

## Alice Accorsi, Ph.D. (she/her)

**Research Interest** *I am a cellular and developmental biologist interested in embryogenesis and regeneration. My overarching goal is to obtain a mechanistic understanding of adult regeneration and tissue plasticity. To achieve this, I established a new research organism, the snail *Pomacea canaliculata*, to define cellular and molecular events orchestrating the regeneration of visual systems and to explore the redeployment of developmental programs during adult regeneration.*

### EDUCATION

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26 March 2015 **Ph.D. in Cell Biology and Evolution**, *University of Modena and Reggio Emilia (Italy)*  
Advisor: Prof. Enzo Ottaviani

20 July 2011 **Master's degree in Biology (110/110 cum laude)**, *University of Modena and Reggio Emilia (Italy)*

21 July 2009 **Bachelor's degree in Biological Sciences (110/110 cum laude)**, *University of Modena and Reggio Emilia (Italy)*

### RESEARCH EXPERIENCE

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2015-present **Postdoctoral Scientist / Senior Research Associate**, *Stowers Institute for Medical Research (Kansas City, MO) / HHMI - Howard Hughes Medical Institute*  
Advisor: Dr. Alejandro Sánchez Alvarado  
Project: Setting the foundations and developing tools for studying the regeneration of camera-type eyes in the emerging research organism, *Pomacea canaliculata*

2012-2015 **Graduate student in Cell Biology and Evolution**, *University of Modena and Reggio Emilia (Italy)*  
Advisor: Prof. Enzo Ottaviani [deceased, 2017]  
Project: Comparative analysis of invertebrate immune-neuroendocrine systems

Spring 2014 **Visiting graduate student**, *Stowers Institute for Medical Research (Kansas City, MO)*  
Advisor: Dr. Alejandro Sánchez Alvarado  
Project: Exploring immune-related molecules involved in the regeneration of the planarian *Schmidtea mediterranea* and the gastropod *Pomacea canaliculata*

Spring 2012 **Visiting graduate student**, *University of Lille (France)*  
Advisor: Prof. Michel Salzet and Dr. Jacopo Vizioli  
Project: Characterization of neuroinflammatory markers in the medicinal leech

2009-2011 **Master's degree in Biology**, *University of Modena and Reggio Emilia (Italy)*  
Advisor: Prof. Davide Malagoli  
Project: *In vitro* effects of a recombinant helical cytokine on cultured hemocytes of *Drosophila melanogaster*

Spring 2011 **Erasmus Placement Program**, *University of Lille (France)*  
Advisor: Prof. Michel Salzet and Dr. Jacopo Vizioli  
Project: Characterization of neuroinflammatory markers in the medicinal leech

2008-2009 **Bachelor's degree in Biological Sciences**, *University of Modena and Reggio Emilia (Italy)*  
Advisor: Dr. Paolo Facci  
Project: Monitoring antigen-antibody bonds using a quartz crystal microbalance

### RELEVANT PROFESSIONAL TRAINING

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2022 **New Faculty Search Workshop**, Stowers Institute for Medical Research

2022 **Strengths-based Leadership Workshop and CliftonStrengths assessment**, Stowers Institute

2021 **Mental Health First Aid training**, Bert Nash Community Mental Health Center

2013 **MBL Course - Embryology and Developmental biology**, Marine Biological Laboratory

2012 **Volker Schmid Training Course - Developmental biology of marine metazoans**, Roscoff Biological Station

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**FELLOWSHIPS AND CAREER DEVELOPMENT AWARDS**


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2023	University of Utah Rising Stars in Genetics and Genomics Symposium, University of Utah
2022	UIUC Cell and Developmental Biology Early Career Inclusive Excellence Seminar Series, UIUC
2021	Leading Edge 2021 Fellow, HHMI/Janelia Research Campus and TARA Health Foundation
2017	AAA Postdoctoral Fellowship, American Association of Anatomists
2016	SDB Emerging Models Grant, Society of Developmental Biology
2014	Development Travelling Fellowship, Company of Biologists' Journals
2014	EMBO Short Term Fellowship, European Molecular Biology Organization
2013	Fellowship 'A. Monroy', Alberto Monroy's Association
2013	MBL Fellowship, Marine Biological Laboratory
2012	Ph.D. student Fellowship, Italian Government
2011	Erasmus Placement Fellowship, Italian Government

