

# CURRICULUM VITAE

## PERSONAL INFORMATION

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First Name/Surname: **Carla Bertapelle**

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## EDUCATION AND TRAINING

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- May 2015      **PhD in Biology**, funded by the Italian Ministry of Education, University and Research. Department of Biology, University of Naples Federico II, Italy. Final thesis: "*Octopus vulgaris* brain as a model to study adult neurogenesis",
- February 2013      **professional qualification as Biologist**, University of Sannio, in Benevento, Italy.
- March 2011      Laurea Specialistica (**Master Degree**) in **Biology**. Faculty of Biology, University of Naples Federico II, Italy. Final thesis on "Development of an ultrasonic approach for the assessment of sexual maturity in *Octopus vulgaris*"  
Final mark: 110 out of 110 cum laude
- July 2008      Laurea (**Bachelor's Degree**) in **Biology**. Faculty of Biology, University of Naples "Federico II", Italy. Final thesis on "Distribution of GnRH in nervous system of *Sepia officinalis*"  
Final mark: 102 out of 110
- July 2003      Diploma in Liceo Scientifico "Salvatore Cantone" (Secondary School Focusing on Sciences), Pomigliano d'Arco, Naples, Italy.  
Final mark: 100 out of 100.

## WORK EXPERIENCES

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- Feb 2017 - present     **Post-doc fellowship - Department of Health Sciences, Univeristy of Molise, Campobasso, Italy.**  
**Instituto delle Bioscienze e delle BioRisorse, IBBR – CNR. Napoli, Italy.**  
Development of a *C. elegans* model for high throughput screening. She investigates the involvement of LDL-Related Proteins in Alzheimer's disease neurodegeneration using *C. elegans* as transgenic model.
- Mar 2015 – Aug 2016     **Post-doc fellowship - Department of Biology, University of Naples Federico II. Napoli, Italy.**  
Research on the mechanisms of axonal regrowth involved in learning and motor coordination in *Octopus vulgaris*, funded by Fondazione Compagnia di San Paolo. She developed primary nervous culture to study the signaling involved in axonal regrowth and neurons communications.
- Oct 2014 – Nov 2014     **Visiting researcher - CNMPB Research Group, Universität Georg August. Göttingen, Germany.**  
She developed an in situ hybridization protocol on *Xenopus laevis* olfactory system, and she developed abilities about imaging techniques using confocal and two-photon microscopy.
- Mar 2012 – Feb 2015     **Ph.D. student - Department of Biology, University of Naples Federico II. Napoli, Italy.**  
She developed primary neural cell cultures to identify factors that induce proliferation and mechanisms that promote axon regeneration, she investigated adult neurogenesis among *Octopus vulgaris* brain, using immunohistochemistry, genes expression and flow-cytometry.
- May 2010 – Feb 2011     **Master Student Internship - Stazione Zoologica “Anton Dohrn”. Napoli, Italy.**  
Activities: research about *Octopus vulgaris* housing and care, and ultrasonography as non invasive approach to evaluate reproductive stage.
- Jan 2010 – May 2010     **Master Student Internship - Department of Biology, University of Naples Federico II. Napoli, Italy.**  
Activities: research about the reproductive system of *Octopus vulgaris*: morphology, hormonal control and reproductive behavior.
- Mar 2008 – May 2008     **Student Internship - Department of Biology, University of Naples Federico II. Napoli, Italy.**  
Activities: research about hormonal control in nervous system of *Sepia officinalis*

## LANGUAGE

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Italian: mother tongue

English: good writing and communication skills

## **TECHNICAL SKILLS AND COMPETENCES**

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Good knowledge of molecular biology techniques, including cloning, PCR and Real Time PCR, in situ hybridization, nucleic acid extraction, retrotranscription.

Good knowledge of histological techniques, including microtome and cryostat cutting, histological staining, recognition of tissues and cell types.

Good knowledge of immunohistochemistry, immunocytochemistry and immunofluorescence techniques.

Good knowledge of biochemical techniques, such as protein extraction, western blotting, dot blot.

Good knowledge of optical, confocal and two-photon microscopy.

Good knowledge of cell cultures techniques, especially referring to nervous primary cell culture.

Good knowledge of microbiology techniques, including bacterial cultures, bacterial induction, bacterial growth curves, Kirby-Bauer assay.

