

CURRICULUM VITAE

CINZIA VERDE

National Research Council (CNR)

Institute of Biosciences and BioResources (IBBR)

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Via Pietro Castellino 111,

80131 Naples, Italy

VERDE is a marine biochemist. Her research is focused on studying the molecular basis of cold adaptation of oxygen-binding proteins in bacteria and fish. The results of this study are summarised in **120** publications (**40 as corresponding author**) on highly-qualified international journals and book chapters including prestigious Encyclopedias.

Invited Co-author of each section of the 526-pp SCAR (Scientific Committee for Antarctic Research) 2009 Report ‘Antarctic Climate Change and the Environment (ACCE)’, SCAR Scott Polar Research Institute, Cambridge, UK. www.scar.org. Updates to the ACCE Report are presented annually to the Antarctic Treaty Consultative Meeting. The report provides a comprehensive, up-to-date account of how the physical and biological environment of the Antarctic continent and Southern Ocean has changed from Deep Time until the present day. It also considers how the Antarctic environment may change over the next century in a world where greenhouse gas concentrations are much higher than occurred over the last few centuries.

Her extensive and ongoing collaborations with outstanding researchers are well documented in her track record.

Her research is regarded as being at the forefront of the field and she frequently receives invitations to present it at international meetings. Her studies have been the object of over **40** lectures in international and national venues.

Managing Editor of *Marine Genomics* (Elsevier, IF: **1.88**).

Fully qualified for the position of **Associate Professor** in General Biochemistry and Clinical Biochemistry 05/E1 (*Abilitazione nazionale Bando* 2012 (DD n. 222/2012) (from 16.06.2014 to 10.04.2020).

Fully qualified for the position of **Full Professor** in General Biochemistry and Clinical Biochemistry 05/E1 (*Abilitazione nazionale Bando* 2013 (DD n.161/2013) (from 10.04.2015 to 10.04.2021).

Reviewer of over **70** Articles for top-level journals.

Project Reviewer for international grant agencies, e.g. European Science Foundation (ESF), National Science Foundation (NSF), German Research Foundation (DFG), etc.

Guest Editor of 7 Journal Special Issues in top-level international journals and 3 books (Springer).

Organiser of 3 international SCAR-funded Conferences on Polar Environments.

Coordinator/Partner of many national and international grant projects.

Tutor of 4 graduate and 5 PhD students.

Member of the Planning, Advisory and Scientific Group of the SCAR programme Antarctic Ecosystem: Adaptation, Thresholds and Resilience (AnT-ERA). AnT-ERA is designed as a broad international scientific programme supporting excellent research and disseminating corresponding novel information to the scientific community, decision makers and the wider public.

Member of the SCAR-IPY *ad hoc* Steering Committee for Marine Biology.

Member of the planning committee since its inception of TUNU Euro-Arctic Marine Fishes (TEAM-Fish). TEAM-Fish is a long-term international and multidisciplinary programme, led by Prof JS Christiansen, University of Tromsø (Norway). This biology programme is centred on *diversity and adaptation* of fishes thriving in the ocean area that includes Arctic Norway, the Svalbard Islands, Northeast Greenland.

Additional information is available in the internet:

- <https://scholar.google.it/citations?user=pgujduIAAAAJ&hl=it>

- https://www.researchgate.net/profile/Cinzia_Verde

- www.ibbr.cnr.it

- https://en.wikipedia.org/wiki/Cinzia_Verde

(There are no Protocol Numbers for many of these services, because they have not been registered with such numbers.

Auto certification always applies)

ACHIEVEMENTS

I am a Senior Scientist at the National Research Council, Institute of Biosciences and BioResources, Naples, Italy.

My major scientific achievements include identifying and giving structural explanations to a range of protein adaptations to low, stable temperatures, by studying Antarctic and Arctic marine organisms. I have published **92** peer reviewed papers and many scholarly book chapters including Encyclopaedia (by invitation).

I am a leading science communicator, as shown by the number of lectures given in many international countries since 2000. My influence on policymakers comes from roles such as my membership in the Steering Committee of AnT-ERA, a Scientific Research Programme of SCAR *for the exchange of knowledge and for the support of research on BIOLOGICAL PROCESSES at ecological time scales especially related to environmental change.*

In 2016 I have been nominated by members of SCAR as part of “Celebrating Women in Antarctic Research” event (*...it is time to promote and celebrate the achievements of female Antarctic scientists within the SCAR community in order to increase the visibility of these leading and influential role models for our younger female researchers and to stimulate girls around the world to pursue science careers*)

<http://www.scar.org/outreach/women>. SCAR submitted my biography to Wikipedia in recognition of my achievements in science, in protein structure and function. Wikipedia accepted my biography by dedicating a whole page on my achievements

here: https://en.wikipedia.org/wiki/Cinzia_Verde https://en.wikipedia.org/wiki/Cinzia_Verde

Significant international and national collaborations

- Professor Dario Estrin, University of Buenos Aires, Argentina. This collaboration on the structure and function of cold-adapted globins has produced **5** joint publications.
- Professor C Cheng, University of Urbana. This collaboration on the genomics of Antarctic fish has produced **4** joint publications.
- Professor Sylvia Dewilde, University of Antwerp, Belgium. This collaboration on the expression of neuroglobin and cytoglobin has produced **2** publications.
- Italian collaborations are mainly with Federico II Naples University for structural characterisation of cold-adapted globins (**20** publications), Firenze University for spectroscopy of cold-adapted globins (**10** publications), Parma University for ligand-binding properties of cold-adapted globins (**7** publications), Roma 3 University for functional characterisation of cold-adapted globins (**4** publications).
- My research focuses on two areas: molecular adaptations to polar marine environments and responses to environmental change. I have a leading international profile in both areas. My work is mainly experimental. The work is hypothesis testing, but there is also emphasis on directed discovery and innovation.
- My main focus in the last 5 years has been on characterising protein response to environmental conditions and how adaptation to environments affects this, aiming at safeguarding biodiversity from the impacts of current global warming.
- Since 2000, in collaboration with other authors, I demonstrated the hexa-coordination in fish hemoglobins. I then extended this research to Antarctic bacterial globins by incorporating novel technologies in this area, and used genomics in collaboration with Illinois University to characterise proteins such neuroglobin and cytoglobin (discovered by us in Antarctic fish) with important biomedical perspectives (including Alzheimer's disease).

Future developments:

In the immediate future and over the next 10 years, I will develop my main research theme of adaptation and responses to environmental change.

RESEARCH INTERESTS

Molecular adaptations in models of prokaryotes and eukaryotes from extreme environments; vulnerability to climate change. Impacts on ecosystems of fast climate change occurring in the polar

regions, and pressures arising from global change, invasive species, human impacts, and extreme events. Production of changes in individuals, populations and communities by synergistic stresses. Multidisciplinary studies of current biological processes in polar ecosystems, to define tolerance limits/thresholds and thereby determine resistance and resilience to environmental changes, also by means of structural/functional analysis of genes and proteins, in the framework of impacts on adaptations and evolution.

Interest on polar marine organisms: (i) they are amongst the most vulnerable species to climate change; (ii) micro/macro-organisms are a valuable source of natural products that can function as start structures of new molecules for drug discovery. New projects are aimed at taking advantage of biodiversity of marine organisms for the development of novel bioactive compounds.

Protein structure and function

From 2000 to now, I led work on protein structure/function, most importantly on observing that levels of structural flexibility were much higher at very low temperatures. The paradigm was that low temperature makes proteins less flexible and protein folding more difficult, that species adapt by making proteins more flexible, but full compensation is not possible. At the time, progress was limited by insufficient technology and by difficulties in properly characterising protein sequences. Advances in genomic technologies since 2008 have removed this barrier and I am now able to actively drive this science forwards.

The planned studies promise to make a strong step forward in understanding the fundamental mechanisms limiting abilities to respond to change and to solve a 5-decade-long major question on adaptation to cold marine environments.

