

Maria Dafni (Daphne) Bazopoulou – CV

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Present Affiliation: Assistant Professor, Department of Biology, University of Crete & Collaborating Faculty Member, IMBB – FORTH, Greece.

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EDUCATION AND KEY QUALIFICATIONS

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| 2009 | Ph.D.
Faculty of Sciences and Engineering, Department of Biology, University of Crete & Institute of Molecular Biology and Biotechnology, FORTH, Greece.
Supervisor: Nektarios Tavernarakis. |
| 2004 | M.Sc.
Faculty of Sciences and Engineering, Department of Biology, University of Crete & Institute of Molecular Biology and Biotechnology, FORTH, Greece.
Supervisor: Nektarios Tavernarakis. |
| 2002 | B.Sc. Faculty of Sciences and Engineering, Department of Biology, University of Crete, Greece. |

Current positions

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| Since 2025 | Collaborating Faculty Member, IMBB – FORTH, Greece. |
| Since 2021 | Assistant Professor
Faculty of Sciences and Engineering, Department of Biology, University of Crete, Greece. |
| Since 2014 | Co-Founder
<i>Microkosmos LLC</i> https://www.ukosmos.com/ |

Previous positions

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| 2020 – 2021 | Assistant Professor
Department of Biosciences, Durham University, UK. |
| 2014 – 2021 | Research Fellow
College of Literature, Science and the Arts, Department of Molecular, Cellular and Developmental Biology Department, University of Michigan, USA. PI: Ursula Jakob. |
| 2009 – 2014 | Postdoctoral Fellow
College of Engineering, Department of Mechanical Engineering, University of Michigan, USA. PI: Nikos Chronis. |

PUBLICATIONSScopus Author ID: [24314633400](#)PubMed: <https://pubmed.ncbi.nlm.nih.gov/?term=Bazopoulou+D&sort=date>

*Corresponding author

- *Redox regulation in lifespan determination*, Karagianni C., Bazopoulou D.*, **Journal of Biological Chemistry**, 300(3):105761 (2024). DOI: [10.1016/j.jbc.2024.105761](#).
- *Early life changes in histone landscape protect against age-associated amyloid toxicities through HSF-1 dependent regulation of lipid metabolism*, Oleson B.J., Bhattarai J., Sarah Zalubas S., Kravchenko T., Ji Y., Jiang E., Lu C., Madden C., Coffman J., Bazopoulou D., Jones J., Jakob U., **Nature Aging**, 4(1):48-61 (2023). DOI: [10.1038/s43587-023-00537-4](#)
- *Shaping longevity early in life: developmental ROS and H3K4me3 set the clock*, Oleson B. J., Bazopoulou D., Jakob U., **Cell Cycle**, 20: 2337-2347 (2021). DOI: [10.1080/15384101.2021.1986317](#)
- *An alternative food source for metabolism, drug, and longevity studies in C. elegans*, Beydoun S., Choi H.S., Dela-Cruz G., Kruempel J., Huang S., Bazopoulou D., Miller H., Evans C., Leiser S.F., **Communications Biology**, 4(1):258 (2021). DOI: [10.1038/s42003-021-01764-4](#)
- *Automated phenotyping and lifespan assessment of a C. elegans model of Parkinson's disease*, Kim M., Knoefler D., Quarles E., Jakob U., Bazopoulou D.*, **Translational Medicine of Aging**, 4:38-44 (2020). DOI: [10.1016/j.tma.2020.04.001](#)
- *Developmental ROS individualizes stress resistance and lifespan*, Bazopoulou D., Knoefler D., Zheng Y., Ulrich K., Oleson B., Xie L., Kim M., Kaufmann A., Lee Y.T., Dou Y., Chen Y., Quan S., Jakob U. **Nature**, 576(7786):301-305 (2019). DOI: [10.1038/s41586-019-1814-y](#)
- *An automated compound screening for anti-aging effects on the function of C. elegans sensory neurons*, Bazopoulou D., Chaudhury A.R., A, Pantazis A., Chronis N., **Scientific Reports**, 7:9403 (2017). DOI: [10.1038/s41598-017-09651-x](#)
- *The anti-inflammatory drug mesalamine targets bacterial polyphosphate accumulation*, Dahl J.U., Gray M.J., Bazopoulou D., Beaufay F., Lempart J., Koenigsknecht M.J., Wang Y., Baker J.R., Hasler W.L., Young V.B., Sun D., Jakob U., **Nature Microbiology**, 2:16267 (2017). DOI: [10.1038/nmicrobiol.2016.267](#)
- *On-demand isolation and manipulation of C. elegans by in vitro maskless photopatterning*, Oliver C.R., Gourgou E., Bazopoulou D., Chronis N., Hart A.J., **PLoS One**, 11(1):e0145935 (2016). DOI: <https://doi.org/10.1371/journal.pone.0145935>
- *Circuit mechanisms encoding odors and driving aging-associated behavioral declines in C. elegans*, Leinwand S.H., Yang C.J., Bazopoulou D., Srinivasan J., Chronis N., and Chalasani S. H., **eLife**, 4: e10181 (2015). DOI: <https://doi.org/10.7554/elife.10181>
- *Probing the physiology of ASH neuron in C. elegans using electric current stimulation*, Chokshi T.V., Bazopoulou D., Chronis N., **Applied Physics Letters**, 99(5):53702-5370232011 (2011). DOI: <https://doi.org/10.1063/1.3615821>
- *An automated microfluidic platform for calcium imaging of chemosensory neurons in C. elegans*, Chokshi T.V., Bazopoulou D., Chronis N., **Lab Chip**, 10(20):2758-63 (2010). DOI: <https://doi.org/10.1039/c004658b>
- *The NemaGENETAG initiative: large scale transposon insertion gene-tagging in C. elegans*, Bazopoulou D., Tavernarakis N., **Genetica**, 137(1):39-46 (2009). DOI: <https://doi.org/10.1007/s10709-009-9361-3>
- *Genome-wide investigation reveals pathogen-specific and shared signatures in the response of C. elegans to infection*, Wong D., Bazopoulou D., Pujol N., Tavernarakis N., Ewbank J. J., **Genome Biology**, 8(9):R194 (2007). DOI: <https://doi.org/10.1186/gb-2007-8-9-r194>

