

UNIVERSITÀ DEGLI STUDI DI MILANO

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**DAFNE CAMPIGLI DI GIAMMARTINO
CURRICULUM VITAE****INFORMAZIONI PERSONALI**

COGNOME	CAMPIGLI DI GIAMMARTINO
NOME	DAFNE
DATA DI NASCITA	02/12/1979
NAZIONALITA'	ITALIANA
CITTADINANZA	ITALIANA
EMAIL	dafnecdg@gmail.com

EDUCATION AND PROFESSIONAL EXPERIENCE

Weill Cornell Medicine, New York, USA

- 2021-present **Senior Research Associate** at the Meyer Cancer Center
Supervisor: Dr. Effie Apostolou

Research project: Identifying 3D enhancer hubs that maintain cancer stem cell programs
- 2014-2019 **Post-Doc** in epigenetics and stem cells at The Meyer Cancer Center
Supervisor: Dr. Effie Apostolou

Research project: Involvement of KLF4 in the organization and regulation of pluripotency-associated 3D enhancer networks during somatic cell reprogramming

Columbia University, New York, USA

- 2007-2014 **Ph.D.** Biological Sciences (with distinction- top 10%)
Master of Philosophy Biological Sciences (2010)
Master of Arts Biological Sciences (2009)
Supervisor: Dr. James L. Manley

Research project: Regulation of gene expression through modulation of RNA processing by PARP1 and RBBP6
- 2006-2007 **Research Assistant** Biological Sciences
Supervisor: Dr. James L. Manley

Research project: Proteomic purification of the pre-mRNA 3' processing complex

The Hebrew University of Jerusalem, Israel

- 2002-2004 **Master of Science** Biological Sciences at The Lautenberg Center for General and Tumor Immunology- Hadassah Medical School
Supervisor: Dr. Ygal Haupt

Research project: Role of the tyrosine kinase c-Abl in protecting the tumor suppressor p53 from HPV-E6 mediated degradation

1999-2002

Bachelor of Science Biological Sciences

PUBLICATIONS

Web of science researcher ID ABH-9610-2020 : H-index 10, Citations 987, Publications 14

- 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**. Springer editor*
- Doane AS, Jiang Y, Di Giammartino DC, Helmut J, Rivas M, Yusova N, Chu CS, Alonso A, Apostolou E, Melnick M, Elemento O. Transcription factor pre-positioning facilitates cell fate transition and chromatin architecture changes in humoral immunity. *Under revision in **Nature Immunology***
- 2021 Pelham-Webb B, Polyzos A, Wojenski L, Kloetgen A, Li J, Di Giammartino DC, Sakellaropoulos T, Tsigos A, Core L and Apostolou E. H3K27ac bookmarking promotes rapid post-mitotic activation of the pluripotent stem cell program without impacting 3D chromatin reorganization. ***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
- 2019 Di Giammartino DC*, Kloetgen A*, PolyzosA*, Liu Y, Kim D, Murphy D, Abuhashem A, Cavaliere P, Aronson B, Shah V, Dephore N, Stadtfeld M, Tsigos 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

REVIEWER ACTIVITY FOR PEER-REVIEWED JOURNALS

Nature Communications- is an open access journal that publishes high-quality research from all areas of the natural sciences with an impact factor of 12

Cells- an international peer-reviewed open-access journal for studies related to cell biology and molecular biology. Published monthly online by MDPI With an impact factor of 6.6

Genes- a peer-reviewed open access *journal* of genetics and genomics published monthly online by MDPI, with an impact factor 3.48

Cell Cycle- a peer-reviewed scientific journal covering all aspects of cell biology, published bi-weekly by Taylor & Francis, with an impact factor 3.74

IJMS (International Journal of Molecular Sciences)- a peer-reviewed, open access journal providing an advanced forum for biochemistry, molecular and cell biology. Is published bi-weekly by MDPI, with an impact factor of 4.55

