

CARMEN ANDRIKOU PhD, RN

PERSONAL INFORMATION

Nationality: Greek/ British
Date of Birth: 27 /01/1982
Family status: married, one child
Title: Assistant Professor
Languages: Greek, English, German, Italian
Address: Patras, Greece
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ACADEMIC EDUCATION

Dec 2009-Dec 2013 **PhD in molecular biology**

PhD title awarded the 13-02-2013 by the Open University of London. Host Institution: Stazione Zoologica Anton Dohrn, Department of Cellular and Developmental Biology, Naples, Italy. Internal supervisor: Dr. Maria Ina Arnone. External supervisor: Professor Dr. Ulrich Technau, University of Vienna, Austria. Thesis title: “*Evolution of mesoderm specification and myogenesis in the sea urchin*”.

Jan 2005-Nov 2009 **Bachelor degree of Science**

University of Patras, Greece. Department of Biology. Internal supervisor: Professor Dr. Constantin N. Flytzanis, Department of Molecular Biology, University of Patras, Greece. External supervisor: Professor Dr. Pedro Martinez, Department of Genetics, University of Barcelona, Spain. Thesis title: “*Study of the expression patterning and regeneration ability in S. roscoffensis*”.

Sep 2001-Dec 2005 **Bachelor degree or Nursery**

Technological University of Patras, Greece. Department of Nursery.
Supervisor: Professor Dr. Maria Papadimitriou, Department of Nursery, University of Patras, Greece. Thesis title: “*Schizophrenia and violence*”.

WORK EXPERIENCE

February 2026 – present **Assistant Professor in Developmental Biology**
Department of Biology, University of Patras, Greece.

September 2024 - December 2025 **High school teacher in Biology**

January 2024 - July 2024 **Senior Lecturer in Developmental Biology**

Department of Biology, University of Patras, Greece.

September 2021-December 2023 **maternity leave**

Mar 2019-September 2022 **Researcher**

Department of Comparative Developmental Biology, University of Bergen, Norway. Group Leader: Professor Dr. Andreas Hejnol, University of Bergen, Norway.

Sep 2019 & Oct 2020 **Research internship**

Host Laboratory: Dr. Arnau Sebè-Pedrós, Center for Genomic regulation (CRG), Barcelona, Spain.

Apr 2018 **Research internship**

Host Laboratory: Professor Dr. Christopher Lowe, Hopkins (Stanford) marine station, California, USA.

Apr 2014-Dec 2018 **Postdoctoral researcher**

Sars International Centre for Marine Molecular Biology, University of Bergen, Norway. Advisor: Professor Dr. Andreas Hejnol, University of Bergen, Norway.

Jan 2013-Mar 2014 **Postdoctoral researcher**

Stazione Zoologica ‘Anton Dohrn’, Naples, Italy. Advisor: Dr. Maria Ina Arnone, Department of Cellular and Developmental Biology.

Apr 2013-Jul 2013 **Research internship**

Host Laboratory: Professor Dr. Ulrich Technau, University of Vienna, Austria.

Nov 2009-Dec 2012 **PhD internship**

International Open University PhD program. Stazione Zoologica ‘Anton Dohrn’, Naples, Italy. Supervisor: Dr. Maria Ina Arnone, Department of Cellular and Developmental Biology. Thesis title: “*Evolution of mesoderm specification and myogenesis in the sea urchin*”.

Jan 2009-Jun 2009 **Research internship (Erasmus program)**

Host Laboratory: Professor Dr. Pedro Martinez, University of Barcelona, Spain. Thesis title: “*Study of the expression patterning and regeneration ability in S. roscoffensis*”.

May 2008-Dec 2008 **Research internship**

Host Laboratory: Professor Dr. Constantin N. Flytzanis, University of Patras, Greece.

May 2004-Nov 2004 **Registered nurse**

Employed at the ‘Ippokration’ University Hospital of Thessaloniki, Greece. Departments of ICU, Transplantations and Cardiology. Employed at the Rio University Hospital of Patras, Greece. Departments of Emergency Room and Pathology.