Conference proceedings (Peer reviewed)

- *Platform for in vitro photo-patterning of whole animal C. elegans assays and behavior control*, Oliver C.R., Gourgou E., Bazopoulou D., Chronis N., Hart A.J., The 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences - **MicroTAS** (2014).
- *An automated microfluidic platform for electrical stimulation of the nervous system of C. elegans*, Chokshi T.V., Bazopoulou D., Chronis N., The 12th International Conference on Miniaturized Systems for Chemistry and Life Sciences - **MicroTAS** (2011).

Book Chapters

- *Microfluidics for Neuronal Imaging*, Bazopoulou D., Chronis N., **Neural Computation, Neural Devices, and Neural Prosthesis**, 243-259 (2014) Springer New York, USA.
- *Mechanosensitive Ion Channels in C. elegans*, Bazopoulou D. and Tavernarakis N. **Current Topics in Membranes: Mechanosensitive Ion Channels**, 59:49-79 (2007) Elsevier Inc., Academic Press, San Diego, USA.
- *The role of DEG/ENaC ion channels in sensory mechanotransduction*, Bazopoulou M. D., Voglis G., Tavernarakis N., **Molecular Sensors for Cardiovascular Homeostasis**, 3-31 (2005) Springer New York, USA.
- *Protein Turnover and ageing*, Bazopoulou M. D., Troulinaki K., Tavernarakis N., **Focus on Protein Research** (2004) Nova Science Inc. New York, USA.

