

Curriculum Vitae

Sandra Pucciarelli, PhD

Birthdate: 23/10/ 1969

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Education and training

- 22-07-1993 Master Degree in Biology: 110/110 cum laude. Tutor: Prof. Cristina Miceli, University of Camerino, Italy.
- 1993/1997 Doctorate Degree in "Biology". Tutor: Prof. C. Miceli, University of Camerino.
- 13-03/03-04-1994. ERASMUS intensive program: "Blaise Pascal" University, Clermont Ferrand. France.
- 01-07/15-12 1995 Visiting Research Assistant. Tutor: Prof H.W. Detrich III, Department of Biology, Northeastern University, Boston-MA, USA.
- 9/19-09-1996. "EMBO practical course on Cytoskeleton Dynamics" Institute of Molecular Biology, Austrian Academy of Sciences, Salzburg, Austria.
- 28-03/10-05-1997. Antarctic field campaign at Palmer Station, Antarctica.
- 08-08-1998 PhD award. University of Tor Vergata, Roma, Italy.
- 11-1998/06-2000 Post-doctoral course. Tutor: Dr. R.Melki. Laboratoire d'Enzymologie et Biochimie Structurales. CNRS, Gif-Sur-Yvette, France
- 17/25-03-2006 and 25-04/1-05-2007. Visiting researcher at Dr. R.Melki's group, Laboratoire d'Enzymologie et Biochimie.Structurales, CNRS, Gif-Sur-Yvette, France.
- 2000/2003 Researcher Fellow Member of the Prof. C. Miceli's group. University of Camerino.

Research activity

Scientific CV *

Insert a short scientific CV (max 1000 char)

- **Present position: Assistant professor (since 2008) with habilitation**
- **President and founder of IridES srl, UNICAM Spin Off (since 2018)**
- **2018 -today Member del Collegio dei Docenti PhD program in Life Science and Computer Science.**

- 2022- today Member del Collegio dei Docenti, national PhD program on Sustainable Development and Climate Change
- Tutor of a PhD student in national PhD program on Sustainable Development and Climate Change
- Tutor of a RTD-A in Green economy (DM 1062 / 2021)
- Member of the Scientific Reports (<https://www.nature.com/srep/>) Editorial Board
- Principal Investigator of the H2020-Marie Sklodowska-Curie Actions RISE-Metable – 645693.
- Antarctica Service Medal of the United States of America in recognition of the valuable contribution to exploration and Scientific Achievement under the US Antarctic Research Program
- research activity on the isolation, culturing and characterization of microbes, genome sequencing and analysis, gene cloning, heterologous expression of proteins, enzyme optimization by site directed mutagenesis. Application of microbes for preparation of functionalized biomaterials, optimization of protocols, the search for new antibiotics and new biopolymers.

Funded research projects *

- 014-2018: Principal investigator (PI) and international coordinator of the H2020-Marie Sklodowska-Curie Actions RISE-Metable – 645693. Title: Advanced bioinformatics for genome and metagenome analyses with discovery of novel bio-catalysts from extremophiles: implications for improving industrial bio-processes. UE contribution: 337.500 euro.
<https://cordis.europa.eu/project/id/645693/it>
- PNRA18_00133. 2020-2022 Antarctica as a global pollution sensor: aquatic and terrestrial organisms as bio-indicators and meta-analysis of pollutant trends
- 2011-2015 COST Action BM1102: Ciliates as model systems to study genome evolution, mechanisms of non-Mendelian inheritance, and their roles in environmental adaptation.
<https://www.cost.eu/cost-action/ciliates-as-model-systems-to-study-genome-evolution-mechanisms-of-non-mendelian-inheritance-and-their-roles-in-environmental-adaptation/>
- CAMERA (Community Cyberinfrastructure for Advanced Microbial Ecology Research and Analysis) and Microbial Eukaryote Transcriptome Sequencing (2011).
- PNRA - Programma esecutivo annuale "PEA-2013" "Genome scanning" di microorganismi antartici e caratterizzazione di nuove proteine antifreeze per applicazioni industriali".
- PNRA - Programma esecutivo annuale – PEA 2009. 2010-2012/A1.05 Approcci "omici" allo studio della biodiversità e dell'evoluzione dei microorganismi polari in relazione ai cambiamenti climatici ed alle potenziali applicazioni biotecnologiche

Keywords

Molecolare Ecology, Microbiology, Biotechnology, Bioinformatics, Biomaterials.