My policy on publications with my staff is that, while I provide the scientific direction and drive for ongoing research, I encourage them to draft the papers in order to help them to develop as scientists. This means that I often appear as last author, even though I have led the intellectual components of the work. As leading and corresponding author, I significantly contribute to data interpretation and paper editing and revision.

EDUCATION

Classical High School Degree with maximum rating

1987: Degree in Biological Science with maximum rating and *cum laude* at the University of Naples.

1988: Qualified as “Entitled to perform the profession of Biologist”. Registry No. **16402** of the Bureau of Examinations of the State, University of Naples Federico II, **1988**.

PROFESSIONAL EXPERIENCE

2001 to Present: CNR Researcher and Group Leader of the Project “Globins” CNR-IBP, Naples, Italy

2010: CNR Senior Researcher and Group Leader of the Project “Globins” CNR- IBBR, Naples, Italy

2003-2004: Visiting Scientist”, Northeastern University, Department of Biology, Boston, USA (CNR fellowship, “Short-Term Mobility”, 2004). **Project: “Erythropoiesis”**. **November 2003-June 2004**. Protocol’s number “Short Term Mobility”: 000638

1989 (January-June): Visiting Scientist” Department of Pathology, WHO, Immunology Research and Training Centre (Switzerland), Project “Production of Monoclonal Antibodies Against Ribonuclease”. Fellowship: **Federation of European Biochemical Societies (FEBS)**. Approval letter of C. Gancedo, *Chair* of “FEBS Fellowships Committee, 26th December 1988.

SIB (*Società Italiana di Biochimica*) Fellowship: Approval letter of SIB Fellowships Committee 17th November 1988).

HONOURS, LEADERSHIP/SERVICE, PROPOSALS REVIEWER

2016: Member of the Editorial Board of *Biodiversity Journal of Life on Earth* (Taylor & Francis) http://www.tandfonline.com/loi/tbid20?open=12#vol_12 Published by Biodiversity Conservancy <http://www.biodiversityconservancy.org/> and Taylor & Francis Journals

2016: Member of the Scientific Committee *XIXth International Conference on Dioxygen Binding and Sensing Proteins*, Hamburg (UK) **11-14 September 2016**

- 2016: Guest Editor** of the Special issue, **Marine Genomics** “Navigating the Future: Cross Sector Marine Genomics” (Labes A, Reich M, Giuliano L, Verde C eds)
<http://www.journals.elsevier.com/marine-genomics/news/call-for-papers-navigating-the-future-cross-sector-marine-ge/>
- 2016: Guest Editor** of the Special issue, **Marine Genomics** “Genome-powered perspectives in integrative physiology and evolutionary biology” (Berenbrink M, Cossins A, Verde C, eds)
- 2016: Guest Editor** of the Special issue, **Biodiversity-Journal of Life on Earth** “Evolution and Biodiversity in Polar Regions - Molecular and Genetic Advances” (di Prisco G, Giordano D, Gutt J, Verde C, eds)
- 2015: Guest Editor** of the Special issue, **Marine Genomics** “The Marine Genome: Structure, Regulation and Evolution” (Danovaro R, Costantini M, Verde C, eds)
- 2016: Research Fellow** Stazione Zoologica A. Dohrn, Naples, Italy (*Consiglio di Amministrazione n. 8 del 2 Marzo 2016*)
- 2014: Organiser of** the AnT-ERA Workshop on *Molecular and genetic advances to understanding evolution and biodiversity in the polar regions - The legacy of EBA*, IBBR, Naples. **2-3 October 2014**
- 2014: Member** of the Scientific Committee of the AnT-ERA Workshop on *Molecular and genetic advances to understanding evolution and biodiversity in the polar regions - The legacy of EBA*, IBBR, Naples. **2-3 October 2014**
- 2014: Reviewer** of the Project Pegasus- Short application to the Research Foundation Flanders- FWO. Structural and functional investigations into a tRNA-modifying enzyme complex tuned by GTP hydrolysis, A Pica, Coordinator
- 2014: Reviewer** of the Project NSF MCB/1112/1413141/, National Science Foundation Proposal: **1341661 Collaborative Research: Causes of parallel molecular evolution: insights from protein engineering** Prof Jay Storz
- 2014: Member** of the Scientific Committee of the *XVIIIth International Conference on Dioxygen Binding and Sensing Proteins*, Manchester (UK) **6-10 July 2014**
- 2013: Reviewer** for SCAR fellowship applicants
- 2013: Reviewer** of the Project NSF 13-527, National Science Foundation Proposal: **1341661 Phylogenomic study of adaptive radiation in Antarctic fishes**, Prof Thomas Near
- 2013: Reviewer** of the Project P 26465-B25, Biological and Medical Sciences Austrian Science Fund Proposal **1341661 Evolutionary dynamics of Eocene Antarctic cartilaginous fishes**, Prof Jürgen Kriwet

- 2013: Reviewer** of the Project 14-27546S Czech Science Foundation Proposal *Prokaryotic community composition of soils of the James Ross Island, Antarctica - a potential pool for biotechnology*, Prof Ivo Sedláček
- 2012: Research Fellow** Dept of Biology, Roma Tre University, Rome, Italy. Decision taken in the Faculty Meeting of 30.05.2012
- 2012: Member** of the Scientific Committee of the *XVIIth International Conference on Dioxygen Binding and Sensing Proteins*, Parma (Italy) **29 August-1 September**
- 2012: Guest Editor** of the Special issue, **Marine Genomics** “Molecular and genetic advances to understanding evolution and biodiversity in the polar regions” (Verde C, di Prisco G, Convey P, eds)
- 2012: Reviewer** of the Project 5111, National Science Foundation Proposal: 1246181 Collaborative Research: Phylogenomics and the adaptive radiation of Antarctic notothenioid fishes (Teleostei: Percomorpha), Prof Thomas Near
- 2012: Reviewer** of the Project 09-612, National Science Foundation Proposal:1204260 *Synthesis of genomic, structural biology, and molecular physiological analyses to understand adaptive mtDNA variation in polar species*, Dr Michael Garvin
- 2012: Editor** From Pole to Pole, Adaptation and evolution in marine environments. A book series on the scientific achievements of environmental research during the International Polar Year (IPY), C. Verde and G. di Prisco, eds, Vol 2, Springer
- 2012: Editor** From Pole to Pole, Adaptation and evolution in marine environments. A book series on the scientific achievements of environmental research during the International Polar Year (IPY), G. di Prisco and C. Verde, eds, Vol 1, 222 pp. Springer
- 2012-Present: Member** of the Planning and Scientific Group of SCAR Programme: Antarctic Thresholds - Ecosystem Resilience and Adaptation (AnT-ERA)
<http://www.scar.org/antera/antera-about>
- 2011: Member** of the Scientific Committee of *CAREX Conference on Life in Extreme Environments*, Dublin (Ireland) **18-20 October 2011**
- 2011: Reviewer** of the Project “Hemoglobin layered nanoparticles”, ASTRID 2011, *Agence National de la Recherche* (ANR), France, Coordinator: Prof. Michael Marden
- 2011: Guest Editor** of a Special issue, *Oecologia Australis: Antarctic-South American interactions in the marine environment* (ASAI) Campos L, Bassoi M, Verde C, Gutt J, eds, Vol 15: 40-50.
ISSN: 21776199

