

SYMPOSIUM BOOKLET



MONDAY

08:00–09:15 REGISTRATION & POSTER INSTALLATION #1

09:15–09:30 OPENING CEREMONY

09:30–10:30 INVITED LECTURE #1

A timeline for ecdysozoan diversification

EDGECOMBE, HOWARD, GIACOMELLI, LOZANO-FERNANDEZ
& DONOGHUE

10:30–11:00 COFFEE BREAK #1

11:00–12:30 TALK SESSION #1 | Biodiversity

Chairs: BARTELS & LISI

11:00–11:15 Solving the six decade-long mystery: phylogenetic relationships of the Cretaceous Canadian tardigrade amber fossils

MAPALO★ & ORTEGA-HERNÁNDEZ

11:15–11:30 New fossil Eutardigrada from Rovno Eocene amber (Ukraine, 34–38 MYA)

INSHYNA, KACZMAREK, PERKOVSKY, HAMMEL, HERB & HAUG

11:30–11:45 A revision of the marine Orzeliscinae (Arthrotardigrada, Tardigrada)

KRISTENSEN, MØBJERG, MØBJERG & JØRGENSEN

11:45–12:00 Phylogeny and biogeography of the genus *Xerobiotus* (Macrobiotidae, Eutardigrada)

VINCENZI★, CESARI, KACZMAREK, ROSZKOWSKA, MIODUCHOWSKA, REBECCHI, KIOSYA & GUIDETTI

12:00–12:15 Phylogeny of the superfamily Isohypsibioidea (Parachela, Eutardigrada)

GUIDETTI, SALA, GIOVANNINI, REBECCHI & CESARI

12:15–12:30 Systematist's nightmare: an updated classification of Isohypsibioidea (Eutardigrada)

GASIOREK, MOREK & MICHALCZYK

MONDAY

12:30–13:45 **LUNCH #1**

13:45–15:00 **TALK SESSION #2 | Biodiversity**

Chairs: KRISTENSEN & ZAWIERUCHA

13:45–14:00 Research on diversity of tardigrades in Northern China

XUELING, JINGYU, NING, HEPING, MIN & XUEGANG

14:00–14:15 Riding on wind, birds or staying home? – Phylogeography of Nearctic *Milnesium* (Eutardigrada: Apochela)

WAŁACH★, LOEFFELHOLZ, MOREK, LÓPEZ-LÓPEZ, PIENAAR & MICHALCZYK

14:15–14:30 A first look into peatland moss tardigrades in Finland

MÄENPÄÄ★, BORG, SILENIUS, SOININEN, ELO, KOTIAHO & CALHIM

14:30–14:45 Current state of knowledge of the limno-terrestrial tardigrade fauna of the Republic of Argentina

OSTERTAG, ROCHA, DOMA, GONZALEZ-REYES, CAMARDA, GRABOSKY & LISI

14:45–15:00 Environmental DNA metabarcoding of Danish soil samples reveals new insight into the hidden diversity of eutardigrades in Denmark

PUST★, MØBJERG, KRISTENSEN & FRØSLEV

15:00–16:15 **COFFEE BREAK #2 & POSTER SESSION #1**

Physiology, Morphology & Ecology

Chaperons: GAŚIOREK & MOREK

16:15–18:00 **WELCOME RECEPTION ★ | Collegium Nowodworskiego Courtyard (Św. Anny 12)**

18:00–??:?? **ICEBREAKER ★ | Budda Bar (Rynek Główny 6) | Paid Bar with Tardigrade Cocktails ☺**

TUESDAY

09:30–10:30

INVITED LECTURE #2

Tardigrades in development and evolution

HEJNOL

10:30–11:00

COFFEE BREAK #3

11:00–12:15

TALK SESSION #3 | Biodiversity

Chairs: MCINNES & SUZUKI

11:00–11:15

A new pantropical genus exposes the challenges of ramazzottiid phylogeny (Eutardigrada: Parachela)

DEY, MOREK, LÓPEZ-LÓPEZ & MICHALCZYK

11:15–11:30

Development of morphological data matrices for the use in integrated taxonomy

MARLEY & MCINNES

11:30–11:45

A new species of *Paramacrobiotus* from Hawaii with a high level of allometric variation in key morphometric traits

MEYER & JACKSON

11:45–12:00

First time-calibrated multilocus phylogeny of the phylum Tardigrada (Ecdysozoa: Panarthropoda)

LÓPEZ-LÓPEZ, GAŚIOREK, MOREK, DEY & MICHALCZYK

12:00–12:15

Broad sampling and HTS spark a revolution in our understanding of tardigrade biogeography

