**ANTONIA CHRONI**

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October 1st, 2020

**APPOINTMENTS (ACADEMIC)**

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| **Postdoctoral research fellow** (Dr. Sudhir Kumar)  Temple University, iGEM, Philadelphia, PA | *November 2018 – present* |

**EDUCATION**

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| **Ph.D. Biological Sciences**  Designated Emphasis in Phylogenomics and Phylogeography (Prof. Theodora Petanidou)  University of the Aegean, Greece  Dissertation: Spatial patterns of genetic diversity of the genus *Eumerus* (Diptera: Syrphidae) in the Balkans | *February 2018* |
| **MSc Conservation Biodiversity**  University of Montpellier II, France and University of the Aegean, Greece | *September 2012* |
| **BSc Biochemistry and Biotechnology**  University of Thessaly, Greece | *April 2010* |

**RESEARCH INTERESTS**

* Molecular evolution and phylogenetics
* Cancer metastasis
* Molecular ecology and Biogeography
* Bioinformatics and Computational Biology
* Insects – Pollinators
* Mediterranean ecosystems

**PROFESSIONAL REVIEWS**

* **Associate Faculty Member for F1000Prime**
* **Editor in Postdoctoral Editors Association (PEA)**, Biomedical Postdoctoral Council, University of Pennsylvania.
* **Reviewer Board**: MDPI (Insects, Cancers)
* **Journals**: BMC Evolutionary Biology, Geobios (Elsevier); MEEGID (Infection, Genetics and Evolution); MDPI (Insects, Genes, Diversity); Bulletin of Entomological Research; Zoology in the Middle East

**TEACHING EXPERIENCE**

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| **GUEST LECTURES, BIO 3112/5112 Evolutionary Genomic Medicine**  **“DNA sequencing: past, present and future” lecture (1 hour)**  Temple University, Philadelphia, PA, 19122 | *February 2020* |
| **Coordinator, Lab journal** (summer semester)  Temple University, Philadelphia, PA, 19122 | *May – September 2019* |
| **Coordinator, Classic Papers in Molecular Phylogenetics** (spring semester)  Temple University, Philadelphia, PA, 19122 | *January – April 2019* |

**RESEARCH EXPERIENCE**

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| **Kumar Lab**, Temple University, iGEM, Philadelphia, PA   * Developing methods for inferring metastatic origin and paths between tumors * Developing methods for estimating evolutionary rates (dN/dS) * Mentoring students | *November 2018 – present* |
| **Petanidou Lab**, Laboratory of Biogeography and Ecology, Department of Geography, University of the Aegean, Greece   * Writing of papers and projects/ fellowships * Mentoring students and supervising exams * Fieldwork: Sampling of insect – pollinators (pantrapping method) and plants combined with Electromagnetic Radiation (EMR) measurements * Participation in processing and managing of insect and plant material as well as the database | *June 2011 – February 2018* |
| **Djan Lab**, Laboratory of Genetics, Department of Biology and Ecology, University of Novi Sad, Serbia   * Laboratory (DNA sequencing) and phylogenetic analyses | *June 2013 – May 2017* |
| **Gasperi & Malacrida Lab,** University of Pavia (Faculty of Sciences MMFFNN), Department of Animal Biology, Italy   * Laboratory analyses for Diploma thesis: «Molecular sexing in the olive fruit fly, *Bactrocera oleae*» | *March – July 2009* |

**PROFESSIONAL EXPERIENCE**

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| **Administration assistant**, Project Thales (co-financed by the European Union (European Social Fund - ESF) and Greek national funds through the Operational Program “Education and Lifelong Learning” of the National Strategic Reference Framework (NSRF)), “THE POLLINATORS OF THE AEGEAN ARCHIPELAGO: DIVERSITY AND THREATS (POL-AEGIS)”   * proceeding with contracts and vacancies announcements for collaborators (paperwork and interviews), payments (of collaborators and expenses), direct labor and project’s reports and budget; contact with collaborators (>50, >18 foreigners); organization and conduct of the annual project meetings & workshops; research, transaction and purchase for lab supplies; and sending/receiving of insect and plant material | *March 2012 – November 2015* |
| **Scientific laboratory technician** (internship)  Laboratory of Blood Tests and Biochemical Analysis, General Hospital of Mytilene «Vostaneio», Lesvos, Greece | *June – August 2006* |

**FELLOWSHIPS**

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| Erasmus+ Programme/International Credit Mobility for the academic year 2015-2016. University of Novi Sad, Serbia | *February – May 2017* |
| PhD Fellowship Research, ΙΚΥ – State Scholarships Foundation (Greece), "Mobility program scholarship for training in short time (‘short terms’) to qualified scientific / research centers. University of Novi Sad, Serbia | *June – November 2014* |
| Project ExpeER (financed by the European community’s Seventh Framework programme (FP2007-2013) under grant agreement no. 262060 (ExpeER)), “Ecosystem Research”, with project title: “GeNetic status Of *EumeruS*: conservatIon implications (GNOSIS)” | *June – July 2013* |
| Erasmus+ Programme/International Credit Mobility for the academic year 2010-2011. University of Montpellier II, France | *September 2010 – January 2011* |
| Erasmus+ Programme/International Credit Mobility for the academic year 2009. University of Pavia, Italy  **MEMBERSHIPS IN SCIENTIFIC ORGANIZATIONS**   * Society for the Study of Evolution * Society for Molecular Biology and Evolution | *March – July 2009* |