Good knowledge of statistical analysis of biological data.

Good knowledge of flow-cytometry.

Good experience in design behavioral experiment and ethological studies, including statistical analysis.

Good knowledge of *C.elegans* common maintenance methods, genetic cross, phenotype analysis.

## **COMPUTER SKILLS AND COMPETENCES**

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Excellent ability to use Operating System (Windows, MS-DOS, Mac), excellent knowledge of Office packages (Word, Excel, PowerPoint, Outlook), Internet browsers, good ability to use biostatistic software (SigmaPlot, SYSTAT, GraphPad), imaging software (ImageJ) and microscopy software (Nis-Element Nikon).

## **ORGANIZATIONAL SKILLS AND COMPETENCES**

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Good capability to organize my work and the one of my collaborators in all practical laboratory activity, to work and cooperate with people from different fields, to manage my time, to organize and manage a research team.

Good capability to elaborate project, to design experiments and to validate methods and protocols independently.

I face with passion and enthusiasm new projects, pushed by a constant desire to improve myself, professionally and culturally, and to acquire new skills.

## **OTHER SCIENTIFIC ACTIVITIES**

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She attended the **Schmid Training Course at Station Biologique de Roscoff, in Roscoff (France), Université Pierre et Marie Curie (UPCM)**, about marine organisms as conventional and non-conventional model organisms, studying the Evo-Devo question, its functional approaches and tools for molecular and cellular analyses. May 2013.

She attended the **IN Cell Analyzer** course, “Introduction -IN Cell Analyzer 2200 Acquisition, Introduction -IN Cell Investigator Level 1 and Level 2”, **at Department of Biology, University of Naples Federico II, Italy**, May 2014.

She is a member of **Italian Zoological Union (UZI)**.



## PRESENTATIONS IN SCIENTIFIC MEETINGS

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### ABSTRACTS AND POSTERS

**Bertapelle C.**, Medoro A., Cocco F., Di Schiavi E. and Russo C. A *C.elegans* model to study LDL-Related Proteins involvement in Alzheimer's disease. 6<sup>th</sup> Meeting of Neapolitan Brain Group. Napoli, Italy. 14<sup>th</sup> December 2017.

**Bertapelle C.**, Cocco F., Di Schiavi E. and Russo C. A *C.elegans* model to study LDL-Related Proteins involvement in Alzheimer's disease. 21<sup>st</sup> International *C.elegans* Conference. Los Angeles, California (USA). 21<sup>st</sup>-25<sup>th</sup> June 2017.

**Bertapelle C.**, Polese G., Porcellini A. and Di Cosmo A. First attempt to measure adult neurogenesis in a lophotrochozoan (*Octopus vulgaris*) brain using flow-cytometry technique. 77<sup>o</sup> Congresso Nazionale dell'Unione Zoologica italiana. Milano (Italy). Aug 31<sup>th</sup> - Sept 3<sup>rd</sup> 2016.

**Bertapelle C.**, Polese G. and Di Cosmo A. *Octopus vulgaris* nervous system as a model to study adult neurogenesis. 76<sup>o</sup> Congresso Nazionale dell'Unione Zoologica italiana. Viterbo (Italy). Sept 15<sup>th</sup> – 18<sup>th</sup> 2015.

Campoli L., **Bertapelle C.**, Ardizio P., Polese G. and Di Cosmo A. First survey of meiofaunal communities in Porto Paone, Nisida. 75<sup>o</sup> Congresso Nazionale dell'Unione Zoologica italiana. Bari (Italy). Sept 22<sup>nd</sup> - 25<sup>th</sup> 2014.

**Bertapelle C.**, Troncone L., Polese G. e Di Cosmo A. Il sistema nervoso di *Octopus vulgaris* come modello di studio della neurogenesi adulta. 74<sup>o</sup> Congresso Nazionale dell'Unione Zoologica italiana. Modena (Italy). Sept 30<sup>th</sup> – Oct 3<sup>rd</sup> 2013.

Polese G., Troncone L., **Bertapelle C.** e Di Cosmo A. Controllo multi-peptidico dell'olfatto in *Octopus vulgaris*. 74<sup>o</sup> Congresso Nazionale dell'Unione Zoologica italiana. Modena (Italy). Sept 30<sup>th</sup> – Oct 3<sup>rd</sup> 2013.

