

PERSONAL INFORMATION

Chiara Manfrin



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Research gate web site: https://www.researchgate.net/profile/Chiara_Manfrin/

Google scholar: <https://scholar.google.com/citations?user=4NP34xUAAAAJ&hl=it>

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Gender female | Birth 23 July 1982 | Nationality Italian

RESEARCH EXPERIENCES

October 2022- Present

Research fellow (RtdA, Italian rule) in zoology (BIO/05) at Department of Life Sciences, University of Trieste.

Fauna monitoring through eDNA technique, molecular species identification, Genetics population.

October 2021- March 2022

Fixed-term contract with UNITS for the project “MITigazione e monitoraggio dell’interazione tra pesca artigianale e la Fauna Ittica, le Specie protette dell’avifauna acquatica e gli Habitat bentonici nei siti Natura 2000 (MITFISH – N2K) – PO FEAMP (cod. pro. 071/RBC/20 – CUP D48D20000730009)

August 2020 - June 2022

Analyst Clinical laboratory at Policlinico Sanitario Triestino S.p.A. via Bonaparte, 4/6, 34123, Trieste (TS).

February 2022

Multiple eDNA analysis to detect *Astacus astacus*, *Austropotamobius pallipes* and *Procambarus f.f. virginalis* in Slovenian watercourses.

eDNA detection of *Astacus astacus*, *Austropotamobius pallipes* and *Procambarus f.f. virginalis* in Slovenian watercourses

November 2020

Fixed-term contract with UNITS for eDNA analysis to detect *Procambarus clarkii* in Slovenian watercourses (CTSERPALLAVICINI-FRISLASCAPCLA-20 – CUP J92F20001020007).

eDNA analysis for detecting *Procambarus clarkii* in Slovenian watercourses.

31/07/2020-09/09/2020

Fixed-term contract with UNITS for genetic analysis of the fish *Protochondrostoma genei* (CTSERPALLAVICINI-FRISLASCAPCLA-20, agreement 39/2020 – CUP J94I20000580007).

DNA analysis of genetic markers to assess genetic population information on three different population of *P. genei*.

09/03/2020-08/06/2020

Fixed-term contract with UNITS for “Study of the evolutionary responses of Antarctic panarthropods to climate warming using transcriptomic and epigenetic approaches” (MIUR PNRA n.651 5/4/2016 – CUP E52F16003220001).

Transcriptomics studies on thermal challenged tardigrade *Acutuncus antarcticus* and springtail *Cryptopygus terranovus*.

February 2020

Short-Term Scientific Mission supported by the COST action CA 15219 (DNAqua Net) at Galway-Mayo Institute of Technology (GMIT), Galway, Ireland.

Visiting scientist at Dr Luca Mirimin’s laboratory. I worked at the improvement of current protocols for detection and genetic analysis of the invasive ascidian *Didemnum vexillum* alongside other taxonomical groups sharing the same ecological niches of *D. vexillum*.

- November 2019 **eDNA analysis for invasive crayfish detection in Slovenian watercourses**
Analysis of eDNA samples for the detection of *Procambarus clarkii*, *Faxonius limosus* and *Pacifastacus leniusculus*.
- August 2019 **Visiting Scientist at Galway-Mayo Institute of Technology (GMIT), Galway, Ireland.**
In collaboration with Dr Luca Mirimin, I have compared outputs from a high-throughput microfluidic quantitative PCR system (Biomark HD, by Fluidigm) and a quantitative Real-Time PCR (CFX Connect, by Bio-Rad) on environmental DNA samples to detect *Pseudorasbora parva*.
- 13/12/2017-12/12/2019 **Post-doc fellow “ Acidificazione dei mari ed alterazione dell'espressione genica nel cocolitoforo *Pleurochrysis pseudoroscoffiensis*”**
Post-doc fellow D.Lgs. 240/2010. Sector BIO/18. Duration 24 months.
- 04/11/2015-11/12/2017 **Post-doc fellowship “ The hyperglycemic hormone of crustaceans: role in stress responses and its use as an autocidal method to combat invasive alien species - Within the projects: BIODINET cross-border cooperation project - CUP: D52D11000140003; PRIN 2010/2011 - CUP: J91J12000450001”**
Post-doc fellow D.Lgs. 240/2010. Sector BIO/05. Duration 12 months, maternity leave in the middle of this fellowship.
- September 2014-September 2015 **Maternity leaves**
August 2016-August 2017 (Italian Law 1204/1971, D. Lgs. 151/01 and D. Lgs. 119/11).
- 01/06/2013-02/11/2015 **Post-doc fellow “Genes and molecules of invertebrate immunity: structure, functions, evolutionary precursors and transferability in applied research - PRIN research project 2010-2011 - Genes and molecules of invertebrate immunity. Structure, functions, evolutionary precursors and transferability in applied research - CUP J91J12000450001”**
Post-doc fellow D.Lgs. 240/2010. Sector BIO/05. Duration 12 months, maternity leave in the middle of this fellowship.
- 2013 **Visiting Researcher at Center for Environmental studies (UMCES), Baltimore, Maryland, USA.**
Three months as visiting researcher supported by the “Premio Matassino” (Accademia dei Georgofili, Firenze) at University of Maryland, Center for Environmental Studies (UMCES), 701 East Pratt Street, Baltimore, MD, 21202. Supervised by Prof. J. Sook Chung I worked on the characterisation of Crustacean Hyperglycaemic Hormone-superfamily from the crayfish *Procambarus clarkii*.
- 01/01/2012-31/05/2013 **Post-doc fellowship “ Development of biomolecular methods for the eradication of the invasive alien species *Procambarus clarkii* and genetic characterization of the *Austropotamobius pallipes* complex in FVG (LIFE10 NAT / IT / 000239 RARITY)”**
Post-doc fellow D.Lgs. 240/2010. Sector BIO/05. Duration 17 months.
- 2011 **Fixed-term contract with DNA Analytica Srl, spin-off of University of Trieste**
Gene expression analysis in animal tissues intended for human consumption (6 months).