- 2011: Reviewer** of the Project “New tools and directions for the understanding of the effect of environmental changes on fish physiology”, *Agence National de la Recherche* (ANR), France, Programme for Post-docs
- 2010: Member** of the Scientific Committee of the Workshop *Polar Marine and Lacustrine Organisms: Gene and Protein Evolution in a Changing Environment, in the framework of the SCAR Programme SCAR, IPY, Evolution and Biodiversity in the Antarctic. The Response of Life to Change (EBA)* IBP, Naples. **24-25 May 2010**
- 2010: Reviewer** of the Project “Phylogeny of the Cumacea (Crustacea) and the evolution of cumacen hemocyanin” **RE 3160/1-1**-DFG-Erstantrag (11.05.2010). DFG Deutsche Forschungsgemeinschaft (*German Research Foundation*) Coordinator: Dr. Peter Rehm
- 2010: Member** of the Scientific Committee of the *XVIth International Conference on Dioxygen Binding and Sensing Proteins*, Antwerp (Belgium) **22-26 August 2010**
- 2009: Editor** of a Special issue of *Marine Genomics* devoted to the Workshop “*The Polar and Alpine Environments: Molecular and Evolutionary Adaptations in Prokaryotic and Eukaryotic Organisms*” (G. di Prisco, P. Luporini, L. Tutino, C. Verde, eds), Elsevier. Vol 2, Issue 1, pp 1-80 (March 2009). Vol 2, Issue 2, pp 81-148 (June 2009)
- 2008-Present: Managing Editor** of *Marine Genomics* (Elsevier)
- 2009-Present: Expert of Marine Biology** in the *Working Group 3: Environmental change and marine ecosystems. Marine observatories and ecosystem time series*. Svalbard Integrated Arctic Earth Observing System (SIOS). SIOS is a Collaborative Project and Coordination and Support Actions for Construction of New Infrastructures - Preparatory Phase - funded by EU under INFRA-2010-2.2.3
- 2008: Present-External Reviewer** of the *National Science Foundation* for Polar Research
- 2008: Member** of the Scientific Committee of the *XV International Conference on Dioxygen Binding and Sensing Proteins*, Aarhus (Denmark). **17-21 August 2008**
- 2008: Editor**, “Dioxygen Binding and Sensing Proteins”, Protein Reviews Series (M Bolognesi, G di Prisco, C Verde eds), Springer
- 2008: Member** of the Scientific Committee of the Workshop “*The Polar and Alpine Environments: Molecular and Evolutionary Adaptations in Prokaryotic and Eukaryotic Organisms*”, IBP, Naples. **29-30 May 2008**
- 2008: Reviewer**, Project 0839007, National Science Foundation, Proposal:08-535 “*Antarctic organisms and ecosystems*”, Coordinator: Prof. Thomas Near
- 2008: Associate Partner in “CAREX”** (The Coordination Action for Research Activities on Life in Extreme Environments) FP7 call ENV.2007.2.2.1.6

- 2007: Editor** of a Special Issue of *Gene*, devoted to the “XIVth International Conference on Dioxygen Binding and Sensing Proteins” (L Moens, M Bolognesi, G di Prisco, C Verde eds), Elsevier. Vol 398, Issues 1-2, pp 1-248
- 2007-Head of the Research Area** “Polar Biology” (TA. P02.021.001, Department of Earth and Environment (DTA), CNR: “*Life and adaptations in polar environments*”
- 2006: Present-Invited Member and Participant, TUNU-Mafig** (TUNU = *East Greenland*, MAFIG = *MARine Fishes of N.E. Greeland*), “Lead Project” of IPY
- 2006: Present-Invited Member and Participant, EBA** (*Evolution and Biodiversity in the Antarctic: the Response of Life to Change*), Scientific Committee on Antarctic Research (SCAR)
- 2006: Present-Member** of “SCAR-IPY *ad hoc* Steering Committee for Marine Biology”
- 2006: Member** of the Scientific Committee of the XIVth International Conference on Dioxygen Binding and Sensing Proteins, Naples, (Italy). **3-7 September 2006**
- 2001-Present:** Vice-President of the CNR Network of Polar Research “Polarnet”
- 2001: Coordinator** of the Whole Sector Biological Sciences (PNRA) in Italy for the Theme: “Molecular bases of cold adaptation in Antarctic and Arctic organisms”, Project “*Physiological, biochemical and molecular bases of evolutionary adaptation in teleosts*”. Prot. N. 815. Ministero dell’Istruzione, dell’Università e della Ricerca. Commissione Scientifica Nazionale per l’Antartide.

INVITED TALKS, CHAIR/CONVENOR AT MEETING SESSIONS

- 2017- Chair of three Sessions XII SCAR BIOLOGY Symposium**, Leuven (Belgium): **S08:** Response to climate change: understanding bio resilience; **S09:** Adaptation and processes in top predators; **S10:** Understanding Physiology (including '-omics' approaches) **10-14 July 2017**
- 2017- Invited Lecture MicroArctic meeting**, Akureyri (Iceland) **03-09 April 2017**
- 2016- Invited Lecture 41 CIESM Conference**, Kiel (Germany) **12-14 September 2016**
- 2016- Keynote Lecture XXXIV SCAR Open Science Conference**, Kuala Lumpur (Malaysia) **20-30 August 2016**
- 2015- Lecture 6th International Conference on Polar and Alpine Microbiology**, České Budějovice (Czech Republic) **6-10 September**
- 2015- Lecture SCAR cross-program workshop**, Barcelona (Spain) **16-18 September**
- 2015- Lecture Society of Experimental Biology**, Annual Meeting, Prague (Czech Republic) **30 June-3 July**
- 2014- Chair of Session AnT-ERA Workshop on Molecular and genetic advances to understanding evolution and biodiversity in the polar regions - The legacy of EBA**, IBBR, Naples **2-3 October**

2014-Chair of Session XVIIIth International Conference on Dioxygen Binding and Sensing Proteins, Sheffield (UK) **6-10 July**

2014- Chair of Session XXXIII SCAR Open Science Conference, Auckland, (New Zealand) **23-31 August**

2014- Lecture XXXIII SCAR Open Science Conference, Auckland, (New Zealand) **23-31 August**

2014- Invited Lecture, *Society of Experimental Biology*, Annual Meeting, Manchester (UK) **1-4 July**

2013-Lecture *Society of Experimental Biology*, Annual Meeting, Valencia (Spain) **3-6 July**

2013-Chair of Session XI SCAR BIOLOGY SYMPOSIUM. Barcelona, (Spain) **15-19 July**

2013-Lecture XI SCAR BIOLOGY SYMPOSIUM. Barcelona, (Spain) **15-19 July**

2013-Invited Lecture Convegno “Giornata Antartica” Università Roma 3, Roma (Italia). **15 March 2013**

2012-Chair of Session XVIIth International Conference on Dioxygen Binding and Sensing Proteins, Parma (Italy). **29 August-1 September**

2012-Invited Lecture Side-Meeting Event, *XXXII SCAR Open Science Conference*, Portland, (USA) **13-25 July**

2012-Lecture Session: Bipolar Science: Connections with the Arctic, *XXXII SCAR Open Science Conference*, Portland, (USA) **13-25 July**

2012-Chair of session Evolutionary Adaptation to the Antarctic Environment, *XXXII SCAR Open Science Conference*, Portland, (USA) **13-25 July**

2012-Lecture, *IPY Conference Montreal, From Knowledge to Action*, Montreal, (Canada) **22-27 April**

2012-Invited Lecture *Planet Under Pressure*, Elsevier Conference, London (UK) **25-28 March**

2011-Lecture *Society of Experimental Biology*, Glasgow, (Scotland) **30 June-4 July**

2011-Invited Expert *European Science Foundation (ESF) “Brainstorming meeting: towards a wider scenario”*, Cascais (Portugal) **10-11 February 2011**

2011-Lecture *World Conference on Marine Biodiversity*, Aberdeen (Scotland) **26-30 September 2011**

2011-Chair and Organiser Side-Meeting Event Advances on Evolution and Biodiversity in Marine Antarctic Environment, *World Conference on Marine Biodiversity*, Aberdeen (Scotland) **26-30 September**

2011-Chair Session 1 Advances on Evolution and Biodiversity in Marine Antarctic Environment, *World Conference on Marine Biodiversity*, Aberdeen (Scotland) **26-30 September**