INVITED SEMINARS (enterprises or advanced schools)

- SFRR-E (Society for Free Radical Research – Europe) ERC (Early Career Researcher) Webinar Series "Emerging Leaders in Redox Biology" (2024), [online](#).
- Symposium on Market & Innovation: Challenges for Researchers and Entrepreneurs (2023), Heraklion Chamber of Commerce and Industry, Greece.
- Epigenetics Working Group of University of North Dakota (2021), ND, USA.
- Institute for Systems Biology (2021), Seattle WA, USA.
- Biochemistry & Molecular Biology Dept, University of Nevada (2020), NV, USA
- Union Biometrica, Inc (2020), Boston MA, USA.
(<https://www.unionbio.com/media/webinar.aspx?id=315>)
- School of Medicine, Genetics and Genome Sciences, Case Western Reserve (2020), OH, USA.
- Department of Biological Sciences, Oakland University (2020), MI, USA.
- Department of Developmental Biology, Washington University (2020), MO, USA.
- Department of Biochemistry & Molecular Biology, SUNY Upstate Medical University (2020), NY, USA (did not attend due to COVID).
- Institute of Biotechnology HiLIFE, Uni. of Helsinki (2020), Finland (did not attend due to COVID).
- Michael Smith Laboratories, Uni. of British Columbia (2020), Canada (did not attend due to COVID).

CONFERENCES/WORKSHOPS (Invited speaker)

- EMBO Workshop: Bridging Thiol Chemistry and Biology: Exploring structure, function, and metabolic regulation of redox systems across species (2025), Girona, Spain.
- 42nd Scientific Conference of the Hellenic Society for Biological Sciences (2023), Thessaloniki, Greece.
- Society for Experimental Biology Annual Conference (2021), *Online*.
- 22nd International C. elegans Meeting (2019), Los Angeles CA, USA (Workshop).
- Geriatrics Center Research Symposium (2019), Ann Arbor MI, USA.
- Customer Discovery - Center of Entrepreneurship of University of Purdue (2016), IN, USA.

CONFERENCES/WORKSHOPS (Selected for presentation)

- 4th Interventions in Aging Conference (2023), Dubrovnik, Croatia (Flash Talk & Poster).
- EMBO Workshop – Developmental Circuits in Aging (2022), Heraklion, Greece (Poster).
- 22nd International C. elegans Meeting (2019), Los Angeles CA, USA (Oral - Plenary Session).
- Midwest C. elegans Meeting (2019), Ann Arbor MI, USA (Oral).
- C. elegans Stress, Pathogenicity, Aging, Metabolism & Small RNAs Meeting (2018), Madison WI, USA (Poster).
- Cutting Edge Drug Discovery and Development Symposium (2017), Detroit MI, USA (Poster).
- Midwest Chaperone Meeting (2016), Chicago IL, USA (Poster).
- Society for Lab Automation and Screening Conference - SLAS (2014), San Diego CA, USA (Poster).
- EMBO Conference - C. elegans Neurobiology (2012), Heidelberg, Germany (Poster).
- 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences - MicroTAS (2011) Seattle WA, USA (Oral).
- 18th International C. elegans Meeting (2011), Los Angeles CA, USA (Poster).
- Cell Symposia: Metabolism & Aging (2011), Cape Cod, MA, USA (Poster).
- C. elegans Neurobiology Meeting (2010), Madison, WI, USA (Poster).
- 17th International C. elegans Meeting (2009), Los Angeles CA, USA (Poster).
- European C. elegans Meeting (2008), Seville, Spain (Oral).
- Network of European Neuroscience Institutes PhD Symposium (2008), Berlin, Germany (Oral).
- Hellenic Society of Neuroscience (2008), Athens, Greece (Oral).
- 16th International C. elegans Meeting (2007), Los Angeles CA, USA (Poster).
- European C. elegans Meeting (2006), Hersonissos, Greece (Poster).