TEACHING AND TUTORING ACTIVITIES

- 2021-2022 Member of the exam commission for the course “Animal Ecophysiology” MSc in Ecologia dei Cambiamenti Globali at University of Trieste.
- 2020-2021 Member of the exam commission for the course “Animal Ecophysiology” MSc in Ecologia dei Cambiamenti Globali at University of Trieste.
- 2021 Temporary Professor for the course “Metodi di monitoraggio e analisi della qualità degli ambienti acquatici - Corso MONAMBACQ-21” for FVG regional employees (5 h).
- 2021 Temporary adjunct Professor for the laboratory activities for students of the course “Molecular

- Ecology", MSc in Ecologia dei Cambiamenti Globali at University of Trieste (24 h).
- 2021 Temporary adjunct Professor in Ecology at University "J. Dobrila" of Pola (Croatia) (30 h).
- 2021 Temporary adjunct Professor in Natural Sciences at University "J. Dobrila" of Pola (Croatia) (30 h).
- 2020 Temporary adjunct Professor in Animal Biology at BSc in Scienze e Tecnologie per l'Ambiente e la Natura at University of Trieste (36 h).
- 2020 Temporary adjunct Professor for the laboratory activities for students of the course "Molecular Ecology", MSc in Ecologia dei Cambiamenti Globali at the University of Trieste (24 h).
- 2020 Temporary adjunct Professor in Ecology at University "J. Dobrila" of Pola (Croatia) (30 h).
- 2020 Temporary adjunct Professor in Natural Sciences at University "J. Dobrila" of Pola (Croatia) (30 h).
- 2020 Seminar entitled "Adaptations to extreme environments" for the course "Animal Biology" to MSc in Ecologia dei Cambiamenti Globali (2 h).
- 2019 Seminars at BSc in Scienze e Tecnologie per l'Ambiente e la Natura (3 h) at University of Trieste
- 2019 Temporary adjunct Professor of the Animal Biology course at BSc in Scienze e Tecnologie per l'Ambiente e la Natura at University of Trieste (36 h).
- 2019 Temporary adjunct Professor for the laboratory activities for students of the course "Molecular Ecology", MSc in Ecologia dei Cambiamenti Globali at University of Trieste (24 h).
- 2019 Seminar entitled "Adaptations to extreme environments" for the course "Animal Biology" to MSc in Ecologia dei Cambiamenti Globali (2 h).
- 2019 Tutor for the laboratory activities for students of the course "Applied Genetics" (BSc in Scienze e Tecnologie per l'Ambiente e la Natura) at University of Trieste (80 h).
- 2019 Tutor for the Animal Biology course at University of Trieste (30 h).
- 2018 Temporary adjunct Professor in Natural Sciences at University "J. Dobrila" of Pola (Croatia) (30 h).
- 2018 Educational seminars to MSc in Ecologia dei Cambiamenti Globali (3 h) and BSc in Scienze e Tecnologie per l'Ambiente e la Natura (6 h) at University of Trieste.
- 2018 Tutor of the Animal Biology course at BSc in Scienze e Tecnologie per l'Ambiente e la Natura at University of Trieste supported by a fellow from University of Trieste (36 h).
- 2013 Practical seminars on the invasive alien *Procambarus clarkii* to the volunteers of the Authority for the Fishing Protection (Ente Tutela Pesca, ETP) and to forest rangers (2 h).
- 2012 Tutor of the Zoology course at BSc in Scienze e Tecnologie per l'Ambiente e la Natura at University of Trieste (30 h).
- 2012 Practical seminars on the invasive alien *Procambarus clarkii* to the volunteers of the Authority for the Fishing Protection (Ente Tutela Pesca, ETP) and to forest rangers (2 hours).
- From 2009 at the present I have co-authored 4 PhD students in Environmental Biology (University of Trieste).
3 Second level degree students in Functional Genomics (University of Trieste) and in Marine Biology (University of Pisa, Sector: BIO/05 Zoology).
8 Bachelor degree students in Biology (University of Trieste).

GRANTS AND AWARDS

- 2020 Grant for Short-Term Scientific Mission within COST Action CA15219
- 2019 Enzo Ottaviani 2019 award for young researchers on Comparative Immunobiology.
- 2017 National Scientific Ability to Associate Professor in Zoology and Anthropology (05/B1) – Abilitazione Nazionale Scientifica a Professore di II fascia in Zoologia e Antropologia (05/B1).
- 2017 National Scientific Ability to Associate Professor in Comparative anatomy and cytology (05/B2) – Abilitazione Nazionale Scientifica a Professore di II fascia in Anatomia comparata e citologia (05/B2).
- Since October 2016 Lecturer (Cultore della materia) in Zoology at the Department of Life Sciences (University of Trieste, Italy). Minutes of the council of the MSc in Ecology of Global Changes 06/2016.
- 2015 Travel grant to visit Japan as invited lecture by the University of Trieste.
- 2015 Grant as invited lecturer by Dr. Tadashi Kawai and organizing committee.
- 2012 Donato Matassino Award for Best PhD Thesis for the 2012 in the field of Genetics applied to zootechnics (Accademia dei Georgofili, Florence).

MEMBERSHIPS

- Since 2017 Member of the Unione Zoologica Italiana (UZI).
- Since 2016 Member of the International Association of Astacology (IAA).
- Since 2014 Member of the Società Italiana di Immunobiologia Comparata e dello Sviluppo (SIICS).
- 2010 Member of World Aquaculture Society (WAS).

EDUCATION AND TRAINING

- March 4th-6th 2020 Workshop on "New developments in the field of genomic technologies for solving practical conservation issues"

- WG4 workshop for practitioners and scientists within the COST action CA18134 (G-Bike). Portorož, Slovenia.
- June 11st-27th 2018 **Summer School on Blue Growth in the Euro-Mediterranean Region**
Euro-Mediterranean University – EMUNI (Slovenia) and the National Institute of Oceanography and Applied Geophysics – OGS (Italy).
- September 14th-20th 2016 **Basic Animal Experimentation Course - Corso di Base sulla sperimentazione Animale (OPBA (Organismo Preposto al Benessere Animale)-supported)**
University of Trieste
- June 6th-10th 2016 **RNA-seq data analysis workshop (Elixir-ITA supported)**
University “Federico II” of Naples, Italy.
- 2013 **Qualification to the practice of biologist**
State exam to qualify for the profession of Biologist senior (Italian rule).
- November 25th-29th 2013 **Marine Genomics course**
Centre for Marine Evolutionary Biology, University of Gothenburg, Sweden.
- 7/01/2008 – 6/01/2011 **PhD in Biomonitoring Methods of Environmental Alteration**
University of Trieste, Prof. Alberto Pallavicini (advisor). I worked on the Mediterranean mussel (*Mytilus galloprovincialis*) for defining its transcriptomic profiles upon exposure with toxic dinoflagellates.
- 2009 **Erasmus student**
Supported by the EU Lifelong Learning Program at Roem van Yerseke, 4400AA Yerseke, The Netherlands. I compared two diets for bivalves (on *Mytilus edulis*) based on dried or alive algae.
- 2005 - 2007 **Second level degree in Marine Biology**
University of Trieste, Prof. Alberto Pallavicini (advisor), mark 110/110 with honours.
- 2001 - 2004 **First level degree in Environmental Biology**
University of Ferrara, Proff. Anna E. Fano (advisor), and Giuseppe Castaldelli (co-advisor), mark 107/110, sector: BIO/07 Ecology.

