

Giovanni Messina, PhD

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Born in Catania, (Italy), April 12, 1984

EDUCATION

Ph.D. in Genetics and Molecular Biology, Sapienza University of Rome, Rome, Italy	2014
Supervisor Prof Patrizio Dimitri, thesis: <i>Functional studies on the evolutionary conserved Bucentaur (BCNT) protein family</i>	
Laurea Magistrale (equivalent MRes) in Biomolecular Sciences, University of Turin, Turin, Italy	2010
Supervisor Dr Alessandra Fiorio Pla, thesis: <i>PKA mediates the release of nitrogen monoxide and Ca⁺⁺ signals induced by arachidonic acid in tumour endothelial cells</i>	
Laurea Triennale (equivalent BSc) in Biological Sciences, University of Catania, Catania, Italy	2007
Supervisor Prof Angela Messina, thesis: <i>Expression of human VDAC3 mitochondrial porin as photo-switchable fusion protein</i>	

POSTS HELD

Assistant Professor (RTDa) , Department of BtBs, University of Milano-Bicocca	Apr 2023 – present
Research Associate , Department of BBCD, Sapienza University of Rome	Apr 2020 – Mar 2023
Research Fellow , Pasteur Institute, Sapienza University of Rome	Apr 2018 – Mar 2020
Research Associate , Institute of Molecular Life Sciences, University of Zurich	Mar 2017 - Mar 2018
Research Associate , Pasteur Institute, Sapienza University of Rome	Nov 2016 – Feb 2017
Research Associate , Department of Biochemistry, University of Liverpool	Jan – Oct 2016
Postdoctoral Fellow , Pasteur Institute, Sapienza University of Rome	Mar 2014 – Dec 2015

RESEARCH APPOINTMENTS

Research Associate , Department of Pathology, University of Cambridge	July – Dec 2014
PhD Fellow , Spanish National Cancer Research Centre (CNIO), Madrid, Spain	May – Sep 2012

PERSONAL DISTINCTIONS**HONOURS and AWARDS**

Pasteur Institute, Italy – 'Teresa Ariaudo 2018' Grant	Apr 2018– Mar 2020
ABCD – Pre-Congress Travel Grant 2019	September 2019
Pasteur Institute, Italy – Post-Doctoral Fellowship	Apr – Dec 2015
Pasteur Institute, Italy – 'Teresa Ariaudo' Post-Doctoral Fellowship	Apr 2014 – Mar 2015
Company of Biologists – Travelling Fellowship	July 2014
Pasteur Institute of Rome – Research Fellowship	Nov 2013 – Mar 2014
MIUR – PhD Studentship	Nov 2010 – Oct 2013
University of Turin – Collaboration Scholarship	Jan – May 2009

TALKS/POSTERS at CONFERENCES and SYMPOSIA

FISV2022 Congress, Portici di Napoli, 14-16 September 2022 Accepted oral presentation titled “ <i>Evolutionary conserved relocation of chromatin remodeling complexes to the mitotic apparatus: a new class of moonlighting proteins preventing genetic instability</i> ” - Section “Genetics, Epigenetics and Chromosome Biology”	2022
ABCD Congress, Bologna (BO), Italy	2019
14 th International Conference on Drosophila Heterochromatin. Spoleto, Italy	2019
AGI-SIMAG Congress, Cortona (AR), Italy	2019
XIX Italian Drosophila Research Conference, Padua, Italy	2018
National Congress of the Italian Genetics Association (AGI). Cortona, Italy	2013
11 th International Conference on Drosophila Heterochromatin. Lecce, Italy	2013
XVI Italian Drosophila Congress. Palermo, Italy	2012
10 th International Conference on Drosophila Heterochromatin. Gubbio, Italy	2011

COURSE ATTENDANCE

Course in Cytogenetics and molecular Cytogenomics, Cortona Genetics School, Cortona (AR), Italy	2018
Course in Proteomics, CEINGE, Naples (NA), Italy	2020
Course in “Sistemi modello come strumento di analisi genetica” Cortona Genetics School, Cortona (AR), Italy	2022

