Di Rocco

C. elegans modelling of a germline missense mutation in *CLTC* underlying intellectual disability and early-onset Parkinsonism
L. Pannone

Investigating the spreading and toxicity of tau using *C. elegans*
C. Natale

C. elegans avatars of amyloid cardiac toxicity
L. Diomedè

A model for human binge eating in the worm *C. elegans*
M. Pucci

17.30 Coffee break - *POSTER SESSION I*

18.30 *SESSION II* - MODELLING HUMAN DISEASES II

C. elegans expressing D76N β 2-microglobulin: a model for *in vivo* screening of drug candidates targeting amyloidosis
G. Faravelli

Characterization of ATP7B/*cua-1* mutants to find new targets to attenuate copper toxicity in Wilson disease
F. Catalano

Activating intercellular translocation of MANF into neurons as a novel therapeutic strategy for Parkinson's disease
R. Vozdek

Protective effects of nutraceuticals in neuronal pathologies
N. Ventura

Silencing of the mitochondrial ribosomal protein L-24 gene activates the oxidative stress response in *Caenorhabditis elegans*
A. Montanari

TOGARAMI is a novel gene associated with primary ciliopathy
E. Trevisson

20.30 DINNER @ IBBR

PROGRAMME – Friday 6 March

- 9.00 **SESSION III - ELUCIDATING BASIC BIOLOGICAL PROCESSES**
- Pathogenic attack stimulates *C. elegans* extracellular proteostasis to prevent protein aggregation
I. Gallotta
- Mytho* is a newly identified gene that controls lifespan and stress response in *C. elegans*
V. Morbidoni
- Function of MOG proteins in germline sex determination and splicing in *C. elegans*
M.S. Tarca
- 10.00 **SESSION IV - TARGETING SPINAL MUSCULAR ATROPHY**
- Key role of SMN/SYNCRIP and RNA-Motif 7 in spinal muscular atrophy: RNA-Seq and motif analysis of human motor neurons
M. Nizzardo
- lin-45/B-RAF* role in a *C. elegans* model of Spinal Muscular Atrophy
F. Cieri
- Identification of new drugs and genetic targets for Spinal Muscular Atrophy
P. Santonicola
- 11.00 Coffee break - **POSTER SESSION II**
- 12.00 **SESSION V – ALTERNATIVE ASSAYS/MODELS**
- Dissecting metabolomic signatures of breast cancer by exploiting the receptor-ligand binding affinity in *C. elegans*
V. Folli
- Biophysical modeling of AWC_{ON} and RMD *C. elegans* neurons
M. Nicoletti
- Automation in *C. elegans* research - a translational approach
M. Perni
- Spaceflight and neurodegeneration: *C. elegans* as a model organism to understand the effect of cosmic rays on nervous system
G. Onorato
- Characterization of the *hsp90* gene in the entomopathogenic nematode *Heterorhabditis bacteriophora* and its expression related to temperature
F. De Luca
- 13.40 **CLOSING REMARKS**
E. Di Schiavi, S. Martinelli

SPEAKERS AND MODERATORS

Catalano Federico - TIGEM, Pozzuoli e Istituto di Bioscienze e Biorisorse-CNR, Napoli, Italia
Cieri Federica - Istituto di Bioscienze e Biorisorse-CNR, Napoli, Italia
De Luca Francesca - IPSP-CNR e Università "A. Moro", Bari, Italia
Di Rocco Martina - Istituto Superiore di Sanità, Roma, Italia
Di Schiavi Elia (MODERATOR) - Istituto di Bioscienze e Biorisorse-CNR, Napoli, Italia
Diomede Luisa - IRCCS Mario Negri, Milano, Italia
Faravelli Giulia - Università di Pavia, Italia
Folli Viola - Istituto Italiano di Tecnologia-Center for Life Nano Science, Roma, Italia
Gallotta Ivan - DZNE, Tübingen, Germania
Germoglio Marcello - Istituto di Bioscienze e Biorisorse-CNR, Napoli, Italia
Martinelli Simone (MODERATOR) - Istituto Superiore di Sanità, Roma, Italia
Montanari Arianna - Sapienza Università di Roma, Italia
Morbidoni Valeria - Università di Padova e IRP Fondazione Città della Speranza, Padova, Italia
Natale Carmina - IRCCS Mario Negri, Milano, Italia
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Nizzardo Monica - Università di Milano e IRCCS Ca' Granda Ospedale Maggiore, Milano, Italia
Onorato Giada - Istituto di Bioscienze e Biorisorse-CNR, Napoli e Università di Torino, Torino, Italia
Pannone Luca - Istituto Superiore di Sanità, Roma, Italia
Perni Michele - Wren Therapeutics, University of Cambridge, Misfolding Diseases Centre, Cambridge, UK
Pucci Mariangela - Università di Teramo, Italia e Karolinska Institute, Stockholm-Huddinge, Svezia
Salcini Anna Elisabetta - BRIC, Università di Copenhagen, Danimarca
Santonicola Pamela - Istituto di Bioscienze e Biorisorse-CNR, Napoli, Italia
Tarca Maria Simona - University of Fribourg, Svizzera
Trevisson Eva - Università di Padova e IRP Fondazione Città della Speranza, Padova, Italia
Ventura Natascia - Heinrich Heine University e the IUF- Leibniz Research Institute for Environmental Medicine, Duesseldorf, Germania
Vozdek Roman - EURAC Research, Istituto di Biomedicina, Bolzano, Italy

ORGANIZERS AND SCIENTIFIC SECRETARIAT

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GENERAL INFORMATION

MEETING VENUE

Institute of Biosciences and BioResources, CNR, Aula Seminari CNR
Via Pietro Castellino, 111 - Naples

OFFICIAL LANGUAGE

The official language of the Congress is **English** (simultaneous translation is not foreseen).

TARGET AUDIENCE

Italian researchers working with *C. elegans* as a model system in the following fields: Neuroscience, Developmental Biology, Genetics, Ecotoxicology and Parasitology. The meeting is also open to foreign researchers who use *C. elegans* in their laboratories and Italian researchers working with other simple model organisms.

Maximum number of attendants: 100.

REGISTRATION AND DEADLINE

The application form, available on the web page www.micerco.it, must be sent to the Organizing Secretariat at the following email address: postmaster@micerco.it by 15/12/2019 (early registration) or **29/02/2020** (late registration).

REGISTRATION FEES

- € 20,00 (early registration, before 15/12/2019)
- € 30,00 (late registration, from 16/12/2019 to 29/02/2020)

The registration fee includes: Congress kit, Book of Abstracts, dinner, two coffee breaks.

FELLOWSHIPS

Travel and accommodation costs are covered by participants. However, thanks to the unrestricted contribution of the sponsors, some fellowships will be available for young researchers (students, PhD students and post-doc) which will cover travel and accommodation costs.

ABSTRACTS AND POSTER SESSION

Abstract and Poster Forms and Guidelines: download from www.micerco.it

Abstract Submission Deadline: **December 20, 2019**

Notification of Abstract Acceptance: **January 15, 2020**

If an abstract is accepted for presentation, at least one author must pay for the registration fee to attend the Conference. All accepted abstracts will be published in the Abstract Book.

CERTIFICATE OF ATTENDANCE

At the end of the Conference participants will receive a Certificate of Attendance.

For any further information, please contact the Scientific Secretariat at the following telephone numbers: 0816132365 (IBBR) or 0649902569 (ISS), or email to elia.dischiavi@ibbr.it or simone.martinelli@iss.it.

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