PERSONAL SKILLS

- Laboratory skills** Broad experience in molecular and genetic techniques, experiments and protocols;
Experience in NGS libraries preparation and troubleshooting;
Good attitude in team-working;
Detail-oriented personality;
Good communication skills;
Experience in writing international and national projects;
Good experience in basic bioinformatic analysis;
Good experience in people and laboratory managements.

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C2	C2	C1
French	A2	B2	B1	A2	A2
Spanish	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user (Common European Framework of Reference for Languages)

Other skills I practice diving activity and I am certified for PADI (Professional Association Diving Instructors) licence for Advanced Open Water Diver, PADI license for Enriched Air Nitrox MAX 40% O₂ (NITROX). In addition, First Aid certificate from Italian Red Cross achieved 1st December 2008. Driving license: B.

ASSOCIATE EDITOR AND REVIEWER ACTIVITIES

2021-2022 Guest Editor for Animals (MDPI) for the special issue: "Management and Control of Invasive Aquatic Animals" (call for paper still open).

Da Dicembre 2017 Associate Editor of Marine and Freshwater Behaviour and Physiology (Taylor and Francis).

Da Dicembre 2015 Member of the Rubriq reviewers panel.

Revisore per Scientific Reports (Nature)
 Bioinvasions Records (Reabic)
 BMC Genomics (Springer Nature)
 Biomolecules (MDPI)
 Comparative Biochemistry and Physiology (Elsevier)
 Conservation Physiology (Oxford University Press)
 Scientia Marina (Institut de Ciències del Mar de Barcelona (CSIC))
 International Journal of Peptide Research and Therapeutics (Springer)
 Molecular Immunology (Elsevier)
 Marine Genomics (Elsevier)
 Journal of Genomics (Ivyspring)
 Journal of Neuroscience Research (Wiley Online Library)
 Toxins (MDPI)
 PlosONE (PLOS)
 Gene (Elsevier)
 Marine Drugs (MDPI)
 Invertebrate Survival Journal (University of Modena and Reggio Emilia)
 Seminars in Cell and Developmental Biology (Elsevier)

COLLABORAZIONI INTERNAZIONALI

University of the Sunshine Coast – Australia, Wakkanai Fisheries Institute – Japan, National Institute of Oceanography – Israel, LSU AgCenter, Dept. Aquaculture Research Station – USA, Stockholm University – Sweden, Ben Gurion University – Israel, Bournemouth University - United Kingdom, Université de Poitiers – France, Trinity College Dublin – Ireland, University of South Bohemia in České Budějovice - Czech Republic, University of Évora – Portugal, Institut de Recerca i Tecnologia Agroalimentaries – Spain, Universiteit Gent – Belgium, National Institute of Biology – Slovenia, University of Zagreb – Croatia, Galway-Mayo Institute of Technology - Ireland.

PUBLICATION ON PEER-REVIEW JOURNALS

Web of Science h-index = 14; Scopus h-index = 15; Google Scholar h-index = 17

- 1 Greco S., Gaetano A.S., Furlanis G., Capanni F., **Manfrin C.**, Giulianini P.G., Santovito G., Edomi P., Pallavicini A., Gerdol M. **2022**. Gene Expression Profiling of *Trematomus bernacchii* in Response to Thermal and Stabbling Stress. *Fishes*, 7(6), 387. doi:10.3390/fishes7060387.
- 2 **Manfrin C.**, Zanetti M., Stanković D., Fattori U., Bertucci Maresca V., Giulianini P.G., Pallavicini A. **2022**. Detection of the endangered stone crayfish *Austropotamobius torrentium* (Schrank, 1803) and its congeneric *A. pallipes* in its last Italian biotope by eDNA analysis. *Diversity*, 14(3), 205. doi:10.3390/d14030205.
- 3 **Manfrin C.**, Mirimin L., Zanetti M., Pizzul E., Giulianini P.G., Pallavicini A. **2022**. Highly sensitive environmental DNA detection of topmouth gudgeon, *Pseudorasbora parva*: A comparison of qPCR and microfluidic qdPCR. *Biological Invasions*, 24, 2121-2133. doi:10.1007/s10530-022-02761-2.
- 4 Scapolatiello A., Rosani U., **Manfrin C.**, Puljas S., Pallavicini A., Gerdol M. **2022**. Identification of five picorna-like viruses associated with the endangered cave-dwelling bivalve *Congeria kusceri* (Bole, 1962). *Invertebrate Survival Journal*, 19: 28-36. doi:10.25431/1824-307X/isj.v19i1.28-36.
- 5 Rizzotti D.*, **Manfrin C.***, Gerdol M., Greco S., Santovito G., Giulianini P.G. **2022**. Morphological analysis of erythrocytes of an Antarctic teleost under heat stress: Bias of the stabbling effect. *Journal of Thermal Biology* 103. doi:10.1016/j.jtherbio.2021.103139
 * equal contribution.