**AWARDS AND HONORS**


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2022	ASCB Travel Grant for LGBTQ+ Community Members, American Society for Cell Biology
2022	The Jim and Virginia Stowers Award for Outstanding Podium Presentation, Stowers Institute Postdoctoral Retreat
2019	Runner-Up Best Oral Presentation, Stowers Institute - Young Investigator Science Retreat
2018	Best Image, Stowers Institute Image, Data Visualization, and Video Competition
2018	Best oral presentation - 'Enzo Ottaviani' Award, Italian Association of Developmental and Comparative Immunobiology Meeting
2015	Travel Award, Italian Association of Developmental and Comparative Immunobiology
2014	Travel Award, International Annual Biomedical and Comparative Immunology Symposium
2013	Best Poster Presentation, National Meeting of the Italian Zoological Society
2013	Best Oral Presentation, National Meeting of the Italian Zoological Society
2013	Best Oral Presentation, Italian Association of Developmental and Comparative Immunobiology
2013	Best Graduate Student - 'Francesco Reggiani' Award, Abitcoop co-operative business
2013	Best Master Student 2010/2011, University of Modena and Reggio Emilia
2012	Travel Award, International Society of Developmental and Comparative Immunology
2011	Best Bachelor Student 2008/2009, University of Modena and Reggio Emilia

**PUBLICATIONS** († denotes equal contribution) [Google Scholar Profile](#)


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- **Accorsi A**<sup>†</sup>, Box AC<sup>†</sup>, Peuß R<sup>†</sup>, Wood C, Sánchez Alvarado A, Rohner N. Image3C: a multimodal image-based and label-independent integrative method for single-cell analysis. *Elife* 10: e65372 (2021)
- Sun J, Mu H, Ip JCH, Li R, Xu T, **Accorsi A**, et al. Signatures of divergence, invasiveness, and terrestrialization revealed by four apple snail genomes. *Mol Biol Evol* 36: 1507-20 (2019)
- Guo L<sup>†</sup>, **Accorsi A**<sup>†</sup>, He S, Guerrero-Hernández C, Sivagnanam S, McKinney S, Gibson M, Sánchez Alvarado A. An adaptable chromosome preparation methodology for use in invertebrate research organisms. *BMC Biol* 16: 25 (2018)
- Boraldi F, Lofaro FD, **Accorsi A**, Ross E, Malagoli D. Toward the molecular deciphering of *Pomacea canaliculata* immunity: first proteomic analysis of circulating hemocytes. *Proteomics* 19: 1800314 (2018)
- **Accorsi A**, Williams M, Ross E, Robb S, Elliott S, Tu K, Sánchez Alvarado A. Hands-on classroom activities for exploring regeneration and stem cell biology with planarians. *American Biology Teacher* 79: 208-23 (2017)
- **Accorsi A**, Benatti S, Ross E, Nasi M, Malagoli D. A prokineticin-like protein responds to immune challenges in the gastropod pest *Pomacea canaliculata*. *Dev Comp Immunol* 72: 37-43 (2017)
- Smith V, **Accorsi A**, Malagoli D. Hematopoiesis and hemocytes in pancrustacean and molluscan models. In: Malagoli D (ed.), *The evolution of the immune system*. Academic Press 2016: 1-28 (2016) – Book Chapter –
- **Accorsi A**, Zibae A, Malagoli D. The multifaceted activity of insect caspases. *J Insect Physiol* 76: 17-23 (2015) – Review –