- 2011-Lecture** *CAREX Conference on Life in extreme environments*, Dublin (Ireland) **18-20 October 2011**
- 2011-Chair of Session** *CAREX Conference on Life in extreme environments*, Dublin (Ireland) **18-20 October 2011**
- 2011-Keynote Lecture** *International Debate, Festival della Scienza*, Genova (Italy) **21 October-2 November 2011**
- 2011-Organiser** *International Debate, Festival della Scienza*, Genova (Italy) **21 October-2 November 2011. Funded by the Festival della Scienza organisation**
- 2010-Organiser** of the Workshop *Polar Marine and Lacustrine Organisms: Gene and Protein Evolution in a Changing Environment, in the framework of the SCAR Programme SCAR, IPY, Evolution and Biodiversity in the Antarctic. The Response of Life to Change (EBA)* IBP, Naples (Italy) **24-25 May 2010.**
- 2010-Invited Lecture** Workshop *Polar Marine and Lacustrine Organisms: Gene and Protein Evolution in a Changing Environment, in the framework of the SCAR Programme SCAR, IPY, Evolution and Biodiversity in the Antarctic. The Response of Life to Change (EBA)* IBP, Napoli (Italy) **24-25 May 2010**
- 2010-Invited Participant** *WORKSHOP ON FUTURE OF SCAR BIOLOGY*, Castiglioncello (Italy) **27-28 May 2010**
- 2010-Chair of Session** *XVIth International Conference on Dioxygen Binding and Sensing Proteins*, Antwerp (Belgium). **22-26 August 2010**
- 2010-Invited Lecture** *Society of Experimental Biology*, Prague (Czech Republic) **30 June- 3 July 2010**
- 2010-Lecture** *The International Polar Year Oslo Science Conference* Oslo (Norway) **8-12 June 2010**
- 2010-Keynote Lecture** *Biodiversity: Life response to Changes*, ESF Workshop, Strasbourg (France) **27 September 2010**
- 2009-Keynote Lecture** *X SCAR International Biology Symposium*, Sapporo, Hokkaido (Japan). **26-31 July 2009**
- 2009-Chair of Session** *X SCAR International Biology Symposium*, Sapporo, Hokkaido (Japan). **26-31 July 2009**
- 2009-Invited Lecture** *European Community-CAREX - Laboratory Procedures Workshop*, Viterbo (Italy). **25-26 June 2009**
- 2009-Invited Lecture**, *ASLO Aquatic Sciences Meeting Conference*, Nice (France). **25-30 January 2009**

2008-Invited Lecture *European Community-CAREX - Identification of model ecosystems in extreme environments*, Sant Feliu de Guixols (Spain). **30 November-2 December 2008**

2008-Keynote Lecture International Debate, *Festival della Scienza*, Genova (Italy). **23 October-4 November 2008**

2008-Organiser International Debate, *Festival della Scienza*, Genova (Italy). **23 October-4 November 2008. Funded by the *Festival della Scienza* organisation**

2008-Invited Lecture *Joint EC-US/CIESM Workshop on Marine Genomics: at the Interface of Marine Microbial Ecology and Biotechnological Applications*, Montecarlo (Monaco). **12-14 October 2008**

2008-Invited Participant due to her expertise and role in Marine Genomics *Joint EC-US/CIESM Workshop on Marine Genomics: at the Interface of Marine Microbial Ecology and Biotechnological Applications*, Montecarlo (Monaco). **12-14 October 2008**

2008-Invited Lecture *Ciclo di seminari per i dottorandi della Scuola di Dottorato in Scienze Polari*, Università di Siena, Siena (Italy). **12 September 2008**

2008-Keynote Lecture *XV International Conference on Dioxygen Binding and Sensing Proteins*, Aarhus (Denmark). **17-21 August 2008**

2008-Chair of Session *XV International Conference on Dioxygen Binding and Sensing Proteins*, Aarhus (Denmark). **17-21 August 2008**

2008-Invited Lecture *XXX SCAR/IASC IPY Open Science Conference*, St. Petersburg (Russia). **5-7 July 2008**

2008-Organiser of the Workshop “*The Polar and Alpine Environments: Molecular and Evolutionary Adaptations in Prokaryotic and Eukaryotic Organisms*”, IBP-CNR, Naples. **29-30 May 2008**

2008-Keynote Lecture *XVIII Settimana della Cultura Scientifica*, Rome, (Italy). **7 March 2008**

2007-Keynote Lecture upon invitation, “*Ny-Ålesund and IPY*” Seminar, Cambridge (UK.) **16-17 October 2007**

2007-Invited Speaker *6th PNRA Meeting on Antarctic Biology*, Follonica (Italy). **7-9 June 2007**

2007-Keynote Lecture “Italy-Norway Meeting”, Rome (Italy). **11 May 2007**

2006-Invited Lecture *Workshop on Antarctic Evolutionary Biology*, Leuven (Belgium) **4-5 December 2006**

2006-Invited Participant *Workshop on Antarctic Evolutionary Biology*, Leuven (Belgium) **4-5 December 2006**

2006-Lecture *Marine Genomics*, Sorrento (Italy). **28 October-1 November 2006**

2006-Invited Lecture *Conferenza Nazionale sulla Ricerca nelle aree Polari*, Rome (Italy).

17-18 October 2006

2006-Organiser of the “*XIVth International Conference on Dioxygen Binding and Sensing Proteins*”, Stazione Zoologica Anton Dohrn, Naples (Italy). **3-7 September 2006**

2006-Invited Lecture *XIVth International Conference on Dioxygen Binding and Sensing Proteins*, Naples, (Italy). **3-7 September 2006**

2006-Invited Lecture *XXIX SCAR Meeting and Open Science Conference*, Hobart (Australia). **12-14 July 2006**

2005-Keynote Lecture *Third International Symposium on the Arctic Research and Seventh Ny-Ålesund Scientific Seminary*, Tokyo (Japan). **22-24 February 2005**

2005-Invited Lecture, *The ICEFISH Symposium*, Walpole, Maine (USA). **21-24 August 2005**

2005-Invited Lecture *IX SCAR International Antarctic Biology Symposium*, Curitiba (Brasil). **25-29 July 2005**

2005-Invited Lecture *XVI riunione della sezione Sardegna della Società Italiana di Biochimica e Biologia Molecolare*, Sassari, (Italy). **24 June 2005**

2004-Lecture, *Ecology of the Antarctic Sea Ice Zone, Final Symposium*, Korčula (Croatia). **27 September-1 October 2004**

2004-Lecture *XXVIII SCAR & COMNAP XVI: Evolution and Biodiversity of Life in Polar Regions*, Bremen (Germany). **25-31 July 2004**

2002-Invited Lecture *EVOLANTA 2nd Workshop: Adaptive Evolution of Antarctic Marine Organisms*, Pontignano, Siena (Italy). **1-6 December 2002**

2002-Invited Lecture *9th Int Symp on Antarctic Science. Environmental changes in Antarctica: impacts and responses*, Ansan-Seoul (South Korea). **8-10 October 2002**

2002-Invited Lecture *1st Korea-Italy Workshop on Polar Research*, Ansan-Seoul (South Korea). **4 October 2002**

2002-Invited Participant *1st Korea-Italy Workshop on Polar Research*, Ansan-Seoul (South Korea). **4 October 2002**

EDUCATION/TEACHING ACTIVITIES

Mentor of Young Scientist

Tutor of 4 experimental theses and 5 PhD students.

2013-2016-Tutor of PhD student. Candidate: Giovanna Altomonte. PhD in BIOMEDICAL SCIENCES AND TECHNOLOGIES/XXIX cycle, Project: “Structural and functional characterization of globins in Arctic and Antarctic fish”. Roma Tre University

2009-2011-Tutor of PhD student. Candidate: Roberta Russo. PhD in CHEMICAL SCIENCES /XXIV cycle, Project: “Structure and function of hemoproteins from cold-adapted organisms”. “Federico II Naples University”.