MEMBERSHIPS & REVIEWING ACTIVITIES

- Appointed Member of the Scientific Committee of Tech Transfer Office of University of Crete, Greece (2023-present).
- *Ad hoc* Evaluator of Spanish State Research Agency (AEI) (2024-present).
- *Ad hoc* Evaluator of NIEHS (National Institute of Environmental Health Sciences) Study Section – NIH (National Institute of Health), USA (2023-present).
- *Ad hoc* Evaluator of UKRI (UK Research and Innovation) & MRC (Medical Research Council) Grants, UK (2023-present).
- Member of the American Society for Biochemistry and Molecular Biology (ASBMB) (2023-present).
- Member of the Society for Neuroscience (SfN) (2011).
- Guest Associate Editor in *Frontiers in Aging* (2023-present).
- *Ad hoc* Reviewer: *eLife* (eLife Sciences Publications), *FEBS Letters* (FEBS PRESS), *Nature Communications*, *Communications Biology*, *Scientific Reports*, *Cell Discovery* (Springer Nature), *Aging Cell* (Wiley & Sons), *Methods in Cell Biology*, *Pesticide Biochemistry and Physiology*, *Advanced Drug Delivery Reviews*, (Elsevier), *Metabolites*, *Antioxidants*, *Cells*, *Sensors* (MDPI), *Lab on a Chip* (Royal Society of Chemistry), *American Institute of Physics* (AIP Publishing).

TEACHING ACTIVITIES

- “*Biology of Aging*” (Elective undergraduate course), Dept of Biology, University of Crete, Greece (2023-present).
- “*Biotechnology*” (Core undergraduate course), Dept of Biology, University of Crete, Greece (2024-present).
- “*Model organisms in the study of immune system: C. elegans*” (Graduate course), M.Sc. in Immunobiology, University of Crete, Greece (2025-present).
- “*Redox Biology in Neurodegeneration & Aging*” (Graduate course), M.Sc. in Neurosciences,

University of Crete, Greece (2024-present).

- “*Model organisms in experimental neuroscience: An approach to gain insights into the workings of the human brain*” (Graduate course), M.Sc. in Translational Engineering in Health and Medicine, National Technical University of Athens, Greece (2023).
- “*Reactive Oxygen Species in Health & Disease*” (Graduate course), M.Sc. in Molecular Biology & Biomedicine, University of Crete, Greece (2021-present).
- “*Microfluidic applications: from single-cells to model organisms*” (Graduate course) M.Sc. in Biomedical Engineering, University of Crete, Greece (2021-present).
- “*In vivo aspects of Protein Quality Control*” (Graduate course) M.Sc. in Protein Biotechnology, University of Crete, Greece (2021-2023).
- “*Literature Review*” (Elective undergraduate course), Department of Biosciences, Durham University, UK (2020).
- “*Project Management and Consulting*” (Graduate course), Center for Entrepreneurship, University of Michigan, USA (2018-2019).

SUPERVISION

- Main Supervisor: 4 PhD Candidate, 5 Graduate Students (MSc), 2 Research Assistants (MSc), 9 Bachelor Thesis Students (Dept. of Biology, University of Crete, Greece) (2022-present).
- Main Supervisor: 3 Postdoctoral Fellows, 1 Research Associate, 2 Bachelor Thesis Students, 1 Undergraduate Research Assistant (Dept. of Molecular, Cellular, and Dev. Biology, University of Michigan, USA) (2014-2020).
- Deputy Supervisor: 2 Graduate Students (1 PhD Thesis, 1 MSc Thesis) (Dept. of Molecular, Cellular, and Dev. Biology, University of Michigan, USA) (2014-2020).
- Deputy Supervisor: 1 Research Associate, 1 Bachelor Thesis Student, 1 Undergraduate Research Assistant (Dept. of Mechanical Engineering, University of Michigan, USA) (2009-2014).
- Deputy Supervisor: 2 Bachelor Thesis Students (Dept. of Biology, University of Crete, Greece) (2005-2009).

FELLOWSHIPS & AWARDS

- Society for Experimental Biology President’s Medal (Cell Biology Section). **Awarded annually to early career scientists, after independent nomination* (2021).
- Nomination for MRC Confidence in Concept (CiC), Durham University Award (UK) (renounced due to move in Greece) (2021).
- Marie Skłodowska-Curie Individual Fellowship (Reintegration panel) - Seal of Excellence (H2020-MSCA-IF-2020) (2020).
- Michigan Innovation Corps (I-Corps) Team Award (USA) (2016).
- SLAS (Society for Lab Automation and Screening) Tony B. Academic Travel Award (2014).
- Certificate of Recognition in “*College Teaching in Science and Engineering*”, Center for Research on Learning and Teaching, University of Michigan (USA) (2013).
- State Scholarships Foundation (IKY) award (Greece) (2003-2004).
- Institute of Molecular Biology and Biotechnology Fellowship for Graduate Studies (Greece) (2002-2003).