TEACHING EXPERIENCE

Sapienza University of Rome – Subject Expert (Genetics)	2018 – present
Co-Instructor – <i>Genetics</i> (code 1020289) to Bachelor students – Sapienza University of Rome (Italy)	2018 – present
Examiner – <i>Genetics</i> (code 1020289) to Bachelor students – Sapienza University of Rome (Italy)	2018 – present
Subject Expert – <i>Genetics</i> (in Italian: <i>Cultore della Materia</i>)	2018 – present
Co-Instructor – <i>Developmental Biology</i> to Bachelor students – University of Zurich (Switzerland)	2017
Co-Instructor – <i>Developmental Genetics</i> to Master students – University of Liverpool (United Kingdom)	2016
Co-Instructor – <i>Genetics</i> (code 1020289) to Bachelor students – Sapienza University of Rome (Italy)	2011 – 2015
Co-Examiner – <i>Genetics</i> (code 1020289) to Bachelor students – Sapienza University of Rome (Italy)	2011 – 2015
Co-Instructor – <i>Structural and Functional Genomics of Animal Systems</i> (code 1035090) to Master students – Sapienza University of Rome (Italy)	2011 – 2015
Co-Examiner – <i>Structural and Functional Genomics of Animal Systems</i> (code 1035090) to Master students – Sapienza University of Rome (Italy)	2011 – 2015
Co-Instructor – <i>Biochemistry</i> (code S8093) to Master students – University of Turin (Italy)	2009

MENTORING AND SUPERVISION**As co-supervisor (since 2012)**

Leonardo Vitale , Bachelor student, Sapienza University of Rome, Italy	2023 – present
Maria Virginia Santopietro , PhD student, Sapienza University of Rome, Italy	2022 – present
Federica Iorio , Master student, Sapienza University of Rome, Italy	2022 – present
Marta Longo , Master student, Sapienza University of Rome, Italy	2022 – present
Dennisa Ioana Marginean , Bachelor student, Sapienza University of Rome, Italy	2022 – present
Diego Ferreri , Master student, Sapienza University of Rome, Italy	2022 – present

Riccardo Manuel La Rosa , Bachelor student, Sapienza University of Rome, Italy	2022 – present
Livio Perrotta , Bachelor student, Sapienza University of Rome, Italy	2022 – present
Mario Loria , Master student, Sapienza University of Rome, Italy	2021 – present
Sofia Marchetta , Master student, Sapienza University of Rome, Italy	2021 – present
Greta Bizzochi , Master student, Sapienza University of Rome, Italy	2021 – present
Yuri Prozzillo , PhD student, Sapienza University of Rome, Italy	2019 – present
*Vittoria Di Clemente , Bachelor student, Sapienza University of Rome, Italy	2022
*Wiktorcia Denkiewicz , Bachelor student, Sapienza University of Rome, Italy	2022
Francesca Pico , Bachelor student, Sapienza University of Rome, Italy	2022
Simone Salemme , Master student, Sapienza University of Rome, Italy	2021 - 2022
Marika De Cave Lozzi , Bachelor student, Sapienza University of Rome, Italy	2020
Silvia De Cave Lozzi , Bachelor student, Sapienza University of Rome, Italy	2020
Chiara De Gregorio , Bachelor student, Sapienza University of Rome, Italy	2020
Maria Virginia Santopietro , Master student, Sapienza University of Rome, Italy	2020 - 2021
Gaia Fattorini , Master student, Sapienza University of Rome, Italy	2020 – 2021
Merve Sali , Master student, Sapienza University of Rome, Italy	2020 - 2021
*Mario Loria , Bachelor student, Sapienza University of Rome, Italy	2021
Aurora Bonesi , Bachelor student, Sapienza University of Rome, Italy	2021
Lorenzo Aloise , Bachelor student, Sapienza University of Rome, Italy	2021
Isabella Assante , Bachelor student, Sapienza University of Rome, Italy	2020
Luigi Angelucci , Bachelor student, Sapienza University of Rome, Italy	2020
Claudia Spagnoli , Bachelor student, Sapienza University of Rome, Italy	2020
Gaia Fattorini , Bachelor student, Sapienza University of Rome, Italy	2019
Maria Virginia Santopietro Bachelor student, Sapienza University of Rome, Italy	2019
Daniele Testa , Bachelor student, Sapienza University of Rome, Italy	2019
Clelianna Giannicola , Bachelor student, Sapienza University of Rome, Italy	2019
Yuri Prozzillo , Master student, Sapienza University of Rome, Italy	2018 – 2019
Stefano Cuticone , Master student, Sapienza University of Rome, Italy	2018 – 2019
Diego Ferreri , Bachelor student, Sapienza University of Rome, Italy	2018
Francesca Delle Monache , Phd student, Sapienza University of Rome, Italy	2017-2020
Yuri Prozzillo , Bachelor student, Sapienza University of Rome, Italy	2013
Maria Teresa Atterrato , Master student, Sapienza University of Rome, Italy	2012