- 6 Segelbacher G., Bosse M., Burger P., Galbusera P., Godoy J.A., Helsen P., Hvilsom C., Iacolina L., Kahric A., **Manfrin C.**, Nonic M., Thizy D., Tsvetkov I., Veličković N., Vilà C., Wisely S.M., Buzan E. **2021**. New developments in the field of genomic technologies and their relevance to conservation management. *Conservation Genetics*. doi: 10.1007/s10592-021-01415-5
- 7 Cucini C., Leo C., Nardi F., Greco S., **Manfrin C.**, Giulianini P.G., Carapelli A. **2021**. First *de novo* transcriptome analysis of the Antarctic springtail *Cryptopygus terranovus* (Collembola: Isotomidae) following mid-term heat exposure. *Antarctic Science*, 1-10. doi:10.1017/S0954102021000195
- 8 **Manfrin C.**, Tom M., Avian M., Battistella S., Pallavicini A., Giulianini P.G. **2021**. Characterization and Gene Expression of Vitellogenesis-Related Transcripts in the Hepatopancreas and Ovary of the Red Swamp Crayfish, *Procambarus clarkii* (Girard, 1852), during Reproductive Cycle. *Diversity*, 13(9):445. doi: 10.3390/d13090445
- 9 Dara M., Giulianini P.G., **Manfrin C.**, Parisi MG., Parrinello D., La Corte C., Vasta G., Cammarata M. **2021**. F-type lectin from serum of the Antarctic teleost fish *Trematomus bernacchii* (Boulenger, 1902): Purification, structural characterization, and bacterial agglutinating activity. *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* doi: 10.1016/j.cbpb.2021.110633
- 10 Capanni F., Greco S., Tomasi N., Giulianini P.G., **Manfrin C.** **2021**. Orally administered nano-polystyrene caused vitellogenin alteration and oxidative stress in the Red Swamp Crayfish (*Procambarus clarkii*). *Science of the Total Environment*. doi:10.1016/j.scitotenv.2021.147984
- 11 Greco S. D'Agostino E., **Manfrin C.**, Gaetano A.S., Furlanis G., Capanni F., Santovito G., Edomi P., Giulianini P.G., Gerdol M. **2021**. RNA-sequencing Indicates High Hemocyanin Expression as a Key Strategy for Cold Adaptation in the Antarctic Amphipod *Eusirus cf. giganteus* Clade g3. *BioCell*. doi:10.20944/preprints202102.0226.v1
- 12 **Manfrin C.**, Giglio A., Pallavicini L., Zampa L., Vecchiet L., Caputi A., Chiangetti C., Beorchia A., Vidimari R., Giulianini P.G. **2021**. Medium-term feasibility of the management of the invasive crayfish *Procambarus clarkii* with the Sterile Males Release Technique SMRT. *Pest Management Sciences*, 77: 2494–2501. doi:10.1002/ps.6280.
- 13 Qyli M., Aliko V., Sgarra R., Giulianini P.G., **Manfrin C.** **2020**. Identification and characterisation of crustacean hyperglycaemic hormone (CHH) from Mediterranean shore crab *Carcinus aestuarii*. *Turkish Journal of Zoology*, 44. doi:10.3906/zoo-2005-25.
- 14 Cavion F., Fusco L., Sosa S., **Manfrin C.**, Alonso B., Zurutuza A., Loggia R.D., Tubaro A., Prato M., Pelin M. **2020**. Ecotoxicological impact of graphene oxide: toxic effects on the model organism *Artemia franciscana*, *Environ. Sci. Nano*, 7, pp. 3605-3615, doi:10.1039/D0EN00747A.
- 15 Marcolin F., Iordan F., Pizzul E., Pallavicini A., Torboli V., **Manfrin C.**, Quaglietta L. **2020**. Otter diet and prey selection in a recently recolonized area assessed using microscope analysis and DNA barcoding. *Hystrix*. doi:10.4404/hystrix-00260-2019.
- 16 Menconi V., **Manfrin C.**, Pastorino P., Mugetti D., Cortinovis L., Pizzul E., Pallavicini A., Prearo M. **2020**. First Report of *Clinostomum complanatum* (Trematoda: Digenea) in European Perch (*Perca fluviatilis*) from an Italian Subalpine Lake: A Risk for Public Health? *Int. J. Environ. Res. Public Health*. 17, 1389, doi:10.3390/ijerph17041389.
- 17 Rončević T, Čikeš-Čulić V, Maravić A, Capanni F, Gerdol M, Pacor S, Tossi A, Giulianini P.G., Pallavicini A, **Manfrin C.** **2020**. Identification and functional characterization of the astacidin family of proline-rich host defence peptides (PcAst) from the red swamp crayfish (Girard 1852), *Procambarus clarkii*. *Developmental and Comparative Immunology*, doi: 10.1016/j.dci.2019.103574.
- 18 González-Castellano I, **Manfrin C**, Pallavicini A, Martínez-Lage A. **2019**. De novo gonad transcriptome analysis of the common littoral shrimp *Palaemon serratus*: novel insights into sex-related genes. *BMC Genomics*, 20:757. doi: 10.1186/s12864-019-6157-4
- 19 **Manfrin C**, Souty-Grosset C, Anastácio PM, Reynolds JD, Giulianini PG. **2019**. Detection and Control of Invasive Freshwater Crayfish: From Traditional to Innovative Methods. *Diversity*, 11, 5. doi: 10.3390/d11010005.
- 20 Giglio A, **Manfrin C**, Zanetti M, Aquiloni L, Simeon E, Bravin MK, Battistella S, Giulianini PG. **2018**. Effects of X-ray sterilisation on haemocytes of *Procambarus clarkii* males. *European Zoological Journal*, 18 (1): pp. 1-10. doi: 10.1080/24750263.2017.1423119.
- 21 **Manfrin C**, Comisso G, dall'Asta A, Bettoso N, Chung JS. **2016**. The return of the blue crab (*Callinectes sapidus*, Rathbun, 1896) after 70 years from its first appearance in the Gulf of Trieste (Northern Adriatic Sea, Italy). *Check list journal* 12-6: 7pp. doi: 10.15560/12.6.2006.
- 22 Bertoli M*, **Manfrin C***, Bonzi LC, Pizzul E, Pallavicini A. **2016**. First taxonomical analyses of pike populations (Esocidae, Esox) in Friuli Venezia Giulia (Northeast Italy), *Annales Ser. hist. nat.* 26-1:pp. 41-49. DOI: 10.19233/ASHN.2016.7. * Equal contribution.
- 23 **Manfrin C**, Piazza F, Cocchietto M, Antcheva N, Masiello D, Franceschin A, Peruzza L, Bonzi LC, Mosco A, Guarnaccia C, Sava G, Giulianini PG. **2016**. Can peptides be orally-delivered in crustaceans? The case study of the Crustacean Hyperglycaemic Hormone in *Procambarus clarkii*. *Aquaculture*, 463: 209-216.
- 24 Candotto Carniel F, Gerdol M, Montagner A, Banchi E, De Moro G, **Manfrin C**, Muggia L, Pallavicini A, Tretiach M. **2016**. New features of desiccation tolerance in the lichen photobiont *Trebouxia gelatinosa* are revealed by a transcriptomic approach. *Plant Molecular Biology*, pp. 1-21.
- 25 Gerdol M, Puillandre N, De Moro G, Guarnaccia C, Lucafò M, Benincasa M, Zlatev V, **Manfrin C**, Torboli V, Giulianini PG, Sava G, Venier P, Pallavicini A. **2015**. Identification and Characterization of a Novel Family of Cysteine-Rich Peptides (MgCRP-I) from *Mytilus galloprovincialis*. *Genome Biology and Evolution* 7(8). DOI:10.1093/gbe/evv133
- 26 Piazza F, Aquiloni L, Peruzza L, **Manfrin C**, Simi S, Marson L, Edomi P, Giulianini PG. **2015**. Managing of *Procambarus clarkii* by X-ray sterilisation of males: Cytological damage to gonads. *Micron*, 77: 32-40.
- 27 **Manfrin C**, Turolla E, Chung JS, Giulianini PG. **2015**. First occurrence of *Callinectes sapidus* (Rathbun, 1896) within the Sacca di Goro (Italy) and surroundings. *Check list*, 11(3): 1-4. DOI: http://dx.doi.org/10.15560/11.3.1640.
- 28 Peruzza L, Piazza F, **Manfrin C**, Bonzi LC, Battistella S, Giulianini PG. **2015**. Reproductive plasticity of a *Procambarus clarkii* population living 10° C below its thermal optimum. *Aquatic Invasions* 03/2015; 10(2). DOI:10.3391/ai.2015.10.2.08.
- 29 **Manfrin C.**, Peruzza L., Bonzi L.C., Pallavicini A., Giulianini P.G. **2015**. Silencing two main isoforms of crustacean hyperglycemic hormone (CHH) induces compensatory expression of two CHH-like transcripts in the red swamp crayfish *Procambarus clarkii*. *Invertebrate Survival Journal*, 12: 29-37.
- 30 **Manfrin C.**, Tom M., De Moro G., Gerdol M., Giulianini P.G., Pallavicini, A. **2015**. The eyestalk transcriptome of red swamp crayfish *Procambarus clarkii*. *Gene*. S0378-1119(14)01373-0. doi: 10.1016/j.gene.2014.12.001
- 31 Gerdol M, De Moro G, **Manfrin C**, Milandri A, Riccardi E, Beran A, Venier P., Pallavicini A **2014**. RNA sequencing and de novo