COURSES

- 2019 Elixir-Carpentries (R programming course) in University of Bergen, Norway
- 2017 ‘Comparative anatomy of invertebrates’ workshop in Department of Invertebrate Zoology, Moscow State University
- 2016 EMBO course in ‘Single Cell Gene Expression Analysis’ in EMBL, Heidelberg, Germany
- 2013 CeMEB Advanced Course in ‘Marine Genomics’ in University of Gothenburg, Tjärno marine station, Sweden
- 2012 MBL course in ‘Gene Regulatory Networks ‘ in MBL, Woodshole (MA), USA
- 2012 EMBO course in ‘Evolutionary Biology and Phylogenetics’ in Stazione Zoologica Anton Dohrn di Napoli, Italy
- 2010 EMBO course in ‘Molecular approaches to evolution and Development’ in Sven Lowen marine station, Kristineberg, Sweden
- 2010 EMBO course in ‘Browsing genomes with Ensembl’ in Stazione Zoologica Anton Dohrn di Napoli, Italy
- 2010 EMBO course in ‘Genomic Approaches to Evolution and Development’ in EMBL, Heidelberg, Germany

SERVICE TO THE SCIENTIFIC COMMUNITY

- Participation to scientific events promoting Science communication to the general public in Bergen, Norway.
- Member of PhD and Postdoc hiring committees and scientific evaluation in Stazione Zoologica “Anton Dorhn” di Napoli, Italy and University of Bergen, Norway.
- Member of the scientific organizations EUROEVODEVO society and International Society for Invertebrate Morphology (ISIM) society
- Reviewer in several journals (PLOS One, EvoDevo, Developmental Biology, Development, Frontiers Cell και Developmental Biology, JOVE, MBE etc)
- Organiser of symposiums for the international EuroEvoDevo meetings 2022, 2026.

Teaching:

- 2026- present Assistant Professor in Developmental Biology module of the Department of Biology, University of Patras, Greece
- 2024 Senior Lecturer in “Developmental Biology” module of the Department of Biology, University of Patras, Greece
- Jun 2019 Instructor in the third summer course in ‘Embryology of marine invertebrates’ at the White Sea Biological station of Moscow State University, Russia
- Jun 2016 Instructor in the second summer course in ‘Embryology of marine invertebrates’ at the White Sea Biological station of Moscow State University, Russia

- 2016-2017 Lecturer in “Zoology” module of the Department of Biology, University of Bergen, Norway
- Jul 2013 Teaching assistant in EMBO course in ‘Marine animal models in evolution and development’ at the Sven Lovén Centre for Marine Sciences, Kristineberg, Sweden
- Jul 2011 Teaching assistant in EMBO course in ‘Marine animal models in evolution and development’ at the Sven Lovén Centre for Marine Sciences, Kristineberg, Sweden

Awards/grants:

- 2022 Scientific meeting grant (EuroEvoDevo), Company of Biologists
- 2020 ASSEMBLE plus fellowship, Sven Lovén Centre for Marine Infrastructure Sweden
- 2019 ASSEMBLE plus fellowship, Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung Biologische Anstalt Helgoland (BAH), Germany
- 2018 ASSEMBLE plus fellowship, Sven Lovén Centre for Marine Infrastructure, Sweden
- 2016 ASSEMBLE plus fellowship, Sven Lovén Centre for Marine Infrastructure, Sweden
- 2015 -2021 Marie Curie fellowship within EVOMESODERM ERC Grant (Hejnoj)
- 2014 ASSEMBLE fellowship, Laboratoire ARAGO, Banyuls sur Mer, France
- 2014 ASSEMBLE fellowship, Estación Costera de Investigaciones Marinas, Las Cruces, Chile
- 2013 MODO Italian national fellowship
- 2013 EMBO short-term fellowship
- Oct 2012 MBL Scholarship for ‘Gene Regulatory Networks’ course tuition
- 2009- 2012 ESR Marie Curie fellowship within EVONET Initial Training Network (ITN)
- Jan-Jun 2009 Erasmus Student fellowship