**CONFERENCES AND ORGANIZED SYMPOSIA**

* 2020. Lead organizer of the symposium “Evolutionary and Ecological Perspectives in Cancer Biology” (06/28-07/2/20) Selected (conference canceled due to COVID-19 crisis)

Annual meeting of Society for Molecular Biology and Evolution (SMBE), Québec City, Canada.

**AWARDS**

* Young Investigator Award (conference canceled due to COVID-19 crisis)

Annual meeting of Society for Molecular Biology and Evolution (SMBE), Québec City, Canada.

**PUBLICATIONS**

Kumar, S.\*, **Chroni, A.\***, Tamura, K., Sanderford, M., Oladeinde, O., Aly, V., Vu, T., Miura, S. (In print) PathFinder: Bayesian inference of clone migration histories in cancer. Bioinformatics.

**Chroni, A.**, Vu, T., Miura, S., Kumar, S. (2019) Delineation of tumor migration paths by using a Bayesian biogeographic approach. Cancers, 11(12), 1880. <https://doi.org/10.3390/cancers11121880>

**Chroni, A.**, Stefanović, M., Djan, M., Vujić, A., Šašić Zorić, L., Kočiš Tubić, N., Petanidou, T.(2019) Connecting the dots: Bridging genetic to spatial differentiation of the genus *Eumerus* (Diptera: Syrphidae) in the Mediterranean Basin and the Balkans. Journal of Zoological Systematics and Evolutionary Research, 00, 1–18. <https://doi.org/10.1111/jzs.12300>

**Chroni, A**., Grković, A., Ačanski, J., Vujić, A., Radenković, S., Petanidou, T. (2018) Disentangling a cryptic species complex and defining new species within the *Eumerus minotaurus* group (Diptera: Syrphidae), based on integrative taxonomy and Aegean palaeogeography. Contributions to Zoology, 87(4), 197–225.

**Chroni, A.** (2018) Spatial patterns of genetic diversity of the genus *Eumerus* (Diptera: Syrphidae) in the Balkans. Doctoral Dissertation (in English), University of the Aegean, Mytilene (pp. 269).

Grković, A., Vujić, A., **Chroni, A.**, van Steenis, J., Đan, M., Radenković, S. (2017) Taxonomy and systematics of three species of the genus *Eumerus* Meigen, 1822 (Diptera: Syrphidae) new in southeastern Europe. Zoologischer Anzeiger, 270, 176–192. <https://doi.org/10.1016/j.jcz.2017.10.007>

**Chroni, A.**, Djan, M., Vidaković, D.O., Petanidou, T., Vujić, A. (2017) Molecular species delimitation in the genus *Eumerus* (Diptera: Syrphidae). Bulletin of Entomological Research, 107(1), 126–138. <http://dx.doi.org/10.1017/S0007485316000729>

Lázaro, A., **A. Chroni**, T. Tscheulin, J. Devalez, C. Matsoukas, and T. Petanidou. (2016) Electromagnetic radiation of mobile telecommunication antennas affects the abundance and composition of wild pollinators. Journal of Insect Conservation: 1-10. <http://dx.doi.org/10.1007/s10841-016-9868-8>

Grković A., Vujić, A., Radenković, S., **Chroni, A.**, Petanidou, T. (2015) Diversity of the genus *Eumerus* Meigen (Diptera, Syrphidae) on the eastern Mediterranean islands with description of three new species. Annales de la Société Entomologique de France (N.S.), 51(4), 361–373. <http://dx.doi.org/10.1080/00379271.2016.1144483>

**PRESENTATIONS**

**Chroni, A**., Miura, S., Kumar, S. (2020) Tumor biogeography: tracing migration paths of cancer cells (poster). SMBE2020, Québec City, Canada. Selected (conference canceled due to COVID-19 crisis).

**Chroni, A.**, Miura, S., Kumar, S. (2019) Delineation of tumor migration paths by using a Bayesian biogeographic approach (Invited speaker). CST Research Mixer, Temple University, Philadelphia, US.

**Chroni, A.**, Miura, S., Kumar, S. (2019) Can we infer tumor migration routes by using biogeographic methods? (poster). EPiC conference, Philadelphia, US.

**Chroni, A.**, Stefanović, M., Djan, M., Vujić, A., Šašić Zorić, L., Kočiš Tubić, N., Petanidou, T. (2019) A methodological framework for inferring spatial genetic patterns: the case of the genus *Eumerus* (Diptera: Syrphidae) in the Mediterranean. (oral). 10th International Symposium on Syrphidae (ISS10), Lesvos, Greece.