Bibliography and bibliometry

List of best papers published in the last 10 years relative to research topic *

minimum 5 up to 10

Scopus h-index: 19

*Corresponding author

- 1- John MS, Nagoth JA, Ramasamy KP, Mancini A, Giuli G, Miceli C, **Pucciarelli S***. Synthesis of Bioactive Silver Nanoparticles Using New Bacterial Strains from an Antarctic Consortium. *Mar Drugs*. 2022 Aug 31;20(9):558. doi: 10.3390/md20090558. **IF: 5,79, Q1.**
- 2- Mangiagalli M, Lapi M, Maione S, Orlando M, Brocca S, Pesce A, Barbiroli A, Camilloni C, **Pucciarelli S**, Lotti M, Nardini M. The co-existence of cold activity and thermal stability in an Antarctic GH42 β -galactosidase relies on its hexameric quaternary arrangement. *FEBS J*. 2021 Jan;288(2):546-565. doi: 10.1111/febs.15354. Epub 2020 Jun 4. PMID: 32363751. **IF: 5.6, Q1.**
- 3- John MS, Nagoth JA, Zannotti M, Giovannetti R, Mancini A, Ramasamy KP, Miceli C, **Pucciarelli S***. Biogenic Synthesis of Copper Nanoparticles Using Bacterial Strains Isolated from an Antarctic Consortium Associated to a Psychrophilic Marine Ciliate: Characterization and Potential Application as Antimicrobial Agents. *Mar Drugs*. 2021 May 8;19(5):263. doi: 10.3390/md19050263. PMID: 34066868; PMCID: PMC8151786. **IF: 5,79, Q1.**
- 4- John MS, Nagoth JA, Ramasamy KP, Ballarini P, Mozzicafreddo M, Mancini A, Telatin A, Liò P, Giuli G, Natalello A, Miceli C, **Pucciarelli S***. Horizontal gene transfer and silver nanoparticles production in a new *Marinomonas* strain isolated from the Antarctic psychrophilic ciliate *Euplotes focardii*. *Sci Rep*. 2020 Jun 23;10(1):10218. doi: 10.1038/s41598-020-66878-x. PMID: 32576860; PMCID: PMC7311414. **IF 4.99, Q1**
- 5- John MS, Nagoth JA, Ramasamy KP, Mancini A, Giuli G, Natalello A, Ballarini P, Miceli C, **Pucciarelli S***. Synthesis of Bioactive Silver Nanoparticles by a *Pseudomonas* Strain associated with the Antarctic Psychrophilic Protozoon *Euplotes focardii*. *Mar Drugs*. 2020 Jan 3;18(1):38. doi: 10.3390/md18010038. PMID: 31947807; PMCID: PMC7024347. **IF: 5,79, Q1**
- 6- Faktorová D, ..., **Pucciarelli S**, et al. Genetic tool development in marine protists: emerging model organisms for experimental cell biology. *Nat Methods*. 2020 May;17(5):481-494. doi: 10.1038/s41592-020-0796-x. Epub 2020 Apr 6. Erratum in: *Nat Methods*. 2020 Apr 15. **IF: 28.547, Q1**
- 7- Lobanov AV, Heaphy SM, Turanov AA, Gerashchenko MV, **Pucciarelli S**, Devaraj RR, Xie F, Petyuk VA, Smith RD, Klobutcher LA, Atkins JF, Miceli C, Hatfield DL, Baranov PV, Gladyshev VN. Position-dependent termination and widespread obligatory frameshifting in *Euplotes* translation. *Nat Struct Mol Biol*. 2017 Jan;24(1):61-68. **IF: 12.109, Q1.**

- 8- Mangiagalli M, Bar-Dolev M, Tedesco P, Natalello A, Kaleda A, Brocca S, de Pascale D, **Pucciarelli S**, Miceli C, Braslavsky I, Lotti M. Cryo-protective effect of an ice-binding protein derived from Antarctic bacteria. FEBS J. 2017 Jan;284(1):163-177. doi: 10.1111/febs.13965. Epub 2016 Dec 26. Erratum in: FEBS J. 2017 Mar;284(5):831. Bravslavsky, Ido [corrected to Braslavsky, Ido]. PMID: 27860412. **IF: 5.6, Q1.**
- 9- **S. Pucciarelli***, R. R. Devaraj, M.Schrallhammer, G. Petroni, C. Miceli. Microbial consortium associated with the Antarctic marine psychrophilic ciliate *Euplotes focardii*: an investigation from genomic sequences. Microbial Ecology, 2015. **IF: 4.292, Q1**
- 10- Taffi M, Paoletti N, Angione C, **Pucciarelli S**, Marini M, Liò P. Bioremediation in marine ecosystems: a computational study combining ecological modeling and flux balance analysis. Front Genet. 2014 Sep 12;5:319. **IF: 3.789, Q2.**