MICHALCZYK, MOREK, GAŚIOREK, DEY & LÓPEZ-LÓPEZ

12:15–12:30

GROUP PHOTO

12:30–13:45

LUNCH #2

TUESDAY

13:45–15:00	TALK SESSION #4 Ecology Chairs: NELSON & CALHIM
13:45–14:00	The importance of soil structure for soil-inhabiting tardigrades in polar habitats <u>TŮMOVÁ, JÍLKOVÁ, MACEK & DEVETTER</u>
14:00–14:15	Control of tardigrades over cryoconite hole ecosystems <u>ZAWIERUCHA</u> ★, BUDA, NOVOTNA JAROMERSKA, AMBROSINI, FRANZETTI, PONIECKA, KLIMASZYK, ROZWALAK, RICHTER, PIETRYKA & BAGSHAW
14:15–14:30	Life cycle of <i>Acutuncus antarcticus</i> and acclimatory adaptation during exposure to increasing temperature <u>GIOVANNINI</u> , MANFRIN, ALTIERO, GRECO, VINCENZI, GUIDETTI, GIULIANINI & REBECCHI
14:30–14:45	Semiochemical-based mate searching behaviour in tardigrades: comparing the sexes <u>CHARTRAIN</u> , KNOTT, MICHALCZYK, PURO, TYNKKYNNEN & CALHIM
14:45–15:00	Effect of juvenile hormone, methyl farnesoate, on sex determination in <i>Paramacrobiotus metropolitanus</i> <u>MATSUMOTO</u> , UCHIDA, MINATO, SUZUKI, XIE, MIYAKAWA & SUGIURA

15:00–16:15	COFFEE BREAK #4 & POSTER SESSION #1 Physiology, Morphology & Ecology Chaperons: GAŚIOREK & MOREK
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16:15–17:30	COLLEGIUM MAIUS TOUR ★ Jagiellońska 15
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WEDNESDAY

09:00–09:30 POSTER INSTALLATION #2

09:30–10:30 INVITED LECTURE #3

The tardigrade *Hypsibius exemplaris* as a model for body plan evolution

SMITH, CHAVARRIA, GAME & HARRISON

10:30–11:00 COFFEE BREAK #5

11:00–12:30 TALK SESSION #5 | Morphology

Chairs: GUIDETTI & POPRAWA

11:00–11:15 Reproductive strategy of tardigrades: gamete motility and morphology

SUGIURA★ & MATSUMOTO

11:15–11:30 Evolution of sperm morphology in Macrobiotidea

VECCHI★, RYNDOV, MICHALCZYK, NELSON, REBECCHI, STEC & CALHIM

11:30–11:45 Morphology of light perception: localisation of opsins in the eutardigrade *Hypsibius exemplaris*

GROSS, EPPLE, KLEIN & MAYER

11:45–12:00 Three-dimensional reconstruction of the eye in *Hypsibius exemplaris* based on nano-computed tomography and ultrastructure

KLEIN, GROSS, GREVING, LONGO & MAYER

12:00–12:15 Cuticle and cuticular capsule in freshwater tardigrade *Thulinus ruffoi* – formation and shedding

JANELT★ & POPRAWA

12:15–12:30 New insights on chemical composition and morpho-functional adaptations of tardigrade feeding apparatus

MASSA, REBECCHI & GUIDETTI

12:30–13:45 LUNCH #3

WEDNESDAY

13:45–15:00	TALK SESSION #6 Physiology Chairs: ARAKAWA & JØRGENSEN
13:45–14:00	Sequencing genomes from single tardigrade individuals <u>MOREK</u> , STEVENS, BLAXTER & MICHALCZYK
14:00–14:15	<i>In vivo</i> gene expression in tardigrades, a technical breakthrough coming to tardigrades <u>TANAKA</u> ★ & ARAKAWA
14:15–14:30	Gene mining of cytokine-like molecules in the eutardigrade <i>Mesobiotus philippinicus</i> <u>ITANG</u> ★ & MIRANO-BASCOS
14:30–14:45	Doyère-Pouchet controversy (1859–1860) as the first stage of the spontaneous-generation controversy (1859–1864) <u>SUZUKI</u>
14:45–15:00	Identification of promoters associated with tardigrade anhydrobiosis-related genes <u>ISHIKAWA</u> ★, TANAKA & ARAKAWA

15:00–16:15	COFFEE BREAK #6 & POSTER SESSION #2 Biodiversity Chaperons: LÓPEZ-LÓPEZ & DEY
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16:15–18:15	RYNEK UNDERGROUND TOUR ★ Rynek Główny, Sukiennice (Main Square, Cloth Hall)
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THURSDAY

09:30–10:30

INVITED LECTURE #4

Unravelling the mechanisms underlying extreme stress tolerance in tardigrades

MØBJERG

10:30–11:00

COFFEE BREAK #7

11:00–12:30

TALK SESSION #7 | Physiology

Chairs: MØBJERG & JÖNSSON

11:00–11:15

Tardigrade autofluorescence: UV protection or spandrel?