**Bertapelle C.**, Troncone L., Moroz L.L., Polese G. and Di Cosmo A. Neuropeptides analysis of *Octopus vulgaris* Transcriptome: Oct-Pedal Peptide expression in CNS lobes involved in motor coordination. Cephalopod International Advisory Council (CIAC) 2012. Florianopolis, Santa Caterina; Brazil. Oct 27<sup>th</sup> - Nov 2<sup>nd</sup> 2012.

Polese G., Ulloa Severino F. P., Troncone L., **Bertapelle C.** and Di Cosmo A. Topology, morphology and function of olfactory organ in *Octopus vulgaris*. Molluscan Neuroscience in the Genomic Era: From Gastropods to Cephalopods. Jupiter, Florida (USA). May 15<sup>th</sup> - 19<sup>th</sup> 2012.

Troncone L., **Bertapelle C.**, Ulloa Severino F.P., Ciccarelli I., Ciccarelli N., Polese G. and Di Cosmo A. Research on Cephalopods: Past, Present and Future Perspectives. EuroCeph 2012. Vico Equense (Napoli), Italy. Apr 19<sup>th</sup> -23<sup>th</sup> 2012

## ORAL COMMUNICATIONS

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Setting up a *C.elegans* model to study LRP8 involvement in Alzheimer's disease. Symposium on Neurodegeneration and Protein Aggregation in *C.elegans*. Napoli (Italy), 18th-20th July 2017

*Octopus vulgaris* brain as a model to study adult neurogenesis. 6th YOUNMARES. Bremen (Germany). Sept 16th – 18th 2015.

Il sistema nervoso di *Octopus vulgaris* come modello di studio della neurogenesi adulta. 2° Convegno Intermedio Progetto MODO (Model Organism). Napoli (Italy). July 14th 2014.

Il sistema nervoso di *Octopus vulgaris* come modello di studio della neurogenesi adulta. 74° Congresso Nazionale dell'Unione Zoologica italiana. Modena (Italy). September 30th – Oct 3rd 2013.

Il sistema nervoso di *Octopus vulgaris* come modello di studio della neurogenesi adulta. 1° Convegno Intermedio Progetto MODO (Model Organism). Napoli (Italy). June 27th 2013.

## AWARDS

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Biologia a Monte S. Angelo 10 anni dopo. "Problem solving" and "play-like" in *Octopus vulgaris*: from behavior to genes. Dipartimento di Biologia Department of Biology, University of Naples Federico II, Italy. June 5th 2015.

UZI AWARD 2013. **Bertapelle C.**, Troncone L., Polese G. e Di Cosmo A. "Il sistema nervoso di *Octopus vulgaris* come modello di studio della neurogenesi adulta", included among best ten posters. 74° Congresso Nazionale dell'Unione Zoologica italiana. Modena (Italy). Sept 30th – Oct 3rd 2013.

## PUBBLICATIONS

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**Bertapelle C.**, Polese G. and Di Cosmo A. Enriched environment increases PCNA and PARP1 levels in *Octopus vulgaris* central nervous system, first evidence of adult neurogenesis in Lophotrochozoa. Journal of experimental Zoology B: Molecular and Developmental Evolution 00B:1–13. 2017

Polese G., **Bertapelle C.** and Di Cosmo A. Olfactory organ of *Octopus vulgaris*: morphology, plasticity, turnover and sensory characterization. Biology open 5(5):611-9. 2016.

Di Cosmo A., Polese G., **Bertapelle C.**, Palumbo A., Zullo L. Benessere ed animal care dell'animale da laboratorio. Le Point Veterinaire Italie. Milan. Cap. 5 Housing e management. Par. 5.6 Cefalopodi. 2015.

Polese G., **Bertapelle C.** and Di Cosmo A. Role of olfaction in *Octopus vulgaris* reproduction. General and Comparative Endocrinology. Vol 210, 2015, 55–62. 2014.

Troncone L., De Lisa E., **Bertapelle C.**, Porcellini A., Laccetti P., Polese G. and Di Cosmo A. Morphofunctional characterization and antibacterial activity of Haemocytes from *Octopus vulgaris*. Journal of Natural History. 1-20. 2014.

Carla Bertapelle  
Napoli, 19/03/2018