2009-2011-Tutor of PhD student. Candidate: Alessia Riccio. PhD in CHEMICAL SCIENCES /XXIV cycle, Project: “Functional and comparative studies of hemoglobins of polar fish”. “Federico II Naples University”.

2009-2011-Tutor of PhD student. Candidate: Daniela Coppola. PhD in BIOTECHNOLOGICAL SCIENCES/XXIV cycle, Project: “Structural and functional studies of hemoproteins from polar marine organisms”. “Federico II Naples University”.

2004-2007-Tutor of PhD student. Candidate: Daniela Giordano. PhD in Biochemical studies of the proteome/XIX cycle “Structure, function and evolution of haemoglobins of polar fishes”. Cattolica del Sacro Cuore University, Rome.

2013-2014-Tutor of an experimental thesis for a master’s degree in Medical Biotechnologies, “Federico II Naples University”.

Thesis: “Structural and functional characterisation of cytoglobins of the Antarctic fishes *Chaenocephalus aceratus* and *Dissostichus mawsoni*”.

2005-2008-Tutor of an experimental thesis for a master’s degree in Chemistry, “Federico II Naples University”.

Thesis: “Struttura ed evoluzione dell’emoglobina troncata “two on two” del batterio antartico *Pseudoalteromonas haloplanktis TAC125*”.

2004-2006.-Tutor of an experimental thesis for a master’s degree in Biological Sciences, “Federico II Naples University”.

Thesis: “Il sistema di trasporto dell’ossigeno del teleosteo nototenioideo sub-antartico *Cottoperca gobio*”.

2001-2003-Tutor of an experimental thesis for a master's degree in Chemistry, "Federico II Naples University".

Thesis: "Struttura e funzione di emoglobine da specie adattate al freddo".

Teaching

2012: PhD school lectures *Ciclo di seminari per i dottorandi della Scuola di Dottorato* per le SCIENZE della Terra, ambientali e POLARI. **Invited Lecture** on Evolutionary adaptations in polar marine organisms. The role of the time and oxygen. Academic Year 2011-2012

There are no protocol numbers. The decisions of the Faculty Council did not entail protocol numbers.

2012: PhD school lectures in Chemistry "Studio di emoproteine con funzione protettiva da specie reattive dell'azoto e dell'ossigeno", University Federico II, Naples, Italy

1999-2000: Didactic Integrative Activity in teaching Clinical Enzymology, School of Specialisation in Biochemistry and Clinical Chemistry, Degree in Medicine and Surgery, Faculty of Medicine and Surgery, University of Naples Federico II. **Academic year: 1999-2000**

1988-1989: Didactic Integrative Activity in teaching Clinical Enzymology, School of Specialisation in Biochemistry and Clinical Chemistry, Degree in Medicine and Surgery, Faculty of Medicine and Surgery, University of Naples Federico II. **Academic year: 1988-1989**

1987-1988, 1988-1989, 1989-1990-Didactic Integrative Activity, in the framework of the Degree in Biological Sciences, practical and theoretical experimental lab activity in Biological Chemistry, Faculty of Sciences, University of Naples Federico II. **Academic years: 1987-1988, 1988-1989, 1989-1990**

1987-1988, 1988-1989, 1989-1990-Official Membership of the Committees for Examinations in Biological Chemistry for students of the Degree in Biological Sciences, Faculty of Sciences, University of Naples Federico II. **Academic years: 1987-1988, 1988-1989, 1989-1990.**

1998-1999-Graduate degree programme in Neurophysiopathology for Biochemistry. University Federico II, Naples, Italy. Protocol N. 129 (Faculty Council 21 December 1998). University Federico II, Naples, Italy.

RESEARCH GRANT EXPERIENCE

2014-2020- Leading Investigator Theme 1: *Physiological limits, bio-molecular processes, and thresholds* for the international SCAR project AnT-ERA for communication, dissemination and coordination. **Total funding in 2016: 20.000 USD**

SCAR funds an amount of US \$ 20 000 per year for a period of eight years, depending on successful interim evaluations. Decisions about the use of these funds are made by the SC. Priorities for financial support are: travel funds (especially early career), capacity building (especially new emerging Antarctic programmes), and outreach

2002-Present Partner TUNU-MAFIG: Marine Fishes of NE Greenland – diversity and adaptation; The research programme is funded and managed by the University of Tromsø since 2002 and comprises scientists from 10 nations, among those Italy for participation in oceanographic expeditions. . **Four Postdocs of my lab have participated in the expeditions for tissue and sample collections.**

2016-Associated Partner of WP 3: Polar microorganisms: responses to warming of model organisms and release of pathogens into the environment; EU Project MicroArctic Innovative Training Networks (ITN) Call: H2020-MSCA-ITN-20152016- (<http://www.microarctic.eu/>).
Total funding 3.8 M EURO

2014-Partner in the Project *Detrimental effects of oil exposure on polar cod investigated by genome-wide transcriptome analysis and enzyme assays of vital organs*, coordinated by Dr. Øivind Andersen (Nofima; Norway)

2013/2014-Coordinator of the Project CNR_CONICET (Argentina) *Structure and function of hemoproteins from Antarctic microorganisms*. Prot. N. 0005262 (28.01.2013)
Total funding EURO 8000

2013-Coordinator of the PNRA Project 2013/AZ1.20 “*The emergent role of new globins of Antarctic fish in the defence against oxidative and nitrosative stress*”. Prot.-n. 0048514
Total Funding EURO 58.000.00

2013-Participant in the PNRA Project 2013/C1.04 “*TUNU Euro-Arctic Marine Fishes (TEAM-Fish): Impact of climate change on biodiversity, adaptation, contaminant bioaccumulation. Comparison with Antarctic*, coordinated by Dr. Simonetta Corsolini (Siena University)
Total Funding EURO 70.000,00
VERDE EURO 26.000,00

2013-Participant in the PNRA Project 2013/AZ1.10 “*Response of Antarctic notothenioids to thermal stress: an integrated molecular approach to investigate the effects of increasing temperatures in *Trematomus bernacchii* and *Chionodraco hamatus**”, coordinated by Prof. Tomaso Patarnello (Padova University)

Total Funding EURO 96.000,00

2013-Participant in the Project PGR 00151 Italia-Argentina, Ministero degli Affari Esteri *Il ruolo delle emoglobine nella rimozione delle specie reattive dell'ossigeno e dell'azoto* coordinated by Cristiano Viappiani (Parma University)

Total Funding EURO 21.000,00

VERDE EURO 2000,00 + 10.000,00 for traveling

2012-Partner in the project “*Interaction of thermal stress and toxicant exposure in polar cod investigated by genome-wide transcriptome analysis*” coordinated by Dr. Øivind Andersen (Nofima, Norway).