BARTELS, COFFEY, PINEAU, NELSON & KACZMAREK

11:15–11:30

Investigation of osmobiosis in the limno-terrestrial eutardigrade *Ramazzottius varieornatus*

EMDEE ★, MØBJERG, GROLLMANN & MØBJERG

11:30–11:45

Why are not all tardigrades good models for anhydrobiosis studies?

KACZMAREK, POPRAWA & KMITA

11:45–12:00

Tardigrades are shining models of anhydrobiosis research

ARAKAWA & TANAKA

12:00–12:15

Examining the resistance of active tardigrades to cyanide poisoning

BARTYLAK, BUDA, KMITA & KACZMAREK

12:15–12:30

Are invertebrates capable of surviving Martian concentrations of perchlorate?

KAYASTHA, GOŁDYN, ROBOTNIKOWSKI, ZACHARYASIEWICZ, NAGWANI, FIAŁKOWSKA, PAJDAK-STÓS, RZYMSKI & KACZMAREK

THURSDAY

12:30–13:45

LUNCH #4

13:45–15:00

POSTER SESSION #2

Biodiversity

Chaperons: LÓPEZ-LÓPEZ & DEY

15:00–19:00

WIELICZKA SALT MINE EXCURSION ★★ ★

FRIDAY

09:30–10:30	TALK SESSION #8 Physiology Chairs: ALTIERO & KACZMAREK
09:30–09:45	Physiological roles of tardigrade-unique heat-soluble proteins <u>KUNIEDA</u> , YASUI & TANAKA
09:45–10:00	Mechanisms of cold tolerance in tardigrades (<i>Hypsibius exemplaris</i>) <u>LYONS</u> ★, ROBERTS, CHENG, SHANG, SEE, RITCHIE, WU, STOCK & WILLIAMS
10:00–10:15	Factors affecting survival of repeated anhydrobiosis in a dioecious tardigrade <i>Paramacrobiotus experimentalis</i> Kaczmarek et al., 2020 <u>NAGWANI</u> ★, KACZMAREK & KMITA
10:15–10:30	Soft electrophiles inducing dormancy in tardigrades <u>MOMENI</u> ★, PHILLIPI, PIENAAR & CIESLA

10:30–11:00 COFFEE BREAK #8

11:00–12:15	TALK SESSION #9 Physiology Chairs: SMITH & GROSS
11:00–11:15	DNA damage response of <i>Hypsibius exemplaris</i> to genotoxic stress DE CIAN, ANOUD, DUVERNOIS-BERTHET, JOURDREN, ADRAIT, HEINRICH, BLUGEON, COUTE, GIOVANNANGELI, DELAGOUTTE & <u>CONCORDET</u>
11:15–11:30	Tardigrade phenotype classification using neural networks <u>VÍTEK</u> ★, FRYČÁK, FÜRST, LACEY, VAVRUŠA & VOLLER
11:30–11:45	Tardigrade community microbiomes in North American orchards (Iowa, USA) include putative plant pathogens and endosymbionts <u>TIBBS-CORTES</u> ★, TIBBS-CORTES & SCHMITZ-ESSER

FRIDAY

11:45–12:00 Using fluorescence *in situ* hybridisation to visualise *Rickettsia* in tardigrades

12:00–12:15 TIBBS-CORTES ★, TIBBS-CORTES, SCHULTZ & SCHMITZ-ESSER
Identifying the core microbiome of tardigrades:
what is really there?

SURMACZ ★, STEC, MICHALCZYK & ŁUKASIK

12:15–12:30 **CLOSING CEREMONY**

12:30–13:45 **LUNCH #5**

13:45–15:00 **MICROSCOPE SLIDE EXAMINATION**
Sponsored by Evident | Olympus

16:30–18:30 **KRAKÓW OLD TOWN TOUR ★★** | Main Square – Wawel Hill – Wawel Dragon – Kazimierz (Jewish Quarter) – Banquet Venue

18:30–??:?? **SYMPOSIUM BANQUET
& YOUNG SCIENTIST AWARDS ★★** | Stara Zajeżdźnia Restaurant (Św. Wawrzyńca 12)

Jagiellonian University
Auditorium Maximum
Krupnicza 33

tardigrada.uj.edu.pl

Wi-Fi: maximumwifi@uj.edu.pl
Wi-Fi Pass: Tardies#15

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