Field experience

- 2024 sea urchin collection, West Achaia, Greece
- 2019 phoronid collection, Helgoland marine station, Germany
- 2019 nemertodermatid and brachiopod collection, Espegrend marine station, Bergen, Norway
- 2018 phoronid collection, Hopkins (Stanford) marine station, Monterey, California, USA
- 2018 priapulid collection, Sven Lowen marine station, Kristineberg, Sweden
- 2017 nemertodermatid and brachiopod collection, Espegrend marine station, Bergen, Norway
- 2017 priapulid collection, Sven Lowen marine station, Kristineberg, Sweden
- 2016 brachiopod collection, Friday Harbor marine station, USA
- 2016 priapulid collection, Sven Lowen marine station, Kristineberg, Sweden
- 2015 brachiopod collection, Friday Harbor marine station, USA
- 2015 priapulid collection, Sven Lowen marine station, Kristineberg, Sweden
- 2014 nemertean collection, Laboratoire ARAGO, Banyuls sur Mer, France
- 2014 sea urchin collection, Estación Costera de Investigaciones Marinas, Las Cruces, Chile

Publications:

Publications in ISI journals:

Andrikou C., Pang K., Børve A., Lu T.M. and A. Hejnl. *Molecular evidence from xenacoelomorph gonopore formation supports homology with the bilaterian anus.* **Nature Ecology and Evolution** 2025, doi: 10.1038/s41559-025-02866-6

Schwaiger M.*, Andrikou C.*, Dnyansagar R., Ferrer Murguia P., Paganos P., Voronov D., Zimmermann B., Lebedeva T., Schmidt H., Genikhovich G., Benvenuto G., Arnone I.M. and U. Technau. *An ancestral Wnt-Brachyury feedback loop in axial patterning and recruitment of mesoderm-determining target genes.* **Nature Ecology and Evolution** 2022, doi: 10.1038/s41559-022-01905-w.

*Equal first authorship

Gąsiorowski L., Andrikou C., Janssen, R., Gonzalez, P., Budd, G., Lowe C., and A. Hejnl. *Molecular evidence for a single origin of ultrafiltration-based excretory organs.* **Current Biology** 2021, doi: 10.1016/j.cub.2021.05.057

Andrikou C. and A. Hejnl. *FGF signaling acts on different levels of mesoderm development within Spiralia.* **Development** 2021, doi: 10.1242/dev.196089.

Andrikou C., Lowe C., Passamaneck Y., Martindale M. and A. Hejnl. *Molecular patterning during the development of *Phoronopsis harmeri* reveals similarities to rhynchonelliform brachiopods* **EvoDevo** 2019, doi: 10.1186/s13227-019-0146-1.

Annunziata R., Andrikou C., Perillo M., Cuomo C. and M.I. Arnone. *Development and evolution of gut structures: from molecules to function.* **Cell and Tissue Research** 2019, doi: 10.1007/s00441-019-03093-9.

Andrikou C., Thiel D., Ruiz-Santesteban J.A. and A. Hejnl. *Active mode of excretion across digestive tissues predates the origin of excretory organs.* **PLoS Biology** 2019, 17(7): e3000408. doi: 10.1371/journal.pbio.3000408

Arnone M.I., Andrikou C. and R. Annunziata. *Echinoderm systems for gene regulatory studies in evolution and development.* **COGEDE** 2016, 39:129–137. doi: 10.1016/j.gde.2016.05.027.