2012- Co-Leader of a Research Team in the Project PRIN 2010 “*Neuroprotection vs Neurodegeneration: Role of Estrogen-Induced Neuroglobin Expression*”, coordinated by Prof. Paolo Ascenzi (Roma University). Prot. N.20109MXHMR

Total Funding EURO 752.892,00

VERDE EURO 50.000,00

2012-Participant in the Project Italia-Argentina, Ministero degli Affari Esteri, “*Il ruolo delle emoglobine nella rimozione delle specie reattive dell'ossigeno e dell'azoto*” coordinated by Cristiano Viappiani (Parma University)

Total Funding EURO 21.000,00

VERDE EURO 4.500,00 + 10.000,00 for traveling

2011-Participant in the Project Italia-Argentina, Ministero degli Affari Esteri, “*Il ruolo delle emoglobine nella rimozione delle specie reattive dell'ossigeno e dell'azoto*” coordinated by Cristiano Viappiani (Parma University)

Total Funding EURO 30.000,00

VERDE EURO 6.250,00 + 10.000,00 for traveling

2010-2011-Group Leader of a Research Team in the PNRA Project 2010/A1.08 “*Role of the Oxygen in the Evolution – Genes and Proteins of Polar Fishes*”, coordinated by Ennio Cocca (CNR, Naples)

Total Funding EURO 125.000,00

VERDE EURO 49.000,00

2009-2010-Group Leader of a Research Team in the PNRA Project 2010/A2.02

“*Biogeochemical characterization of sub-glacial Antarctic Lakes*”, coordinated by Prof. Carlo Barbante (Venezia University)

Total Funding EURO 150.000,00

VERDE EURO 21.000,00

2007-2009-Group Leader of a Research Team in the PRIN Project 2007 SFZXZ7_001

“Structure, function and evolution of heme proteins from Arctic and Antarctic marine organisms: cold-adaptation mechanisms and acquisition of new functions”, coordinated by Prof. L. Mazzearella (Naples University) Prot. N. 12673 (09-02-2009).

Total Funding EURO 257.400,00

VERDE EURO 50.000,00

2006-2013-Participant in the EBA (*Evolution and Biodiversity in the Antarctic: the Response of Life to Change*) SCAR programme. WP2 Evolutionary Adaptation to the Antarctic Environment.

Total Funding \$145,875

2006-Group Leader and Coordinator of the International IPY Project: ICEFISH

(“International Collaborative Expedition to collect and study Fish Indigenous to Sub-Antarctic Habitats”), chosen by the Steering Committee of ICSU-WMO (“International Council for Science-World Meteorological Organisation”) as “Lead Project” for the International Polar Year (IPY)

2006-Group Leader and Coordinator of the CNR Project: “Bloodthirsty and erythropoiesis”

CNR. Proposal number 971

Total Funding EURO 7.000,00

2005-2007-Group Leader of a Research Team in the PNRA Project 2005/1.04 “Polar Aquarium”

Total Funding EURO 80.000,00

VERDE EURO 80.000,00

2005-2007-Group Leader of a Research Team in the PNRA Project 2005/1.01 “Genomics and Proteomics of the Antarctic Psychrophilic Ciliate Euplotes focardii” coordinated by Prof.

Cristina Miceli (Camerino University)

Total Funding EURO 220.000,00

VERDE EURO 70.000,00

2005-2007-Group Leader of a Research Team in the PNRA Project 2005/12.1 “Exploration and characterisation of Lake Concordia, East Antarctica” coordinated by Prof. Carlo Barbante

(Venezia University)

Total Funding EURO 300.000,00

VERDE EURO 47.800,00

2004-Participant in the PNRA Project EVOLANTA (“Evolution of Antarctic organisms”)

Total Funding EURO 20.000,00

VERDE EURO 20.000,00

2004-2006-Group Leader of a Research Team in the PNRA Project 1.3 2004/2006 “*Evolution and molecular adaptation of the oxygen transport system in polar marine organisms. Structure, function and genes*” coordinated by Dr. Ennio Cocca (CNR, Naples)

Total Funding EURO 600.000,00

VERDE EURO 250.000,00

2002-2003-Participant in the PNRA Project 2002/1.09 “*Transportation and maintenance of Antarctic fish*”, coordinated by Elio Parisi (CNR, Naples)

Total Funding EURO 50.000,00

VERDE EURO 25.000,00

2000-2004- Group Leader of a Research Team in the Project “*Erythrocyte functions, ion transport and hemoglobin-cell interaction in Arctic marine organisms*” (CNR). Programme *Strategico Artico* CNR 2000; 2001; 2002-2003; 2003-2004. Prot. N. 176/04.

Total Funding EURO 130.000,00

VERDE EURO 80.000,00

2002-2003-Group Leader of a Research Team in the PNRA Project 1.2, 2000-2002 “*Molecular bases of cold adaptation in Antarctic and Arctic organisms*”, Project “*Physiological, biochemical and molecular bases of evolutionary adaptation in teleosts*”

Total Funding EURO 400.000,00

VERDE EURO 160.188,00

1999-2001-Participant in the PNRA Project: “Molecular bases of cold adaptation in Antarctic teleosts” (1.2, 1999-2001), coordinated by Maurizio Tamburrini (CNR, Naples)

Total Funding EURO 273.206,00.

REFEREED PUBLICATIONS

Berenbrink M, Verde C, Cossins AR **2016** Genome-powered perspectives in integrative physiology and evolutionary biology. *Marine Genomics* **30**: 1-2

2016 IF: 1.88

Verde C, Giordano D, Bellas CM, di Prisco G, Anesio AM **2016** Polar marine microorganisms and climate change. *Adv Microb Physiol* **69**: 187-215

Corresponding author

2016 IF: 3.41

Verde C, Giordano D, Gutt J, di Prisco G **2016** Editor's corner Molecular-genetic studies of polar biodiversity – Preface. *Biodiversity* 17: 1-3.

Corresponding author

IF: NA

Fiocchetti M, Cipolletti M, Leone S, Naldini A, Carraro F, Giordano D, **Verde C**, Ascenzi P, Marino M **2016** Neuroglobin in breast cancer cells: effect of hypoxia and oxidative stress on protein level, localization, and anti-apoptotic function. *PLoS ONE* 11(5): e0154959. doi:

10.1371/journal.pone.0154959

2016 IF: 4.41

Danovaro R, Costantini M, **Verde C** **2015** The marine genome: structure, regulation and evolution. *Marine Genomics*. Nov 7. pii: S1874-7787(15)00135-X. doi: 10.1016/j.margen.2015.11.002

Corresponding author

2015 IF: 1.88

Ascenzi P, di Masi A, Leboffe L, Frangipani E, Nardini M, **Verde C**, Visca P **2015** Structural biology of bacterial haemophores. *Adv Microb Physiol* **67**: 127-175

<http://dx.doi.org/10.1016/bs.ampbs.2015.09.002>

2015 IF: 3.41

Giordano D, Russo R, Coppola D, Altomonte G, di Prisco G, Bruno S, **Verde C** **2015** “Cool” adaptations to cold environments: globins in Notothenioidei. *Hydrobiologia*, Biology of the Ross Sea, **761**: 293-312. ISSN: 0018-8158. doi: 10.1007/s10750-015-2306

Corresponding author

2015 IF: 2.66

Coppola D, Giordano D, Abbruzzetti S, Marchesani F, Balestrieri M, di Prisco G, Viappiani C, Bruno S, **Verde C** **2015** Functional characterisation of the haemoglobins of the migratory notothenioid fish *Dissostichus eleginoides*. *Hydrobiologia*, Biology of the Ross Sea, **761**: 315-333. ISSN: 0018-8158 doi:10.1007/s10750-015-2439-2

Corresponding author

2015 IF: 2.66

Giordano D, Coppola D, Russo R, Denaro R, Giuliano L, Lauro F, di Prisco G, **Verde C 2015** Marine microbial secondary metabolites: pathways, evolution and physiological roles. *Adv Microb Physiol* **66**: 357-428. ISSN: 0065-2911 doi: 10.1016/bs.ampbs.2015.04.001

Corresponding author

2015 IF: 3.41

di Prisco G, **Verde C 2015** The Ross Sea and its rich life: research on molecular adaptive evolution of stenothermal and eurythermal Antarctic organisms and the Italian contribution. *Hydrobiologia, Biology of the Ross Sea*, **761**: 335-361(1). DOI: 10.1007/s10750-015-2425-8

2015 IF: 2.66

Giordano D, Pesce A, Boechi L, Bustamante JP, Caldelli E, Howes BD, Riccio A, di Prisco G, Nardini M, Estrin D, Smulevich G, Bolognesi M, **Verde C 2015** Structural flexibility of the heme cavity in the cold-adapted truncated hemoglobin from the Antarctic marine bacterium *Pseudoalteromonas haloplanktis* TAC125. *FEBS J* **282**: 2948–2965. ISSN: 1742-464X. doi: 10.1111/febs.13335