- assembly of the digestive gland transcriptome in *Mytilus galloprovincialis* fed with toxinogenic and non-toxic strains of *Alexandrium minutum*. *BMC Research Notes*. 7:722.
- 32 Tom M., **Manfrin C.**, Mosco A, Gerdol M., De Moro G., Pallavicini A., Giulianini P.G. **2014**. Different transcription regulation routes are exerted by L- and D-amino acid anantiomers of peptide hormones. *Journal of Experimental Biology*. 217: 4337-4346. doi:10.1224/jeb.109140.
- 33 Tom M., **Manfrin C.**, Chung J.S., Sagi A., Gerdol M., De Moro G., Pallavicini A., Giulianini P.G. **2014**. Expression of cytoskeletal and molt-related genes is temporally scheduled in the hypodermis of the crayfish *Procambarus clarkii* during premolt. *Journal of Experimental Biology*. doi: 10.1242/jeb.109009.
- 34 Sandri M., **Manfrin C.**, Pallavicini A., Stefanon B. **2014**. Biodiversity of the microbiome composition of liquid fraction rumen content of lactating cows. *Animal journal*, 13:1-8.
- 35 Gerdol M., De Moro G., Torboli V., **Manfrin C.**, Rosani U., Venier P., Pallavicini A. **2013**. Genomics in bivalve aquaculture. *Communications in agricultural and applied biological sciences*.78 (4), p. 153-156.
- 36 Suarez-Ulloa V., Fernandez-Tajes J., **Manfrin C.**, Gerdol M., Venier P., Eirin-Lopez J.M. **2013**. Bivalve omics: state of the art and potential applications for the biomonitoring of harmful marine compounds. *Marine Drugs*, 11(11), 4370-4389; doi:10.3390/md11114370.
- 37 Tom M., **Manfrin C.**, Giulianini P.G., Pallavicini A. **2013**. Crustacean oxi-reductase proteins sequences derived from a functional genomic project potentially involved in ecdysteroid hormones metabolism - a starting point for function examination. *General and Comparative Endocrinology*, 194, p. 71-80, ISSN: 0016-6480, doi:10.1016/j.ygcen.2013.09.003.
- 38 **Manfrin* C.**, Tom* M., De Moro G., Gerdol M., Guarnaccia C., Mosco A., Pallavicini A., Giulianini P.G. **2013**. Application of D-Crustacean Hyperglycemic Hormone Induces Peptidases Transcription and Suppresses Glycolysis-Related Transcripts in the Hepatopancreas of the Crayfish *Pontastacus leptodactylus* — Results of a Transcriptomic Study. *PLoS One* , 8(6): e65176, ISSN: 1932-6203 * equal contribution.
- 39 Varotto L., Domeneghetti S., Rosani U., **Manfrin C.**, Cajaraville M.P., Raccanelli S., Pallavicini A., Venier, P. **2013**. DNA damage and transcriptional changes in the gills of *Mytilus galloprovincialis* exposed to nanomolar doses of combined metal salts (Cd, Cu, Hg). *Plos One*, 8, p. e54602, ISSN: 1932-6203, doi:10.1371/journal.pone.0054602.
- 40 **Manfrin C.**, De Moro G., Torboli V., Venier P., Pallavicini A., Gerdol, M. **2012**. Physiological and molecular responses of bivalves to toxic dinoflagellates. *ISJ - Invertebrate Survival Journal*, 9, p. 184-199, ISSN: 1824-307X.
- 41 Gerdol M., De Moro G., **Manfrin C.**, Venier P., Pallavicini A. **2012** Big defensins and mytimacins, new AMP families of the Mediterranean mussel *Mytilus galloprovincialis*. *Developmental & Comparative Immunology*, 36(2), 390-399, ISSN: 0145-305X.
- 42 Domeneghetti S.*, **Manfrin C.***, Varotto L., Rosani U., Gerdol M., De Moro G., Pallavicini A., Venier P. **2011**. How gene expression profiles disclose vital processes and immune responses in *Mytilus* spp. *ISJ - Invertebrate Survival Journal*, 8, 179-189, ISSN: 1824-307X. * equal contribution.
- 43 Gerdol M., **Manfrin C.**, De Moro G., Figueras A., Novoa B., Venier P., Pallavicini A. **2011**. The C1q domain containing proteins of the Mediterranean mussel *Mytilus galloprovincialis*: a widespread and diverse family of immune-related molecules. *Developmental Comparative Immunology*, 35(6): 635-643, ISSN: 0145-305X, doi: 10.1016/j.dci.2011.01.018.
- 44 **Manfrin C.**, Dreos R., Battistella S., Beran A., Gerdol M., Varotto L., Lanfranchi G., Venier P., Pallavicini A. **2010**. Mediterranean Mussel Gene Expression Profile Induced by Okadaic Acid Exposure. *Environmental Science and Technology*, 44 (21), p. 8276-8283, ISSN: 0013-936X, doi:10.1021/es102213f.

Web of Science h-index = 14; Scopus h-index = 15; Google Scholar h-index = 18

Threshold values ASN (Italian system) (D.M.589/2018)	Full Professor threshold		
	Number papers 10 years	Citations numbers 15 years	H-index 15 years
Zoology and Anthropology	23	339	12
Values achieved by the undersigned	37	786	15

PEER-REVIEW CHAPTER BOOK

- 1 **Manfrin C.**, Souty-Grosset C, Anastácio P, Reynolds J, Giulianini PG. **2018**. The apparently relentless spread of the major decapod alien species in the Mediterranean basin and European inland waters in Histories of Bioinvasions in the Mediterranean. Ana Isabel Queiroz & Simon Pooley Eds. Springer Environmental History series, series volume 8. pp. XI, 260. ISBN 978-3-319-74986-0. doi: 10.1007/978-3-319-74986-0.
- 2 **Manfrin C.**, Pallavicini A, Battistella S, Lorenzon S, Giulianini PG. **2016**. Crustacean Immunity: The Modulation of Stress Responses in Lessons in Immunity: From Single-cell organisms to Mammals. Chapter: 8, Publisher: Elsevier, Editors: Ballarin Lorian, Cammarata Matteo, pp.107-116. DOI: 10.1016/B978-0-12-803252-7.00001-1.