Andrikou C., Pai C.Y., Su Y.H. and M.I. Arnone. *Logics and properties of a genetic regulatory program that drives embryonic muscle development in an echinoderm.* **Elife** 2015, 4:e07343. doi: 10.7554/eLife.07343

Andrikou C. and M.I. Arnone. *Too many ways to make a muscle; evolution of GRNs driving myogenesis.* **Zoologischer Anzeiger** 2015, 256:2–13. <https://doi.org/10.1016/j.jcz.2015.03.005>

Annunziata R., Perillo M., Andrikou C., Cole G.A., Martinez P. and M.I. Arnone. *Pattern and Process During Sea Urchin Gut Morphogenesis: The Regulatory Landscape.* **Genesis** 2013, 52(3): 251-68. doi: 10.1002/dvg.22738

Andrikou C., Iovene E., Rizzo F., Oliveri P. and M.I. Arnone. *Myogenesis in the sea urchin embryo: the molecular fingerprint of the myoblast precursors.* **EvoDevo** 2013, 4:33. doi: 10.1186/2041-9139-4-33

ISI publications in preparation:

Andrikou C., Voronov D., Paganos P., and M.I. Arnone. *Multi-omics approach provides information on the evolution of muscle GRNs.*

Andrikou C., Orús Alcade A., Sebé Pedrós A., and A. Hejnol. *Single cell transcriptomics on ecdysozoan hemolymph cells and implications on blood cell type homology.*

Marlétaz F., Vellutini B.C., Andrikou C., Wijesena N., Aase-Remedios M.E., Sarre L., Yamakawa S., Parey E., Piovani L., Gavriouchkina D., Matar O., Schiffer P.H., Copley R.R., Ferrier D., Budd G.E., Janssen R., de Mendoza A., Martin-Duran J.M., Rokhsar D.S., Hejnol A., and M. J. Telford. *Priapulid genomes unveil recurrent events of simplification and duplication in ecdysozoans.*

Other publications:

Andrikou C., Thiel D., Ruiz-Santesteban J.A. and A. Hejnol. Meeting Abstract. *Tracing the origin of nephridia by characterising excretion related gene complement in Xenacoelomorpha.* **Integrative and Comparative Biology** 2016, 56:E7.

Andrikou C. PhD thesis. *Evolution of mesoderm specification and myogenesis in the sea urchin.* Supervisor: Dr. Maria Ina Arnone. **The Open University of London.** February, 2013. <https://doi.org/10.21954/ou.ro.0000fa96>

Book chapters:

Andrikou C., Gasiorowski L. and A. Hejnol ” Cell types, morphology and evolution of animal excretory organs: *Origin and Evolution of Metazoan Cell Types (Evolutionary Cell Biology)*”. **CRC press.** 2021. ISBN 9781138032699

Book chapters in preparation:

Andrikou C., and Annunziata R. "Evolution of gut development: *Evolution of digestive systems: cell types and cross-talks, development and regeneration*". **CRC press**.

Oral presentations:

Friedrich Schiller University Jena, Germany "Evolution of blood cell types" (invited speaker). July, 2024.

EMBO Symposium: The Identity and Evolution of Cell Types "*Molecular and functional characterization of blood cells in the priapulid Priapulid caudatus (ecdysozoa)*". Carmen Andrikou, Andrea Orús, Arnau Sebé Pedrós, Felipe Aguilera and Andreas Hejnl. EMBL, Heidelberg, Germany. May, 2019.

Joint Meeting of the German and Israeli Societies of Developmental Biology (GFE): "*The role of Brachyury in mesoderm determination in metazoans*". Michaela Schwaiger, Rohit Dnyansagar, Bob Zimmermann, Grigory Genikhovich, Patricio Ferrer, Carmen Andrikou, Anton Weingart, Elijah K. Lowe, Maria Ina Arnone and Ulrich Technau. Vienna, Austria. February, 2019.

Ocean University of China, Qingdao "Evolution of blood cell types" (invited speaker). October, 2018.

4th International Congress on Invertebrate Morphology "*Molecular characterization of protonephridia development in priapulids and evolutionary implications*". Carmen Andrikou, Felipe Aguilera and Andreas Hejnl. Moscow, Russia. August, 2017.

EuroEvoDevo "*Xenacoelomorpha and the origin of excretory organs*". Carmen Andrikou, Daniel Thiel, Juan-Antonio Ruiz-Santesteban and Andreas Hejnl. Uppsala, Sweden. July, 2016.