Corresponding author

2015 IF: 4.24

Mazzarella L, Merlino A, Vitagliano L, **Verde C**, di Prisco G, Peisach J, Vergara A **2014** Structural modifications induced by the switch from an endogenous bis-histidyl to an exogenous cyanomet hexa-coordination in a tetrameric haemoglobin. *RSC Advances* **4**: 25852

RSC Advances

2014 IF: 3.84

Arnone MI, Bowler C, **Verde C**, Glöckner FO **2014** Editor's message. *Marine Genomics* **13**: iii–iv

2014 IF: 1.80

Giordano D, Coppola D, Russo R, Tinajero-Trejo M, di Prisco G, Lauro F, Ascenzi P, **Verde C 2013** The globins of cold-adapted *Pseudoalteromonas haloplanktis* TAC125: from the structure to the physiological functions. *Adv Microb Physiol* **63**: 329-389

Corresponding author

2013 IF: 5.55

Russo R, Zucchelli S, Codrich M, Marcuzzi F, **Verde C**, Gustincich S **2013** Hemoglobin is present as a canonical $\alpha_2\beta_2$ tetramer in dopaminergic neurons. *Biochim Biophys Acta* 1834: 1939-1943

Corresponding author

2013 IF: 3.19

Coppola D, Giordano D, Tinajero-Trejo M, di Prisco G, Ascenzi P, Poole RK, **Verde C** **2013** Antarctic bacterial hemoglobin and its role in the protection against nitrogen reactive species. *Biochim Biophys Acta* **1834**: 1923-1931

Corresponding author

2013 IF: 3.19

Russo R, Giordano D, di Prisco G, Hui Bon Hoa G, Marden MC, **Verde C**, Kiger L **2013** Ligand-rebinding kinetics of 2/2 hemoglobin from the Antarctic bacterium *Pseudoalteromonas haloplanktis* TAC125. *Biochim Biophys Acta* **1834**: 1932-1938

2013 IF: 3.19

Van Leuven W, Cuypers B, Desmet F, Giordano D, **Verde C**, Moens L, Van Doorslaer S, Dewilde S **2013** Is the heme pocket region modulated by disulfide-bridge formation in fish and amphibian neuroglobins as in humans? *Biochim Biophys Acta* 1834: 1757-1763

2013 IF: 3.19

Ronda L, Merlino A, Bettati S, **Verde C**, Balsamo A, Mazzarella L, Mozzarelli A, Vergara A **2013** Role of tertiary structures on the Root effect in fish hemoglobins. *Biochim Biophys Acta*. **1834**: 1885-1893

2013 IF: 3.19

Giordano D, Boron I, Abbruzzetti S, Van Leuven W, Nicoletti FP, Forti F, Bruno S, Cheng C.-H. C, Moens L, di Prisco G, Nadra AD, Estrin D, Smulevich G, Dewilde S, Viappiani C, **Verde C** **2012** Biophysical characterisation of neuroglobin of the icefish, a natural knockout for hemoglobin and myoglobin. Comparison with human neuroglobin. *PLoS ONE* **7**(12): e44508. doi: 10.1371/journal.pone.0044508

Corresponding author

2012 IF: 3.73

Gutt J, Adams B, Bracegirdle T, Cowan D, Cummings V, di Prisco G, Gradinger R, Isla E, McIntyre T, Murphy E, Peck L, Schloss I, Smith C, Suckling C, Takahashi A, **Verde C**, Wall DH, Xavier J **2012** Antarctic Thresholds – Ecosystem Resilience and Adaptation: a new SCAR-Biology Programme. *Polarforschung* **82**: 147-150

IF: NA

Coppola D, Abbruzzetti S, Nicoletti FP, Merlino A, Gambacurta A, Daniela Giordano D, Barry D. Howes BD, De Sanctis G, Vitagliano L, Bruno S, di Prisco G, Mazzarella L, Smulevich G, Coletta M, Viappiani C, Vergara A, **Verde C** **2012** ATP regulation of the ligand-binding properties in temperate and cold-adapted haemoglobins. X-ray structure and ligand-binding kinetics in the sub-Antarctic fish *Eleginops maclovinus*. *Mol BioSystems* **8**(12): 3295-304. doi: 10.1039/c2mb25210d

Corresponding author

2012 IF: 3.35

di Prisco G, Convey P, Gutt J, Cowan D, Conlan K, **Verde C** **2012** Understanding and Protecting the World's Biodiversity: the Role and Legacy of the SCAR Programme Evolution and Biodiversity in the Antarctic". *Marine Genomics* Dec;**8**: 3-8. doi: 10.1016/j.margen.2012.04.001

Corresponding author

2012 IF: 1.34

Verde C, di Prisco G, Convey P **2012** Editors' Comment. *Marine Genomics* **8**:1-2. doi: 10.1016/j.margen.2012.11.001

Corresponding author

2012 IF: 1.34

Verde C, di Prisco G, Giordano D, Russo R, Anderson D, Cowan D **2012** Antarctic psychrophiles: models for understanding the molecular basis of survival at low temperature and responses to climate change. *Biodiversity* **13**: 249-256 ISSN: **1488-8386**, doi:**10.1080/14888386.2012.706703**
ISSN1488-8386 (Print), 2160-0651 (Online)

Corresponding author

IF: NA

Verde C, Giordano D, di Prisco G, Andersen Ø **2012** The hemoglobins of polar fish: evolutionary and physiological significance of multiplicity in Arctic fish. *Biodiversity* **13**: 228-233 ISSN1488-8386 (Print), 2160-0651 (Online) ISSN: **1488-8386**, doi: **10.1080/14888386.2012.700345**

Corresponding author

IF: NA

Arnone MI, **Verde C**, Bowler C, Glöckner FO **2012** A new Editorial Team and Scope for Marine Genomics. *Marine Genomics* **5**: iii–iv

2012 IF: 1.34

Gutt J, Zurell D, Bracegridle TJ, Cheung W, Clark MS, Convey P, Danis B, David B, De Broyer C, di Prisco G, Griffiths H, Laffont R, Peck L, Pierrat B, Riddle MJ, Saucedo T, Turner J, **Verde C**, Wang Z, Grimm V **2012** Correlative and dynamic species distribution modelling for ecological predictions in the Antarctic: a cross-disciplinary concept. *Polar Research* **31**: 11091

<http://dx.doi.org/10.3402/polar.v31i0.11091>

2012 IF: 1.62

Giordano D, Russo R, di Prisco G, **Verde C** **2012** Molecular adaptations in Antarctic fish and marine microorganisms. *Marine Genomics* **6**: 1-6

Corresponding author

2012 IF: 1.34

Coppola D, Bruno S, Ronda L, Viappiani C, Abbruzzetti S, di Prisco G, **Verde C**, Mozzarelli A **2011** Low affinity PEGylated hemoglobin from *Trematomus bernacchii*, a model for hemoglobin-based blood substitutes. *BMC Biochemistry* **12**: 66

2011 IF: 1.98

Boron I, Russo R, Boechi L, Cheng CH, di Prisco G, Estrin DA, **Verde C**, Nadra AD **2011** Structure and dynamics of Antarctic fish neuroglobin assessed by computer simulations. *IUBMB Life* **63**: 206-213

2011 IF: 3.51

Giordano D, Russo R, Ciaccio C, Howes BD, di Prisco G, Marden MC, Hui Bon Hoa G, Smulevich G, Coletta M, **Verde C** 2011 Ligand- and proton-linked conformational changes of the ferrous 2/2 hemoglobin of *Pseudoalteromonas haloplanktis* TAC125. *IUBMB Life* **63**: 566-573

