

Dafne Campigli Di Giammartino, PhD

Education and Professional Research Experience

- May 2022- **Researcher** at Italian Institute of Technology (Genova)
Within the research line of Stefano Gustincich: non-coding RNAs and RNA-based therapeutics
- Research field: The role of non-coding RNAs and epitranscriptomics in shaping the 3D chromatin architecture of cancer stem cells
- 2021-2022 **Research Associate** at Weill Cornell Medicine (New York)
- Research field: Identifying 3D enhancer hubs that maintain cancer stem cells in glioblastoma
- 2014-2019 **Postdoctoral researcher** at Weill Cornell Medicine (New York)
- Research field: Involvement of transcription factors in the organization and regulation of pluripotency-associated 3D enhancer networks during somatic cell reprogramming
- 2007-2014 **PhD in Biological Sciences** at Columbia University (New York)
Concluded with distinction in May 2014 (top 10%)
- Thesis title: Regulation of gene expression through modification of pre-mRNA processing by PARP1 and RBBP6
- 2006-2007 **Research Assistant** at Columbia University
- Research field: Proteomic purification of the pre-mRNA 3' end processing complex
- 2002-2004 **Master of Science** at the Hebrew University of Jerusalem
- Thesis title: Role of the tyrosine kinase c-Abl in protecting the tumour suppressor p53 from HPV-E6 mediated degradation
- 1999-2002 **Bachelor of Science** at the Hebrew University of Jerusalem

Funding

- 2022-2027 **Human Technopole** Early Career Fellowship (will provide a total of 1Million€ for 5 years)
- 2015-2018 **New York Stem Cell Foundation** Drunkenmiller fellowship award (provided a total of 180.000\$ for 3 years)
- 2015-2017 FFPI, internal fellowship from **Weill Cornell Medicine** (provided salary for hiring a personal technician, a total of 100.000\$ for 2 years)

Publications:

Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=36980409500>

ORCID ID <https://orcid.org/0000-0002-3130-3536>

Pubmed link: <https://pubmed.ncbi.nlm.nih.gov/?term=di+giammartino+dc&sort=date>

- Di Giammartino DC, Polyzos A, Apostolou E. Assessing specific networks of chromatin interactions with HiChIP. *Invited chapter for **Methods in Molecular Biology***-Spatial Genome Organization published by Springer Nature
- 2021 Doane AS, Jiang Y, Di Giammartino DC, Helmut J, Rivas M, Yusova N, Chu CS, Alonso A, Apostolou E, Melnick M, Elemento O. OCT2 pre-positioning facilitates cell fate transition and chromatin architecture changes in humoral immunity. ***Nature Immunology** 10:1327-1340*
- 2021 Pelham-Webb B, Polyzos A, Wojenski L, Kloetgen A, Li J, Di Giammartino DC, Core L, Tsirigos A and Apostolou E. H3K27ac bookmarking promotes rapid post-mitotic activation of the pluripotent stem cell program without impacting 3D chromatin organization. ***Molecular Cell** 81:1732-1748*
- 2020 Di Giammartino DC, Polyzos A, Apostolou E. Transcription factors: building hubs in the 3D space. ***Cell Cycle** 12:1-16*
- 2019 Lhoumaud P, Sethia G, Izzo F, Sakellaropoulos T, Snetkova V, Vidal S, Badri S, Cornwell M, Di Giammartino DC, Kim K, Apostolou E, Stadtfeld M, Landau D, Skok J. EpiMethylTag simultaneously detects ATAC-seq or ChIP-seq signals with DNA methylation. ***Genome Biology** 20:248-260*
- 2019 Di Giammartino DC*, Kloetgen A*, PolyzosA*, Liu Y, Kim D, Murphy D, Abuhashem A, Cavaliere P, Aronson B, Shah V, Dephoure N, Stadtfeld M, Tsirigos A, Apostolou E. KLF4 is involved in the organization and regulation of