- Tascetta F, Malagoli D, **Accorsi A**, Rigillo G, Blom JM, Ottaviani E. Molluscs as models for translational medicine. *Med Sci Monit Basic Res* 21: 96-9 (2015) – Review –
- Quaglino D, **Accorsi A**, Boraldi F, Ottaviani E. Thymic maturation and programmed cell death. In: Malagoli D, Ottaviani E (eds.), *Eco-immunology*. Springer Science 2014: 105-24 (2014) – Book Chapter –
- Drago F, Sautière PE, Le Marrec-Croq F, **Accorsi A**, Van Camp C, Salzet M, Lefebvre C, Vizioli J. Microglia of medicinal leech (*Hirudo medicinalis*) express a specific activation marker homologous to vertebrate ionized calcium-binding adapter molecule 1 (Iba1/alias aif-1). *Dev Neurobiol* 74: 987-1001 (2014)
- **Accorsi A**, Ottaviani E, Malagoli D. Effects of repeated hemolymph withdrawals on the hemocyte populations and hematopoiesis in *Pomacea canaliculata*. *Fish Shellfish Immunol* 38: 56-64 (2014)
- Ottaviani E, **Accorsi A**, Rigillo G, Malagoli D, Blom JM, Tascetta F. Epigenetic modification in neurons of the mollusc *Pomacea canaliculata* after immune challenge. *Brain Res* 1537: 18-26 (2013)
- **Accorsi A**, Bucci L, de Eguileor M, Ottaviani E, Malagoli D. Comparative analysis of circulating hemocytes of the freshwater snail *Pomacea canaliculata*. *Fish Shellfish Immunol* 34: 1260-8 (2013)
- Malagoli D, **Accorsi A**, Sacchi S, Basile V, Mandrioli M, Pinti M, Conklin D, Ottaviani E. *Drosophila* helical factor is an inducible protein acting as an immune-regulated cytokine in S2 cells. *Cytokine* 58: 280-6 (2012)
- Malagoli D, **Accorsi A**, Ottaviani E. The evolution of pro-opiomelanocortin: Looking for the invertebrate fingerprints. *Peptides* 32: 2137-40 (2011) – Review –

## ACADEMIC AND PROFESSIONAL SERVICES

- 2016-present **Ad-hoc Reviewer**, The International Journal of Developmental Biology, Developmental Biology, Physiology and Behavior, Tissue and Cell, Molluscan Research, Developmental and Comparative Immunology, Fish and Shellfish Immunology, Results in Immunology, Molecular Immunology, Invertebrate Survival Journal and HHMI BioInteractive
- 2023-present **Associate member of the LGBTQ+ Committee** of the American Society for Cell Biology (ASCB)
- 2022 **Co-organizer**, 1<sup>st</sup> Annual Postdoctoral Retreat, Stowers Institute for Medical Research
- 2022 **Co-chair**, 2022 Leading Edge Symposium “Evolutionary Biology Session”
- 2019-2022 **Judge**, abstracts and posters, Stowers Institute Scientific Retreat
- 2021 **Moderator**, SDB Ethel Browne Harvey Postdoctoral Seminar Series
- 2020 **Guest organizer**, Spiraliabase Virtual Lab Meeting “SEM and TEM Imaging”  
[Spiraliabase](#) is a world-wide community of scientists working on Spiralia
- 2018-2019 **Assistant Editor**, peer-reviewed and ISI-ranked journal [ISJ-Invertebrate Survival Journal](#)
- 2017-2018 **Responsible of the Editorial Office**, peer-reviewed and ISI-ranked journal [ISJ-Invertebrate Survival Journal](#)
- 2012-2018 **Co-organizer**, 7 editions of ‘Course on laser confocal microscopy’ and ‘Course on transmission electron microscopy’, Italian Society of Microscopic Sciences