EuroEvoDevo "*Evolutionary comparison of gene regulatory networks for organogenesis*". Maria Ina Arnone, Carmen Andrikou, Rossella Annunziata, Claudia Cuomo, Elijah Lowe, Margherita Perillo. Uppsala, Sweden. July, 2016.

SICB "*Tracing the origin of nephridia by characterizing excretion related gene complement in Xenacoelomorpha*". Carmen Andrikou, Juan-Antonio Ruiz-Santesteban and Andreas Hejnl. Portland, USA. January, 2016.

Developmental Biology of the Sea urchin XXIII “*Rewiring gene regulatory networks for organogenesis over evolutionary time*”. Maria Ina Arnone, Carmen Andrikou and Rossella Annunziata. MBL Woodshole, (MA, USA). October 2015.

Stazione Zoologica Anton Dohrn di Napoli “*Evolution of Brachyury role in metazoan development*” (invited speaker). November, 2014.

3rd International Congress on Invertebrate Morphology “*A Gene Regulatory Network driving muscle development: insights from sea urchins*”. Berlin, Germany. Symposium “Development and Morphology of Mesodermal Derivatives” (invited speaker). August, 2014.

Developmental Biology of the Sea urchin XXII “*A Gene Regulatory Network driving sea urchin embryonic muscle development: a Fox family tale*”. MBL Woodshole (MA, USA). Plenary Session V. “Specification” (invited speaker). April, 2014.

Sars International Centre for Marine Molecular Biology “*Similar structure...different architecture: lessons from sea urchins*”. Bergen, Norway (invited speaker). November, 2013.

MODO MidTerm Review meeting “*Gene Regulatory networks in development*”. Carmen Andrikou, Rossella Annunziata and Maria Ina Arnone. Naples, Italy. June, 2013.

Developmental Biology of the Sea urchin XXI “*Evolution of a gene regulatory network that orchestrates myogenesis in sea urchin*”. Carmen Andrikou and Maria Ina Arnone. Woodshole (MA), USA. October, 2012.

Evonet symposium 'Evolution of GRN in animal development' “*Evolution of Gene Networks orchestrating myogenesis: the case of sea urchin*”. Carmen Andrikou and Maria Ina Arnone. Vienna, Austria. September, 2012.

32nd Hellenic Conference of Nursery “*Schizophrenia and violence*”. Carmen Andrikou, Maria Antoniadou and Maria Papadimitriou. Thessaloniki, Greece. May, 2004.

Poster presentations:

EuroEvoDevo “*Homology of the xenacoelomorph male gonopore and the bilaterian anus*”. Carmen Andrikou, Pang Kevin, Børve Aina, Lu Tsai-Ming and Andreas Hejzol. Naples, Italy. May 2022.

EuroEvoDevo “*The role of FGF signaling in early mesoderm specification predates deuterostomes*”. Carmen Andrikou and Andreas Hejzol. Galway, Ireland. July 2018.

EuroEvoDevo “*Comparative tissue-specific transcriptomics of priapulids allows the characterization of blood and nephridia cell types and provides insights into their evolution*”. Felipe Aguilera, Carmen Andrikou and Andreas Hejnol. Uppsala, Sweden. July, 2016.

EuroEvoDevo “*Evolution of Brachyury role in animal development*”. Carmen Andrikou, Michaela Schwaiger, Anna Gilles, Josefine Stångberg, Maria Ina Arnone and Ulrich Technau. Vienna, Austria. July, 2014.

7th tunicate meeting “*A gene regulatory network driving myogenesis in the sea urchin embryo: an evolutionary perspective*”. Carmen Andrikou and Maria Ina Arnone. Naples, Italy. July, 2013

Evonet symposium 'Evolution of GRN in animal development'. “*Evolution of Brachyury: towards a ChIP-seq approach in sea urchin*”. Stangberg Josefine, Andrikou Carmen and Maria Ina Arnone. Vienna, Austria. September, 2012.

Developmental Biology of the Sea urchin XX “*Conservation and divergence of key mesodermal regulators in the *S. purpuratus* embryo*”. Carmen Andrikou and Maria Ina Arnone. Woodshole (MA), USA. April, 2011.
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