PRESENTATIONS AT CONFERENCES AND INVITED SEMINARS

- 2021 Invited seminar at Sapienza University. Department of Genetics. Rome, Italy
- 2019 Invited seminar at Humanitas University. KLF4 is involved in the organization and regulation of pluripotency-associated three- dimensional enhancer networks. Milan, Italy
- 2019 Invited seminar at IFOM. KLF4 is involved in the organization and regulation of pluripotency-associated three- dimensional enhancer networks. Milan, Italy
- 2019 EMBO workshop: chromatin and epigenetics. KLF4 binding is involved in the organization and regulation of 3D enhancer networks during acquisition and maintenance of pluripotency. Heidelberg, Germany- POSTER
- 2018 Keystone symposia: chromatin architecture and chromosome organization. KLF4 binding during reprogramming induces a step-wise chromatin reorganization linked to enhancer and gene activation. Whistler, Canada- POSTER
- 2018 NYSCF Innovator's retreat. Dynamic KLF4 binding during reprogramming induces a step-wise chromatin reorganization linked to enhancer and gene activation. Montauk, New York- ORAL PRESENTATION
- 2017 Keystone symposia: transcriptional and epigenetic control in stem cells. Role of KLF4 in shaping chromatin interactions to induce pluripotency. Olympic valley, California- POSTER

- 2017 RNA biology symposium. Dynamic KLF4 binding during reprogramming induces a step-wise chromatin reorganization linked to enhancer and gene activation. Cornell University Ithaca. New York - POSTER
- 2017 NYSCF conference. Widespread mitotic bookmarking by histone marks and transcription factors in pluripotent stem cell. Rockefeller University, New York - POSTER
- 2016 NYSCF conference. Dynamic KLF4 binding during reprogramming induces a step-wise chromatin reorganization linked to enhancer and gene activation. Rockefeller University, New York- POSTER
- 2013 Cold Spring Harbor Meeting on Eukaryotic mRNA Processing. RBBP6: characterization of a new pre-mRNA 3' end processing factor. Cold Spring Harbor Laboratory, New York- POSTER
- 2011 Cold Spring Harbor Meeting on Eukaryotic mRNA Processing. PARylation of poly(A) polymerase inhibits polyadenylation during heat shock. Cold Spring Harbor Laboratory, New York- ORAL PRESENTATION
- 2010 Gordon Research Conference on post-transcriptional gene regulation. PAP meets PARP: regulation of polyadenylation under stress. Salve Regina University, Newport, Rhode Island- POSTER
- 2009 Cold Spring Harbor Meeting on Eukaryotic mRNA Processing. Connecting pre-mRNA 3' end maturation to multiple nuclear pathways: roles for PARP1 and RBBP6 in 3' mRNA processing. Cold Spring Harbor Laboratory, New York- ORAL PRESENTATION

MENTORING/TEACHING EXPERIENCE

- 2014-19 Training of 3 lab technicians, 5 graduate students and 3 postdocs
- 2012-13 Laboratory mentor of undergraduate student. Columbia University, New York
- 2009 Teaching assistant for "Developmental Biology" course. Columbia University, New York
- 2008 Teaching assistant for "Molecular Biology" and "Introduction to Molecular and Cell Biology" courses. Columbia University, New York

FELLOWSHIPS AND AWARDS

- 2015-2018 New York Stem Cell Foundation Druckenmiller fellowship award
- 2015-2017 FFPI fellowship from Weill Cornell Medicine (provided salary for hiring technician)

SELECTED SKILLS AND TECHNIQUES

High-throughput next generation sequencing technologies

ChIP-seq, ATAC-seq, RNA-seq, PRO-seq, 4C-seq, Hi-C, Hi-ChIP.

Proteins and biochemistry

RIME mass-spectrometry, co-Immunoprecipitation, chromatin immunoprecipitation, gel-filtration chromatography, protein gel electrophoresis, western blot, dot blot, production and purification of recombinant proteins from bacteria, coomassie and silver staining.

Cell culture

Working in sterile conditions, growing and maintaining mammalian cell lines and stem cells, generation and culture of mouse embryonic fibroblasts, generation of embryoid bodies, somatic cell reprogramming to induced

pluripotent stem cells, transfection of cells, lentiviral production and cell infections, generation of inducible knockout cell lines, nuclear extract preparations.

Molecular biology techniques

CRISPR/Cas9 mediated deletions and mutations, CRISPRi (dCRISPR-KRAB), FACS, MACS.

Cloning, RNA and DNA purification, polyA⁺ RNA selection, cDNA synthesis, PCR, RT-qPCR, reverse transcription, EMSA, in vitro transcription, in vitro pre-mRNA 3' cleavage, and polyadenylation assays.

Computer skills

Microsoft Word, Excel, Power Point, Photoshop, Illustrator and Prism

Languages

Fluent in English, Italian, and Hebrew

Data

03/07/2021

Luogo

New York