EDUCATIONAL COMMUNICATIONS AND ACTIVITIES

- 1 Invited as specialist for Invasive Alien Species at the TV program "Trieste in Diretta" on August 1st 2018: <https://www.youtube.com/watch?v=pHUnPYQvKNc> (from 27th minute).
- 2 I held four presentations at the Coffee Science (cultural event for presenting the activities of the University of Trieste to the community, <http://www.caffedellescienze.eu/home-page/>); in 2012 entitled: DNA tells the environmental stress, in 2013 entitled: Aliens among us: the case of the red swamp crayfish, in 2018 entitled: Invasive species and their effects on the environment and in 2019 entitled: Managin wild fauna through DNA analysis.
- 3 Kaway T, and **Manfrin C.** 2015. Similarity of Conservation Strategy Between Italy and Japan. *Crayfish News*, 37:4, pp. 8-9.
- 4 A picture of the histology of *P. clarkii* testis entitled: "The masculine origine du monde" has been awarded among the best pictures of the 2014 edition of "Art or Science?" and the same picture have been published on a website "IO Donna" belonging to the Corriere della Sera (National newspaper): <http://www.iodonna.it/attualita/primo-piano/2014/concorso-fotografico-arte-o-scienza-triestegallery-402212626269.shtml>
- 5 I held a presentation entitled: "The case of the red swamp crayfish *Procambarus clarkii*" at the Museo Sartorio (Trieste) on 6th June 2014 within the meeting series: "Spring in Trieste".
- 6 Piazza F, Aquiloni L, **Manfrin C.**, Simi S, Duse Masin M, Florian F, Marson L, Peruzza L, Borgogna M, Paoletti S, Bonzi LC, Scapini F, Faraoni P, Balzi M, Edomi P, Giulianini PG. 2014. Messa a punto di metodi per il contenimento e la cattura di *P. clarkii*, Capitolo IX in RARITY. Eradicate invasive Louisiana red swamp and preserve native white clawed crayfish in Friuli Venezia Giulia, pp 73-88. Published by the financial contribution of the EC within the RARITY project LIFE10 NAT/IT/000239.
- 7 Bertucci V, Edomi P, **Manfrin C.**, Marson L, Pallavicini A, Piazza F, Giulianini PG. 2013. in Manuale per le pubbliche amministrazioni la gestione consapevole dei gamberi di fiume in Friuli Venezia Giulia. 3. In: "MANUAL FOR THE PUBLIC ADMINISTRATIONS Knowledge, issues and adaptive management of freshwater crayfish in Friuli Venezia Giulia", pp 39-41. Published by the financial contribution of the EC within the RARITY project LIFE10 NAT/IT/000239, text editing Tiziano Scovaccicchi.
- 8 I was interviewed on the topic of Epigenetics for the scientific blog OggiScienza (video available at: <http://www.youtube.com/watch?v=4j5-dNcTpW0> – Italian language), 2013.
Manfrin C., Giulianini PG. 2012. Biologia dei gamberi di acqua dolce (Biology of crayfishes), Capitolo V in Didattica per gli operatori – Eradicazione del gambero rosso della Louisiana e protezione dei gamberi di fiume del Friuli Venezia Giulia. Lithostampa, Pasian di Prato (Udine). Available at: <http://www.life-rarity.eu/pagine/download.htm> (Chapter book).
- 9 Pallavicini A, Bertucci V, Piazza F, **Manfrin C.**, Edomi P, Giulianini PG. 2012. Conservazione della biodiversità genetica di *Austroptamobius pallipes* complex in Friuli Venezia Giulia (Conservation of genetic biodiversity of *Austroptamobius pallipes* complex in Friuli Venezia Giulia), Capitolo VI in Didattica per gli operatori – Eradicazione del gambero rosso della Louisiana e protezione dei gamberi di fiume del Friuli Venezia Giulia. Lithostampa, Pasian di Prato (Udine). disponibile su: <http://www.life-rarity.eu/pagine/download.htm> (capitolo del manuale).
- 10 Sono stata intervistata in un documentario sul progetto europeo RARITY (video disponibile su: <http://vimeo.com/60482246> - dialogo in italiano, sottotitolato in inglese).
- 11 Articolo divulgativo: *Procambarus clarkii*: uno sgradito viaggiatore dei quattro mondi, nella RARITY Newsletter (disponibile su: http://www.life-rarity.eu/images/pdf/newsletter/2012/newsletter_lug_2012.pdf).
- 12 Lezione di Educazione ambientale e osservazione biologica per la Federazione Italiana Pesca Sportiva e attività subacquee (FIPSAS) corsi subacquee (primo e secondo livello), 2011.

PARTECIPAZIONE A CONGRESSI O SEMINARI SU INVITO

a. Presentazione orale, b. Poster; 1. Seminario su invito, 2. Conferenza.

- 1 Bertoli M, Franz F, Zanetti M, Bandi E, **Manfrin C.**, Pallavicini A, Pizzul E. Eradication of brown trout (*Salmo trutta* Linnaeus, 1758) population in the Rosandra stream (Friuli Venezia Giulia, Northeast Italy). Mediterranean Salmonids biodiversity: from systematics to conservation conference. September 18th-20th 2019, Cagliari (Italy). Associazione Italiana Ittiologi Acqua Dolci (AIAD) (Ed.), pp 30-31. b.2
- 2 **Manfrin C.** Detection and Control of Non-Indigenous Freshwater Crayfish Species in Southern Europe. Irish Crayfish Seminar, May 21st-22nd 2019, Galway, Ireland. a.1.
- 3 **Manfrin C.**, Giovannini I., Guidetti, R., Giulianini, P.G., Rebecchi, L. Towards decrypting stress response in tardigrade - Transcriptome survey of *Paramacrobiotus sideralis* during anhydrobiotic state. XX Incontro Scientifico della Società Italiana di Immunobiologia Comparata e dello Sviluppo (SIICS), February 13th-15th 2019, Rende (CS), Italy. a.2
- 4 Dara M., Giulianini P.G., **Manfrin C.**, Parisi M.G., Cammarata M. F-type lectin from serum of *Trematomus bernacchii* (Boulenger, 1902): purification, characterization and bacterial agglutinating activity. XX Incontro Scientifico della Società Italiana di Immunobiologia Comparata e dello Sviluppo (SIICS), February 13th-15th 2019, Rende (CS), Italy. a.2
- 5 **Manfrin C.**, Giglio A., Fabbriozzi P., Beorchia A., Vidimari R, Giulianini PG. Survival and immunological competence of *Procambarus clarkii* after X-ray irradiation. XIX Incontro Scientifico della Società Italiana di Immunobiologia Comparata e dello Sviluppo (SIICS), February 7th-9th 2018, Geneva, Italy. a.2.
- 6 **Manfrin C.** and Zanetti M. Eradicate Invasive Louisiana Red Swamp and Preserve Native white Clawed Crayfish in Friuli Venezia Giulia. Platform meeting on Invasive Alien Species (IAS). November 29th-30th November 2017, Milan, Italy. a.1.
- 7 Giuliani PG, Zampla L, Pallavicini L, **Manfrin C.**, Caputi A, Beorchia A, Vidimari R, Chiandetti C. Managing of *Procambarus clarkii* by x-ray sterilisation of males: survival, immunological competence and behavior. Second Joint Meeting of Société Zoologique de France and Unione Zoologica Italiana, Congres 2017 de la Société Zoologique de France - 78° Congresso dell'Unione Zoologica Italiana, September 18th -22nd 2017, Torino, Italy. a.2.
- 8 **Manfrin C.** Control of alien crayfish for conservation. L-Plaza 札幌エルプラザ公共4施設; October 23rd 2015, Sapporo, Japan