- pluripotency-associated 3D enhancer networks. **Nature Cell Biology** 21:1179-1190
- 2019 Seruggia D, Oti M, Tripathi P, Canver MC, LeBlanc L, Di Giammartino DC, Bullen MJ, Nefzger CM, Sun YBY, Farouni R, Polo JM, Pinello L, Apostolou E, Kim J, Orkin SH, Das PP. TAF5L and TAF6L maintain self-renewal of embryonic stem cells via the MYC regulatory network. **Molecular Cell** 74:1148-1163
- 2017 Liu Y*, Pelham-Webb B*, Di Giammartino DC *, Li J, Kim D, Kita K, Saiz N, Garg V, Doane A, Giannakakou P, Hadjantonakis AK, Elemento O, Apostolou E. Widespread mitotic bookmarking by histone marks and transcription factors in pluripotent stem cells. **Cell Reports** 19:1283-93 (*equal contribution)
- 2016 Di Giammartino DC, Apostolou E. The chromatin signature of pluripotency: establishment and maintenance. **Current Stem Cell Reports** 2:255-62
- 2014 Di Giammartino D.C., Li W., Yashinskie J., Tian B., Manley J.L. RBBP6 is a human polyadenylation factor that regulates mRNAs with AU-rich 3'UTRs. **Genes & Development** 28:2248-60
- 2013 Di Giammartino D.C., Shi Y, Manley J.L. PARP1 represses PAP and inhibits polyadenylation during heat shock. **Molecular Cell** 49:7-17
- 2013 Manley J.L., Di Giammartino D.C. mRNA polyadenylation in eukaryotes. **Encyclopedia of Biological Chemistry, Second edition, Elsevier** (p.188-193)
- 2013 Chan A.L., Grossman T., Zuckerman V., Campigli Di Giammartino D., Moshel O., Scheffner M., Monahan B., Pilling P., Jiang Y.H., Haupt S., Schueler-Furman O., Haupt Y. c-Abl phosphorylates E6AP and regulates its E3 ubiquitin ligase activity. **Biochemistry** 52:3119-29
- 2011 Di Giammartino D.C., Nishida K., Manley J.L. Mechanisms and consequences of alternative polyadenylation. **Molecular Cell** 43:853-66
- 2011 Shi Y., Nishida K., Campigli Di Giammartino D., Manley J.L. Heat shock-induced SRSF10 dephosphorylation displays thermotolerance mediated by Hsp27. **Molecular and Cellular Biology** 31:458-65
- 2009 Shi Y., Di Giammartino D.C., Taylor D., Sharkeshik A., Rice W.J., Yates JR 3rd, Frank J., Manley J.L. Molecular architecture of the human pre-mRNA 3' processing complex. **Molecular Cell** 33:365-7

Oral presentations

- 2021 Invited seminar at **Sapienza** University. Department of Genetics. Rome
- 2019 Invited seminar at **Humanitas** University. Milan, Italy
- 2019 Invited seminar at **IFOM**. Milan, Italy
- 2018 **New York Stem Cells Foundation Innovator's retreat**. Montauk, NY
- 2013 **Cold Spring Harbor Meeting** on Eukaryotic mRNA Processing. Cold Spring Harbor Laboratory, NY
- 2011 **Cold Spring Harbor Meeting** on Eukaryotic mRNA Processing. Cold Spring Harbor Laboratory, NY
- 2009 **Cold Spring Harbor Meeting** on Eukaryotic mRNA Processing. Cold Spring Harbor Laboratory, NY

Poster presentations

- 2019 **EMBO workshop**: chromatin and epigenetics. Heidelberg, Germany
- 2018 **Keystone symposia**: chromatin architecture and chromosome organization. Whistler, Canada
- 2017 **Keystone symposia**: transcriptional and epigenetic control in stem cells. Olympic valley, California
- 2017 **RNA biology symposium**. Cornell University Ithaca. New York
- 2017 **NYSCF conference**. Rockefeller University, New York
- 2016 **NYSCF conference**. Rockefeller University, New York
- 2010 **Gordon Research Conference** on post-transcriptional gene regulation. Newport, Rhode Island

Mentoring/teaching experience

- 2014-21 Training of 3 lab technicians, 8 graduate students and 4 postdocs. Weill Cornell Medicine, NY
- 2012-13 Laboratory mentor of undergraduate student. Columbia University, NY
- 2009 Teaching assistant for “Developmental Biology” course. Columbia University, NY
- 2008 Teaching assistant for “Molecular Biology” and “Introduction to Molecular and Cell Biology” courses. Columbia University, NY

Membership to scientific societies

ISSCR- International Society for Stem Cell Research (www.isscr.org)
RNA Society (www.rnasociety.org)
NYAS- The New York Academy of Sciences (www.nyas.org)
NYSCF- The New York Stem Cell Foundation (www.nyscf.org)

Peer-review activity for scientific journals

Nature Communications (impact factor 14.92)
Cells (impact factor 6.6)
Cancers (impact factor 6.6)
IJMS (impact factor 5.9)
Life (impact factor 3.7)
Genes (impact factor 3.6)
Cell Cycle (impact factor 3.3)
Methods and Protocols-MDPI (impact factor 1.84)