* Assistant Supervisor

KNOWLEDGE EXCHANGE ACTIVITIES

Sapienza University of Rome/High school “T. Tasso”, Rome – Research Trainer Jan – Oct 2015

INDUSTRIAL COLLABORATIONS

Technical Manager for the project titled “*Develop of a biotechnology platform for the generation of Fc(IgG)-fusion therapeutic peptides*” in collaboration with **Special Product’s Line S.p.A.** Gen 2023 - present

REFEREE and EDITORIAL BOARD SERVICES

Guest Editor for <i>Cells</i>	Aug 2022 – present
Associate Editor for <i>European Journal of Medicinal Chemistry</i>	Dec 2020 – present
Guest Editor for <i>Biology</i>	Mar 2020 – present
Associate Editor for <i>Frontiers in Genetics</i> and <i>Frontiers in Cell and Developmental Biology</i>	Aug 2019 – present
Editor for <i>PlosONE</i>	Oct 2018 – present
Manuscript reviewer for <i>Journal of Cell Science</i> , <i>Open Journal of Genetics</i> , <i>American Journal of Molecular Biology</i> , <i>Cellular & Molecular Biology Letters (BMC)</i> , <i>BMC Genomics</i>	Apr 2017 – present
Guest Editor for <i>American Journal of Molecular Biology</i>	Apr 2017

PROFESSIONAL SOCIETY MEMBERSHIPS

Italian Proteomics Association (ItPA)	since 2019
Associazione di Biologia Cellulare e del Differenziamento (ABCD)	since 2019
International Association for Italian Researchers (AIRI)	since 2014
Italian Society of Biochemistry (SIB)	since 2014

FUNDING

Date	Funder	Title	Role	Value (€)
2023-2024	Special Product's Line	<i>Develop of a biotechnology platform for the generation of Fc(IgG)-fusion therapeutic peptides</i>	Principal Investigator	30.500
2022-2023	Sapienza University of Rome	<i>Identification of KAT5 acetyltransferase targets during cell division</i>	Principal Investigator	3.600
2021-2022	Sapienza University of Rome	<i>Crosstalk between KAT5 acetyltransferase and cytokinesis regulators in preventing cell division failure and genetic instability</i>	Principal Investigator	2.400
2018 – 2020	Pasteur Institute	<i>Unmasking the encrypted role of dTip60 chromatin remodeling complex in cell division</i>	Principal Investigator	60.000

I gave my contribution to the preparation of the following successful Grant application:

Date	Funder	Title	Role	Value (€)
2019 - 2022	Miur – PRIN 2017	<i>Microtubule and centrosome dynamics, from Omics to neurodevelopmental disorders of Central Nervous System</i>	Collaborator	1.093.864,12
2015 – 2017	Pasteur Institute	<i>Role of ATP-dependent chromatin remodeling complexes in midbody formation and cytokinesis</i>	Collaborator	60.000,00
2015 – 2016	Sapienza University of Rome	<i>Evolutionary and functional study of genes involved in craniofacial development in humans</i>	Collaborator	10.000,00
2012 – 2014	Rome Foundation	<i>Drosophila melanogaster as model organism to study the human protein CFDP1 and its involvement in craniofacial diseases</i>	Collaborator	30.000,00
2012 – 2014	Sapienza University of Rome	<i>The Cfdp1 gene and craniofacial development: from genetics to clinics</i>	Collaborator	50.000,00
2010 – 2013	Pasteur Institute	<i>Functional analysis of CG40218, a Drosophila melanogaster gene encoding a BCNT-like protein required for chromosome organization</i>	Collaborator	60.000,00

PUBLICATIONS

H-index (Scopus): 8

Citations (Scopus): 383

Messina G, Celauro E, Marsano RM, Prozzillo Y, and Dimitri P. Epigenetic Silencing of P-Element Reporter Genes Induced by Transcriptionally Active Domains of Constitutive Heterochromatin in *Drosophila melanogaster*. *genes* **2022** 14(1), 12

Messina G, Prozzillo Y, Bizzochi G, Marsano RM and Dimitri P. The Green Valley of *Drosophila melanogaster* Constitutive Heterochromatin: Protein-Coding Genes Involved in Cell Division Control. *Cells* **2022**, 11:3058.