- a.1.
- 9 **Manfrin C**, Piazza F, Cocchietto M, Antcheva N, Masiello D, Franceschini A, Peruzza L, Bonzi LC, Mosco A, Guarnaccia C, Sava G, Giulianini PG. Oral delivery of the Crustacean Hyperglycemic Hormone –CHH – in *Procambarus clarkii*. In 76° Congresso Nazionale dell'Unione Zoologica Italiana; September 15th-18th; Viterbo, Italy. 2015. a.2.
 - 10 **Manfrin C**, Piazza F, Giulianini Piero G, Pallavicini A. Biomonitoring invasive species: the case study of the red swamp crayfish in Friuli Venezia Giulia. Biodiversity in the Mediterranean Basin; March 11st-13rd 2015, UP FAMNIT, Koper, Slovenia. a.2.
 - 11 **Manfrin, C**, Peruzza, L, Chung, JS, Piazza, F, Pallavicini, A, Giulianini, PG. Autocidal control on *Procambarus clarkii*. 8th International Crustacean Congress (ICC-8); August 18th-23rd 2014, Frankfurt am Main, Germany. a.2.
 - 12 Aquiloni, L, Piazza, F, **Manfrin, C**, Duse, M, Simi, S, Faraoni, P, Balzi, M, Giulianini, PG. X-ray irradiation of male crayfish to control invasive populations: encouraging but not predictable results. 8th International Crustacean Congress (ICC-8); August 18th-23rd 2014, Frankfurt am Main, Germany. b.2.
 - 13 **Manfrin, C**. Ongoing efforts to characterize the Gonad Inhibiting Hormone in *Procambarus clarkii*. ConSDABI Consortium, February 28th 2014, Benevento, Italy. a.1.
 - 14 **Manfrin, C**, De Moro, G, Giulianini, PG, Pallavicini, A. Characterization of immune-related transcripts within the Atlas gene database of *Procambarus clarkii* (Girard, 1852). Società Italiana di Immunobiologia Comparata e dello Sviluppo (SIICS); February 12nd-14th; Ferrara, Italy. 2014. a.2.
 - 15 **Manfrin, C**, Peruzza, L, Chung, JS, Pallavicini, A, Giulianini, PG. Induzione della crescita ovarica di *Procambarus clarkii* (Girard, 1852) mediante silenziamento dell'ormone gonado-inibitorio. In 74° Congresso Nazionale dell'Unione Zoologica Italiana; September, 30th- October, 3rd; Modena, Italy. 2013. b.
 - 16 Rosani, U, Gerdol, M, De Moro, G, Varotto, L, Domeneghetti, S, **Manfrin, C**, Sharma, N, Roch, P, Pallavicini, A, Venier, P. Molecole dell'immunità innata in *Mytilus galloprovincialis*. In 74° Congresso Nazionale dell'Unione Zoologica Italiana; September, 30th- October, 3rd; Modena, Italy. 2013. a.2.
 - 17 Montagner, A, Candotto Carniel, F, De Moro, G, Gerdol, M, **Manfrin, C**, Muggia, L, Pallavicini, A, Tretiach, M. Analisi trascrittomiche dell'apofotobionte *Trebouxia gelatinosa* sottoposto a processi di disidratazione e reidratazione. In XXVI Convegno della Società Lichenologica Italiana; 2-4 October, 2013; Piacenza, Italy. a.2.
 - 18 Bongioni, L, Cunha, M.R., **Manfrin, C**, Pallavicini, A, Parretti, P, Ravara, A, Santos, R.S., Danovaro R. Microbial and macrofaunal communities associated with sedimentary environments of the Condor Seamount (Azores, NE Atlantic). XXIII Congresso della Società Italiana di Ecologia, Ancona (Italy), 16-18 September 2013. a.2.
 - 19 **Manfrin, C**, Tom, M, De Moro, G, Gerdol, M, Pallavicini, A, Giulianini, PG. Crustacean Transcriptomics: New insights driven by the Next Generation Sequencing. 3rd Colloquium of Genetics, Piran (Slovenia), 13rd September 2013. a.2.
 - 20 Gerdol, M, De Moro, G, Leoni, G, Torboli, V, **Manfrin, C**, Venier, P, Pallavicini, A. De novo discovery of antimicrobial peptides from invertebrate transcriptomes. 3rd Colloquium of Genetics, Piran (Slovenia), 13rd September 2013. a.2.
 - 21 Bertucci, V, **Manfrin, C**, Edomi, P, Giulianini, PG, Pallavicini, A. Population genetics of the crayfish *Austropotamobius pallipes complex* in Friuli Venezia Giulia (Italy). 3rd Colloquium of Genetics, Piran (Slovenia), 13rd September 2013. a.2.
 - 22 Bongioni, L, **Manfrin, C**, Pallavicini, A, Parretti, P, Santos, R.S, Stefanni, S, Antonioli, M, Danovaro, R. MICROBIAL diversity and ecosystem functioning in deep-sea sediments associated to the CONDOR seamount (Azores, NE Atlantic). First EMBO Conference on Aquatic Microbial Ecology: SAME13, Stresa (Italy), 8-13 September 2013. a.2.
 - 23 Gerdol M, De Moro G, **Manfrin C**, Rosani U, Venier, P, Pallavicini A: Genomics in bivalve aquaculture. In Larvi 2013 - 6th fish & shellfish larviculture symposium; September 2nd-5th; Ghent, Belgium. 2013. a.1.
 - 24 **Manfrin, C**, Tom, M, De Moro, G, Gerdol, M, Guarnaccia, C, Mosco, A, Pallavicini, A, Giulianini, PG. Application of D-crustacean Hyperglycemic Hormone induces peptidases transcription and suppresses glycolysis-related transcripts in the hepatopancreas of the crayfish *Pontastacus leptodactylus* - results of a transcriptomic study. International Congress of Comparative Endocrinology (ICCE) 2013, Barcelona, Spain, 15-19 July 2013. a.2.
 - 25 **Manfrin, C**, Gerdol, M, De Moro, G, Giulianini, PG, Pallavicini, A. The first Illumina sequencing of the eyestalk of *Procambarus clarkii*. International Congress of Comparative Endocrinology (ICCE) 2013, Barcelona, Spain, 15-19 July 2013. b.2.
 - 26 Pallavicini, A, Gerdol, M, **Manfrin, C**, De Moro, G, Torboli, V, Rosani, U, Domeneghetti, S, Varotto, S, Battistella, S, Scocchi, M, Venier, P, Giulianini, PG. De novo discovery of antimicrobial peptides from invertebrate transcriptomes. Italian Association of Developmental and Comparative Immunobiology (IADCI) XIV Meeting. 14-16 February 2013, Palermo, Italy. a.2.
 - 27 **Manfrin, C**. Molecular responses of *Mytilus galloprovincialis* to toxic dinoflagellates. IMET seminars, Baltimore, MD, USA, 30 January 2013. a.1.
 - 28 **Manfrin, C**, Venier, P, Pallavicini, A. Sviluppo e applicazione di biotecnologie genomiche in mitilo per il controllo della contaminazione da biotossine algali in stock alimentari. 1° Convegno Nazionale S.I.R.A.M. Teramo, 10 November 2012. b.2.
 - 29 Varotto, L, **Manfrin, C**, Domeneghetti, S, Gerdol, M, Rosani U, De Moro, G, Pallavicini, A, Venier, P. Stress funzionale da contaminanti chimici nei bivalvi (*M. galloprovincialis*). 1° Convegno Nazionale S.I.R.A.M. Teramo, 10 November 2012. a.1.
 - 30 **Manfrin, C**, Piazza, F, Bertucci, V, Marson, L, Gerdol, M, Aquiloni, L, Gherardi, F, Pallavicini, A, Edomi, P, Giulianini, PG. Il controllo della riproduzione nei crostacei: contenimento della specie invasiva *Procambarus clarkii*. 73° Congresso dell'Unione Zoologica Italiana, 24-27 September 2012. Firenze, Italy, Book of abstract. a.2
 - 31 **Manfrin, C**, Bertucci, V, Piazza, F, Marson, L, Gerdol, M, Pallavicini, A, Edomi, P, Aquiloni, L, Gherardi, F, Giulianini, PG. A first glimpse towards the *Procambarus clarkii* transcriptome, 10th Colloquium Crustacea Decapoda Mediterranea, 3-7 June 2012, Athens, Greece. Abstract book, p. 223. b.2.
 - 32 Venier, P, Gerdol, M, Rosani, U, Domeneghetti, S, **Manfrin, C**, De Moro, G, Pallavicini, A. How many defence peptides in *Mytilus* spp? New AntiMicrobials Workshop, New Compounds & New Strategies for Antimicrobials. 25-26 May 2012, Trieste, Italy. a.2.
 - 33 Gerdol, M, Casagrande, R, De Moro, G, **Manfrin, C**, Venier, P, Pallavicini, A. Comparative sequence analysis of antimicrobial peptides in *Mytilus galloprovincialis* and *Ruditapes philippinarum*. XIII Meeting of the Italian Association of Developmental and Comparative Immunobiology (IADCI). San Benedetto del Tronto, Italy. February 22nd – 24th 2012. a.2.
 - 34 Sandri, M, **Manfrin, C**, Gaspardo, B, Pallavicini, A, Stefanon, B. Influence of yeasts supplementation on microbiome composition