## MENTORING EXPERIENCE

- 2023 **Disabled In STEM Mentorship Program**, mentor for one year to a cohort of mentees
- 2022-present **Leading Edge Network**, peer mentorship for job applications, seminar and chalk talk preparation, transition from postdoc to PI position
- 2021-present **Brenda Pardo Loredo**, undergraduate researcher (1 year program) and postbac
- 2021-present **Carlos Barradas Chacon**, rotation student and graduate student
- 2018-2019 **Giulia Bergamini**, master’s student, summer scholar (Stowers Summer Scholars Program) and visiting scientist
- 2017-2019 **Alice Montanari**, undergraduate student, master’s student and visiting student (MoreOverSea Program)
- 2017 **Wei-Ting Yueh**, rotation student
- 2015-2017 **Robel Papotti**, master’s student
- 2015 **Veronica Pellesi**, undergraduate student
- 2015 **Federica Benatti**, undergraduate student

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- 2014 **Jessica Giacomoni**, undergraduate student
  - 2014 **Giovanni Pollastri**, undergraduate student
  - 2012 **Alessio Bellelli**, undergraduate student

## TEACHING EXPERIENCE

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- 2021-2022 **Teaching Assistant**, Evolutionary Biology of Lophotrochozoa Lab, Graduate School at Stowers Institute for Medical Research (GSSIMR) – 2 cohort -
- 2018-2021 **Lecturer**, Evolution and Model System, Graduate School at Stowers Institute for Medical Research (GSSIMR) - 3 cohorts -
  - 2020 **Invited Lecturer**, Developmental Biology Course for Undergraduate students, Amherst College
- 2016-2019 **Invited Lecturer**, Course on laser confocal microscopy, Italian Society of Microscopic Sciences - 4 editions -
- 2016-2018 **Teaching Assistant**, Planarian module, Embryology and developmental biology MBL Course, Marine Biological Laboratories - 3 cohorts -
  - 2018 **Invited Lecturer**, Comparative Immunobiology Course for Master’s students, University of Modena and Reggio Emilia
- 2013-2015 **Invited Lecturer**, Development Biology and Comparative Anatomy Course for Undergraduate students, University of Modena and Reggio Emilia - 3 cohorts -
- 2012-2014 **Teaching Assistant**, Cytology and Histology Course for Undergraduate students, University of Modena and Reggio Emilia - 3 cohorts -

## OUTREACH ACTIVITIES

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- 2022 **Science communicator**, Interview by [Meet Science](#)
- 2020-2021 **Mentor for high school student**, Deirdre Poague (Kenneth Lee’s class at the Center for Academic Achievement at Shawnee Mission School District, Kansas City, KS)
  - 2020 **Mentor for high school student**, Adara Ezekwe (Susie Helwig’s class at Staley High School, Kansas City, MO)
- 2019 **Visiting Lecturer**, Introduction to Biotechnology, Nicholas Adams’ class at Shawnee Mission West High School (Kansas City, KS)
- 2017 **Science communicator**, scientific support and participation in the production of the [HHMI BioInteractive Video](#) ‘Identifying the key genes for regeneration’ using planarian
- 2017 **Science communicator**, key role in the creation of the [CuttingClass website](#) ‘Planarian Educational Resource: where cutting class is required’ to guide teachers in using planarian for hands-on activities in the classrooms

## PROFESSIONAL MEMBERSHIP

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- 2022-present American Society for Cell Biology (ASCB)
- 2021-present International Society for Regenerative Biology (ISRB)
- 2013-present Society of Developmental Biology (SDB)
- 2019-present Unitas Malacologica

## MEETINGS

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### Invited Talks

- 2023 Translational Research Seminar Series at Stowers Institute for Medical Research (Kansas City, MO)
- 2023 Postdoc Success Stories at Stowers Institute for Medical Research (Kansas City, MO)
- 2023 Seminar at Harvard Medical School, Department of Genetics (Boston, MA)
- 2023 Seminar at UC Davis, Department of Molecular and Cellular Biology (Davis, CA)
- 2023 Seminar at the University of Iowa, Department of Biology (Iowa City, IA)
- 2023 Department of Biology at the University of Saskatchewan (Canada)
- 2022 UIUC Cell and Developmental Biology Early Career Inclusive Excellence Seminar Series (Champaign, IL)
- 2021 Stowers Research Conferences: Evolutionary Developmental Biology III (Virtual)