**Chroni, A**., Miura, S., Kumar, S. (2019) Inferring tumor migration routes by using biogeographic methods (oral). Evolution 2019, Providence, Rhode Island, US.

**Chroni, A.**, Miura, S., Kumar, S. (2019) Can we infer tumor migration routes by using biogeographic methods? (poster). SMBE Satellite Meeting on The Molecular Biology and Evolution of Cancer, 04/12-13/2019, Yale University, New Haven, CT.

**Chroni, A.**, Djan, M., Obreht Vidaković, D., Vujić, A., Petanidou, T., Šašić Zorić, L., Velićković, N., Kočiš Tubić, N., Tataris, G., Radenković, S. (2017) A DNA barcode library of the Mediterranean species of *Eumerus* (Diptera: Syrphidae) (poster). Proceedings of the 9th International Symposium on Syrphidae, 28/08 – 01/09/2017, Curitiba, Paraná, Brazil, p. 26–27.

Lazaro, A., Tscheulin, T., **Chroni, A.**, Devalez, J., Matsoukas, C., Petanidou, T. (2015) Effect of mobile telecommunication antennas on the abundance of wild pollinators (poster). Proceedings of the 14th International Conference on Environmental Science and Technology, CEST2015, 3-5 September, Rhodes, C64/1386, pp. 59.

**Chroni, A.**, Djan, M., Obreht, D., Tscheulin, T., Petanidou, T., Vujic, A. (2014) Molecular Systematics of the genus *Eumerus* (Diptera: Syrphidae) in the Aegean Archipelagos (poster). Proceedings of the 7th Congress of the Hellenic Ecological Society, 9-12 October, Mytilene, p. 276.

**Chroni, A.**, Djan, M., Obreht, D., Petanidou, T., Vujic, A. (2014) The validity of COI gene in species identification: The case of the genus *Eumerus* (Diptera: Syrphidae) in Southeastern Europe (poster). Proceedings of the Seventh International Symposium on Molecular Insect Science, 13-16 July, Amsterdam, P3.08.

Stefanaki, A., Chanlidou, E., Karousou, R., Kokkini, S., **Chroni, A.**, Nakas, G., Devalez, J., Vavitsas, G., de Courcy Williams, M., Taylor, M., Mertzanidou, D., Tscheulin, T., Petanidou, T. (2013) Contribution to the botanical research in the Aegean in the frame of the research program: The Pollinators of the Aegean, Biodiversity and Threats (poster). Proceedings of the 13th Congress of the Hellenic Botanical Society, 3-6 October, Thessaloniki, p. 144.

**Chroni, A.**, Tscheulin, T., Matsoukas, Ch., Petanidou, T. (2012) Impact of electromagnetic radiation of mobile telecommunication antennas on biodiversity: the case of wild bees (poster). 6th Congress of the Hellenic Ecological Society, 4-7 October, Athens, p. 278.

**SKILLS**

**Programming:** R, Python

**Phylogenetic and phylogeographic software**: BioEdit Sequence Alignment Editor, DNaSP, Mesquite, Arlequin, MEGA, Phylogenetic Network, RAxML, MrBayes, FigTree, Tracer, WINCLADA/NONA, PAUP\*, PAST, SplitTree, RASP, BEAUti/BEAST, TempEst, TCS and GenAIEx, Alleles In Space, PopART, GENELAND (R), BioGeoBEARS (R), CloneFinder, PathFinder

**Laboratory**: DNA & RNA extraction, PCR, DNA gel electrophoresis, Southern blotting, Cloning strategies, Endonucleases digestions, DNA ligation

**Geospatial**: QGIS, ArcGIS

**Languages**: Greek (mother tongue), English (fluent), French (advance), Italian (advance), Serbian (basic)

**ADDITIONAL INFORMATION**

* Generation of DNA barcodes with GenBank accession numbers: KT157844 – KT157921 (17/06/2015), KT221005 – KT221032 (30/06/2015), KX083349 – KX083368, KX083373 – KX083388 & KX083390 – KX083393 (18/04/2016), KY272851 – KY272855 (01/12/2016), KY865444 – KY865575 (04/04/2017), MG559809-MG560043 (22/11/2017).
* 14-18 October 2013. PhD course – Current trends in Phylogenetics. Biosystematics Group, Wageningen University, The Nerthelands.
* 2012-2014: POL-AEGIS Annual Meetings & Workshops, University of the Aegean, Mytilene, Greece.
* Attended an academic year of: (a) Financial course: «Introduction to Economics and Business Planning», with a final project: Generation of a company for recycling aluminium» and (b) Didactic course in Life Sciences teaching. Department of Biochemistry and Biotechnology, University of Thessaly, Greece (10/10, 2008 – 2009).
* Volunteer Experience: Participation as an actress for the TV commercial for the Victims of Violence of the Municipality of Lesvos (‘BREAK THE SILENCE’, March 2015. https://vimeo.com/121490198