RESEARCH GRANTS

- Gut Bacteria and Precision Redox: a novel “checkpoint” for Health and Longevity (GutRHeaL), H.F.R.I.’s 3rd Call to Support Faculty Members and Researchers, Hellenic Foundation for Research and Innovation (2026-2030); Role: **PI** (265.430,00 €).

- Large Particle Flow Analysis and Sorting for Biomedical and Biotechnology Research (BioLP-FLASH) H.F.R.I.'s 2nd Call for the procurement of High Value Research Equipment, Hellenic Foundation for Research and Innovation (2025-2027); Role: **PI** (449.925,00 €).
- Twinning for excellence in research, training and innovation in Early-in-life Stress and Aging (TWIN4EarLiStAge), Horizon-Widara-2023-Access-02 (2024-2027); Role: **Coordinator** (1.601.268,75 € for the Consortium; 1.062.050,00 € for the lab).
- Ideas Incubator, IBO, Region of Crete (2024); Role: **PI** (3.000 €).
- Development of BaD-BioHI (Bacteria Detection based on Biological Host Imaging) Technology Transfer and Innovation Hub, University of Crete (2023-2024); Role: **PI** (7.500 €).
- Development of a high throughput drug screening platform based on functional imaging for the evaluation of therapeutics against Alzheimer's disease, National Recovery and Resilience Plan Greece 2.0 and funded by the European Union – Next Generation EU (project code: TAEDR- 0535850, Brain Precision) (2024-2025); Role: **Co-PI** (Lab budget: 74.800 €).
- Crosstalk between redox epigenetics and longevity pathways “New Faculty Member Research Grant” - Special Account for Research Grants (SARG), University of Crete (2024-2025); Role: **PI** (15.000€).
- Early life ROS as a universal regulator of lifespan in *C. elegans* “Dissemination of Research Results” - Special Account for Research Grants (SARG), University of Crete & Interventions in Aging Award (Fusion) (2023); Role: **PI** (3.120 €).
- Identification of early-life ROS-regulated epigenetic events that determine the ageing process, Fondation Santé, Greece (2022-2024); Role: **PI** (50.000 €).
- Biotechnology and Biological Sciences Research Council (BBSRC) studentship UKRI, UK (2021); Role: **PI** (£ 118.320) (renounced due to move to Greece).
- Royal Society Research Grant Royal Society, UK (2021); Role: **PI** (£ 20.000) (renounced due to move to Greece).
- Breakthroughs in Gerontology American Federation for Aging Research (AFAR) & Glenn Foundation for Medical Research (2019-2021); Role: **Work Package Leader** (Work Package budget \$ 180.000). PI: Ursula Jakob.
- Training Grant in the Biology of Aging (T32) National Institute of Aging, NIH, USA (2016-2018); Role: **PI** (\$ 212.000).
- Translational Research Fund Center for Entrepreneurship University of Michigan, USA (2016-2017); Role: **PI** (\$ 35.000).

DISSEMINATION, PUBLIC OUTREACH & IMPACT TO EARLY CAREER RESEARCHERS

- *Science Me* Podcast: [Είναι αναπόφευκτη η γήρανση?](#)
- Scientific Consultant (Volunteer) for the promotion of R&I, University of Crete, Greece (since 2023).
- ‘Scientists with Impact’ Invited Interview with the Society for Experimental Biology (2023).
- Coordinator of Dissemination & Outreach activities in the Dept of Biology, University of Crete, Greece (since 2022).
- Presentations and guided tours of senior year high school students in the Dept of Biology, University of Crete, Greece (since 2022).
- Volunteer for educational outreach activities of University of Crete in regional state secondary education schools and private tutoring establishments (since 2022).
- Career talk in the PhD Program in Biomedical Sciences (PIBS) University of Michigan, USA (2020).
- Volunteer and Member of the University of Michigan Postdoctoral Association, USA (2017-2019).
- Co-founder of the University of Michigan Postdoctoral Family Association, USA (2018).