- 2021 Arcadia: Science Fridays! Seminar Series (Virtual)  
 2019 Spiralian White Paper Meeting (St. Augustine, FL)  
 2019 World Congress of Malacology (Pacific Grove, CA)  
 2018 American Association of Anatomists Annual Meeting at Experimental Biology (San Diego, CA)  
 2018 Kansas City American Association for Laboratory Animal Science meeting (Kansas City, MO)

### Key Talks (Selected from abstracts)

- 2022 Symposium - ASCB|EMBO meeting (Washington, DC)  
 2022 Postdoctoral Retreat - Stowers Institute for Medical Research (Kansas City, MO)  
 2022 Ethel Browne Harvey Postdoctoral Seminar Series - SDB (Virtual)  
 2021 Leading Edge Symposium (Virtual)  
 2019 Young Investigator Science Retreat - Stowers Institute (Kansas City, MO)  
 2019 Poster Blitz - New Genetic Tools for Non-Model Organisms (Janelia Research Campus, VA)  
 2018 Italian Association of Developmental and Comparative Immunobiology Annual Meeting (Italy)  
 2017 Congress of the Italian Embryological Group (Italy)  
 2016 Young Investigator Science Retreat - Stowers Institute (Kansas City, MO)  
 2016 Satellite Symposium 'Evolution of regenerative abilities: recapitulation of development or novel mechanisms' - SDB (Boston, MA)  
 2015 Italian Association of Developmental and Comparative Immunobiology Annual Meeting (Italy)  
 2014 International Annual Biomedical and Comparative Immunology Symposium (Miami, FL)  
 2013 Meeting of the Italian Zoological Society (Italy)  
 2013 Italian Association of Developmental and Comparative Immunobiology Annual Meeting (Italy)  
 2012 Italian Association of Developmental and Comparative Immunobiology Annual Meeting (Italy)

### Key posters

- 2020 **Accorsi A**, Corbin T, Ross E, McClain M, Peak A, Li H, Delventhal K, Perera A, Sánchez Alvarado A. *Pomacea canaliculata*: a new research organism to study complex eye regeneration. *Annual International Meeting of Society for Developmental Biology (SDB)* (Virtual)  
 2019 **Accorsi A**, Ross E, Corbin T, Sánchez Alvarado A. *Pomacea canaliculata*: a new research organism to study complex eye regeneration. *New Genetic Tools for Non-Model Organisms* (Janelia Research Campus, VA)  
 2017 **Accorsi A**, Ross E, Sánchez Alvarado A. *Pomacea canaliculata*: a new model system for studying development and regeneration of complex eyes. *Stowers Institute - Young Investigator Science Retreat* (Kansas City, MO)  
 2016 **Accorsi A**, Ross E, Malagoli D, Sánchez Alvarado A. *Pomacea canaliculata*: development and regeneration of complex eyes. *Annual International Meeting of Society for Developmental Biology (SDB)* (Boston, MA)  
 2016 **Accorsi A**, Elliott S, Ross E, Tu K, Sánchez Alvarado A. Learning by doing: using planarians to teach stem cell biology and regeneration. *HHMI Science Meeting* (Chevy Chase, MD)  
 2016 **Accorsi A**, Elliott S, Ross E, Tu K, Sánchez Alvarado A. New and enjoyable tools to explain regeneration to undergraduate students. *Keystone Symposia: Molecular and Cellular Basis of Growth and Regeneration* (Breckenridge, CO)  
 2013 **Accorsi A**, Malagoli D, Bucci L, Ottaviani E. *Pomacea canaliculata* hemocytes: morphology, functions and plasticity. *Meeting of the Italian Zoological Society* (Italy)  
 2012 **Accorsi A**, Malagoli D, Bucci L, de Eguileor M, Ottaviani E. Time-course analysis of hemocyte populations in the freshwater snail *Pomacea canaliculata* (Gastropoda, Ampullariidae). *Meeting of the International Society of Developmental and Comparative Immunology* (Japan)