Messina G^{1*}, Prozzillo Y*, Santopietro MV, Delle Monache F and Dimitri P. Evolutionarily conserved relocation of chromatin remodeling complexes to the mitotic apparatus. *BMC Biol* **2022**, 20, 172

Messina G¹, Prozzillo Y, Delle Monache F, Santopietro MV, Atterato MT and Dimitri P. ATPase SRCAP is a new player in cell division, uncovering molecular aspects of Floating-Harbor syndrome. *BMC Biol.* **2021** Sep 2;19(1):184.

Prozzillo Y, Cuticone S, Ferreri D, Fattorini G, **Messina G¹** and Dimitri, P. In Vivo Silencing of Genes Coding for dTip60 Chromatin Remodeling Complex Subunits Affects Polytene Chromosome Organization and Proper Development in *Drosophila melanogaster*. *Int. J. Mol. Sci.* 2021, 22, 4525.

Prozzillo Y¹ and **Messina G**. Expanding dTAG toolkit to *Drosophila melanogaster*. *Am J Biomed Sci & Res.* 2021 - 11(5). AJBSR.MS.ID.001662.

Prozzillo Y¹, Fattorini G, Santopietro MV, Suglia L, Ruggiero A, Ferreri D and **Messina G**. Targeted protein inactivation tools: overview and future perspectives. *Biology* 2020, 9, 421.

Prozzillo Y, Delle Monache F, Ferreri D, Cuticone S, Dimitri P and **Messina G**. The True Story of Yeti, the "Abominable" Heterochromatic Gene of *Drosophila melanogaster*. *Front Physiol* 2019, 10, 1093.

Marsano RM, Giordano E, **Messina G**, and Dimitri P. A New Portrait of Constitutive Heterochromatin: Lessons from *Drosophila melanogaster*. *Trends Genet* 2019, 35, 615-631.

Messina G¹, Atterato MT, Prozzillo Y, Piacentini L, Losada A, Dimitri P. The human *Cranio Facial Development Protein 1 (Cfdp1)* gene encodes a protein required for the maintenance of higher-order chromatin organization. *Sci Rep*, 2017. Apr 3;7:45022. doi: 10.1038/srep45022.

Taylor E, Alqadri N, Dodgson L, Mason D, Lyulcheva E, **Messina G**, Bennett D. MRL proteins cooperate with activated Ras in glia to drive distinct oncogenic outcomes. *Oncogene*, **2017**. doi: 10.1038/onc.2017.68.

Jonchère V, Alqadri N, Herbert J, Dodgson L, Mason D, **Messina G**, Falciani F, Bennett D. Transcriptional responses to hyperplastic MRL signalling in *Drosophila*. *Open Biol*, **2017**. 7: 160306. <http://dx.doi.org/10.1098/rsob.160306>

Messina G, Atterato MT, Fanti L, Giordano E, Dimitri P. Expression of human *Cfdp1* gene in *Drosophila* reveals new insights into the function of the evolutionarily conserved BCNT protein family. *Sci Rep*, **2016**. May 6;6:25511. doi: 10.1038/srep25511

Messina G, Atterato MT, Dimitri P. When chromatin organization floats astray: the SRCAP gene and Floating-Harbor syndrome. *J Med Genet*, **2016**. doi:10.1136/jmedgenet-2016-103842.

Messina G, Celauro E, Atterato MT, Giordano E, Iwashita S, Dimitri P. The Bucenaur (BCNT) protein family: a long-neglected class of essential proteins. *Chromosoma*, **2015**.

Hoskins RA, Carlson JW, Wan KH, Park S, Mendez I, Galle SE, Booth B, Pfeiffer BD, George RA, Svirskas R, Krzywinski M, Schein J, Accardo MC, Damia E, **Messina G**, Demakova OV, Andreyeva EN, Lidiya Boldyreva V, Moore R, Marra M, Carvalho AB, Villasante A, Dimitri P, Zhimulev IF, Rubin GM, Karpen GH, Celniker SE. The Release 6 *Drosophila melanogaster* reference genome. *Genome Res*, **2015**. Jan 14. pii: gr.185579.114

Messina G, Damia E, Fanti L, Atterato MT, Celauro E, Mariotti FR, Accardo MC, Walter M, Verni F, Picchioni D, Moschetti R, Caizzi R, Piacentini L, Cenci G, Giordano E, Dimitri P. Yeti, an essential *Drosophila melanogaster* gene, encodes a protein required for chromosome organization. *J Cell Sci*, **2014**. 127(Pt 11): p. 2577-88.

¹ Co-corresponding author

* Co-First Author