- in liquid fraction of rumen content of lactating cows, 62nd Annual meeting of the European Federation of Animal Science, 29th August-2nd September 2011 Meeting, Stavanger, Norway, Book of abstract. a.2.
- 35 Gerdol, M, De Moro, G, **Manfrin, C**, Beran, A, Pallavicini, A. The transcriptomic analysis of *Mytilus galloprovincialis* by RNA-seq reveals a specific response to toxic Alexandrium minutum. 46th European Marine Biology Symposium, congress 12-16 August 2011. Rovinj (Croatia), Abstract book, p.26. a.2
 - 36 Varotto, L, Gerdol, M, Domeneghetti, S, **Manfrin, C**, Procopio, G, Rosani, U, Pallavicini, A, Venier, P. Expressed sequences denoting receptors and other proteins progressively reveal the molecular basis of the mussel immunity. In proceeding of: Italian Association of Developmental and Comparative Immunobiology (IADCI) XII Meeting. February, 16-18, 2011; Monteortone (Padova). 2011. a.2.
 - 37 Varotto, L, Rosani, U, Domeneghetti, S, Procopio, G, **Manfrin, C**, Gerdol, M, Pallavicini, A, Venier, P. Expression and diversity of AMP and other immune-related molecules in *M. galloprovincialis*. XII Meeting of Italian Association of Developmental and Comparative Immunobiology (IADCI). In proceeding of: Italian Association of Developmental and Comparative Immunobiology (IADCI) XII Meeting. February, 16-18, 2011; Monteortone (Padova). 2011. a.2.
 - 38 **Manfrin, C**, Gerdol, M, Sosa, S, Venier, P, Tubaro, A, Pallavicini, A. A first glimpse towards genes putatively involved in okadaic acid-contamination in Mediterranean mussel. 45th Congress of European Marine Biology Symposium. August 23-27 2010. Edinburgh, Scotia. Abstract book, p.26. a.2.
 - 39 Gerdol, M, **Manfrin, C**, Venier, P, Pallavicini, A. Characterization of Mytimacin-1, a novel cationic antimicrobial peptide in the Mediterranean mussel *Mytilus galloprovincialis*. 45th Congress of European Marine Biology Symposium. August 23-27 2010. Edinburgh, Scotia. Abstract book, p.24. a.2.
 - 40 **Manfrin, C**, Dreos, R, Venier, P, Battistella, S, Pallavicini, A. A microarray approach to investigate *Mytilus galloprovincialis* gene expression in response to okadaic acid treatment. Congress of the World Aquaculture Society 2009. September 25th-29th 2009. Veracruz, Mexico. Abstract book, p. 535. a.2.
 - 41 **Manfrin, C**, Dreos, R, Venier, P, Pallavicini, A. Gene expression profiles in mussels (*Mytilus galloprovincialis*, Lmk 1819) treated with Okadaic acid. 10th Workshop of (Shell)Fish Immunology. June 22-27 2008. Wageningen, The Netherlands. b.2.

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