Corresponding author

2011 IF: 3.51

Howes BD, Giordano D, Boechi L, Russo R, Mucciacciaro S, Ciaccio C, Sinibaldi F, Fittipaldi M, Martí MA, Estrin DA, di Prisco G, Coletta M, **Verde C**, Smulevich G 2011 The peculiar heme pocket of the 2/2 hemoglobin of cold-adapted *Pseudoalteromonas haloplanktis* TAC125. *J Biol Inor Chem* **16**: 299-311

2011 IF: 3.28

Merlino A, Howes BD, di Prisco G, **Verde C**, Smulevich G, Mazzarella L, Vergara A 2011 Occurrence and formation of endogenous histidine hexa-coordination in cold-adapted hemoglobins. *IUBMB Life* **63**: 295-303

2011 IF: 3.51

Riccio A, Mangiapia G, Giordano D, Flagiello A, Tedesco R, Bruno S, Vergara A, Mazzarella L, di Prisco G, Pucci P, Paduano L, **Verde C** 2011 Polymerisation of hemoglobins in Arctic fish: *Lycodes reticulatus* and *Gadus morhua*. *IUBMB Life* **63**: 346-354

Corresponding author

2011 IF: 3.51

Patarnello T, **Verde C**, di Prisco G, Bargelloni L, Zane L 2011 How will fish that evolved at constant sub-zero temperatures cope with global warming? Notothenioids as a case study. *BioEssays* **33**: 260-268 (*Invited Review*)

2011 IF: 4.95

Giordano D, Russo R, Coppola D, di Prisco G, **Verde C** 2010 Molecular adaptations in hemoglobins of notothenioid fishes. *J Fish Biol* **76**: 301-318 (*Invited Review*)

Corresponding author

2010 IF: 1.33

Coppola D, Giordano D, Vergara A, Mazzarella L, di Prisco G, **Verde C**, Russo R **2010** The hemoglobins of sub-Antarctic notothenioid fishes. *Polar Science* **4**: 295-308

IF: NA

Merlino A, Vitagliano L, Balsamo A, Nicoletti F, Howes B, Giordano D, Coppola D, di Prisco G, **Verde C**, Smulevich G, Mazzarella L, Vergara A **2010** Crystallization, preliminary X-ray diffraction studies and Raman microscopy of the major hemoglobin from the sub-Antarctic fish *Eleginops maclovinus* in the carbomonoxy form. *Acta Crystallographica Section F* **66**: 1536-1540

2010 IF: 0.56

Parrilli E, Giuliani M, Giordano D, Russo R, Marino G, **Verde C**, Tutino ML **2010** The role of a 2-on-2 haemoglobin in oxidative and nitrosative stress resistance of Antarctic *Pseudoalteromonas haloplanktis* TAC125. *Biochimie* **92**: 1003-1009

2010 IF: 3.78

Russo R, Giordano D, Riccio A, di Prisco G, **Verde C** **2010** Cold-adapted bacteria and the globin case study in the Antarctic bacterium *Pseudoalteromonas haloplanktis* TAC125. *Marine Genomics* **3**: 125-131

Corresponding author

2010 IF: 0.84

Russo R, Riccio A, di Prisco G, **Verde C**, Giordano D **2010** Molecular adaptations in Antarctic fish and bacteria. *Polar Science* **4**: 245-256

IF: NA

Vergara A, Vitagliano L, Merlino A, Sica F, Marino K, **Verde C**, di Prisco G, Mazzarella L **2010** An order-disorder transition plays a role in switching off the Root effect in fish hemoglobins. *J Biol Chem* **285**: 32568-32575

2010 IF: 5.33

Convey P, Bindschadler R, di Prisco G, Fahrbach E, Gutt J, Hodgson DA, Mayewski PA, Summerhayes CP, Turner J, the **ACCE Consortium*** **2009** Antarctic climate change and the environment. *Antarctic Sci* **21**: 541-563 (***C Verde is in ACCE consortium**)

2009 IF: 1.50

Merlino A, Vitagliano L, Howes BD, **Verde C**, di Prisco G, Smulevich G, Sica F, Vergara A **2009** Combined crystallographic and spectroscopic analysis of *Trematomus bernacchii* hemoglobin highlights analogies and differences in the peculiar oxidation pathway of Antarctic fish hemoglobins. *Biopolymers* **91**: 1117-1125
2009 IF: 2.6

Vergara A, Franzese M, Merlino A, Bonomi G, **Verde C**, Giordano D, di Prisco G, Lee HC, Peisach J, Mazzarella L **2009** Correlation between hemichrome stability and Root effect in tetrameric hemoglobins. *Biophys J* **97**: 866-874
2009 IF: 4.4

Verde C, Russo R, Riccio A, Giordano D, di Prisco G **2009** Hemoproteins in the cold. *Marine Genomics* **2**: 67-73 (*Invited Review*)
Corresponding author
2009 IF: 1.2

di Prisco G, Luporini P, Tutino L, **Verde C** **2009** Preface, Editor's Comment. Special issue devoted to "The Polar and Alpine Environments: Molecular and Evolutionary Adaptations in Prokaryotic and Eukaryotic Organisms". *Marine Genomics* **2**: 1-1. doi: 10.1016/S1874-7787/(09)00045-2
Corresponding author
2009 IF: 1.2

Giordano D, Boechi L, Vergara A, Martí MA, Samuni U, Dantsker D, Grassi L, Estrin DA, Friedman JM, Mazzarella L, di Prisco G, **Verde C** **2009** The hemoglobins of the sub-Antarctic fish *Cottoperca gobio*, a phyletically basal species. Oxygen-binding equilibria, kinetics and molecular dynamics. *FEBS J* **276**: 2266–2277
Corresponding author
2009 IF: 3.04

Cheng C-H, di Prisco G, **Verde C** **2009** Cold-adapted Antarctic fish: The discovery of neuroglobin in the dominant suborder Notothenioidei. *Gene* **433**: 100-101
Corresponding author
2009 IF: 2.42

Cheng C-H, di Prisco G, **Verde C** **2009** The “icefish paradox”. Which is the task of neuroglobin Antarctic hemoglobin-less icefish? *IUBMB Life* **61**: 184–188

Corresponding author

2009 IF: 3.58

Verde C, Vergara A, Mazzarella L, di Prisco G **2008** The hemoglobins of fishes living at polar latitudes - Current knowledge on structural adaptations in a changing environment. *Current Protein & Peptide Science* **9**: 578-590 (*Invited Review*)

Corresponding author

2008 IF: 3.01

Vitagliano L, Vergara A, Bonomi G, Merlino A, **Verde C**, di Prisco G, Howes BD, Smulevich G, Mazzarella L **2008** Spectroscopic and crystallographic characterization of a tetrameric haemoglobin oxidation reveals structural features of the functional intermediate R/T state. *J Am Chem Soc* **130**: 10527-10535

2008 IF: 8.09

Merlino A, **Verde C**, di Prisco G, Mazzarella L, Vergara A **2008** Reduction of ferric hemoglobin from *Trematomus bernacchii* in a partial bis-histidyl state produces a deoxy coordination even when encapsulated into the crystal phase. *Spectroscopy* **22**: 143-152

2008 IF: 0.82

Verde C, Giordano D, di Prisco G **2008** The adaptation of polar fishes to climatic changes: structure, function and phylogeny of hemoglobin. *IUBMB Life* **60**: 29-40. (*Invited Review*)

Corresponding author

2008 IF: 2.36

Vergara A, Vitagliano L, **Verde C**, di Prisco G, Mazzarella L **2008** Spectroscopic and crystallographic characterization of bis-histidyl adducts in tetrameric hemoglobins. *Meth Enzymol* **436**: 425-444 (*Invited Review*)

2008 IF: 2.31

Dettaï A, di Prisco G, Lecointre G, Parisi E, **Verde C 2008** Inferring evolution of fish proteins: the globin case study. *Meth Enzymol* **436**: 539-570 (*Invited Review*)

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