
BIOGRAPHICAL SKETCH

NAME: Diego Pasini

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POSITION TITLE: Group Leader

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
University of Milan	Master Degree in Biological Sciences	02/2022	Molecular Biology
The Open University	Ph.D.	08/2006	Epigenetics

A. Personal Statement

Diego Pasini was born in 1977 in Milan. He graduated from the University of Milan at the Faculty of Biological Sciences in 2002 and he joined the European Institute of Oncology (IEO) first as research assistant and then as a PhD student in the laboratory of Prof. Kristian Helin. When Prof. Helin relocated to Denmark to lead the new Biotech Research and Innovation Center (BRIC) at the University of Copenhagen, Pasini followed and completed his PhD in 2006. He continued to work in Prof. Helin's laboratory, first as a postdoctoral researcher and then as an assistant professor at BRIC.

In 2010, Pasini returned to Italy to establish his own independent laboratory as a junior Group Leader at the Department of Experimental Oncology at IEO. In January 2015, he became a tenured Group Leader at IEO and was selected as an EMBO Young Investigator. In 2017, he was awarded an ERC Consolidator Grant. By March 2018, he became an Associate Professor at the Department of Health Sciences (DiSS) at the University of Milan and was promoted to Full Professor in 2022. Prof. Pasini received the Chiara D'Onofrio Senior Award in 2019 and was elected an EMBO member in 2021.

B. Positions, Scientific Appointments and Honors

CURRENT POSITIONS

2022-present Full Professor of Molecular Biology at the Department of Health Sciences of the University of Milan (Milan, Italy).

2015-present Tenured Group Leader at the European Institute of Oncology at the Department of Experimental oncology (Milan, Italy).

PREVIOUS POSITIONS

2002-2004 Ph.D. student at the European Institute of Oncology (Milan, Italy).

2005-2006 Ph.D. student at BRIC, Institute of the Copenhagen University (Copenhagen, Denmark).

2006-2007 Post-doctorate at BRIC, Institute of the Copenhagen University (Copenhagen, Denmark).

2007-2009 Assistant Professor at BRIC, Institute of the Copenhagen University (Copenhagen, Denmark).

2010-2014 Junior Group Leader at the European Institute of Oncology (Milan, Italy).

2018-2022 Associate Professor of Molecular Biology at the Department of Health Sciences of the University of Milan (Milan, Italy)

FUNDINGS

Prof. Pasini, as a student and postdoctoral researcher, was a fellow of the Italian Foundation for Cancer Research (2004) and the Danish Medical Research Council (2007-2009). Since becoming an independent PI in 2010, he has been awarded several competitive grants including a Start-Up Unit Grant from the Italian Association for Cancer Research (AIRC) (2010-2014), two Young Investigator Grants from the Italian Ministry of Health (2011-2014 and 2014-2017), a Young Investigator Grant from the Umberto Veronesi Foundation (2014-2016), three Investigator Grants from AIRC (2015-2017, 2017-2022, and 2023-2027), selection for the EMBO Young Investigator Programme (2015-2017), a PRIN Grant for Projects of Relevant National Interest (2023-2025), participation to the RNA and Gene Therapy National Research Center (2023-2025), an ERC Consolidator Grant (2017-2022), and an ERC Proof of Concept Grant (2023-2025).

ELECTED ACADEMY MEMBERSHIPS

2015 EMBO Young Investigator

2022 Elected EMBO member

PRIZES AND AWARDS

2019 Winner of the Chiara D'Onofrio Senior Award

CONFERENCES AND LECTURES INVITED PRESENTATIONS

Prof. Pasini is frequently invited to deliver lectures on his scientific research at various Italian and international institutions. Additionally, he has consistently been selected or invited to present the work conducted in his laboratory at international conferences:

MENTORING ACTIVITIES

Since establishing his independent laboratory at IEO, Prof. Pasini has supervised or is currently supervising the work of 20 post-docs and 20 PhD students from the European School of Molecular Medicine (SEMM, University of Milan). Three of his former post-docs have now established their own independent laboratories at the University of Chicago (Andrea Piunti), the University of Trento (Fulvio Chiacchiera), and University College Dublin (Eric Conway).

Prof. Pasini has also supervised the practical thesis work (~12 months) of nine undergraduate students from various Italian universities. Additionally, he has served as an internal mentor for more than 20 PhD students working in other laboratories affiliated with SEMM and has been an examiner for more than 10 thesis dissertations at the PhD school, as well as at international universities such as Trinity College Dublin, the University of Copenhagen, FMI, Hunimed University, Milan University, and Università della Svizzera Italiana.

INSTITUTIONAL RESPONSIBILITIES

Prof. Pasini has formal responsibilities at both institutions to which he is affiliated: the European Institute of Oncology (IEO) and the University of Milan (Unimi), as well as at the European School of Molecular Medicine (SEMM).

At the IEO Department of Experimental Oncology (DEO), Prof. Pasini is the Chairman of the Operations Committee and is a member of both the Budget and Administrative Opportunities Committee and the Office of the Chairman, a consulting body for the DEO director. Additionally, he is a member of the recruiting committees for untenured group leaders and directors of technological units.

At the University of Milan (Unimi), Prof. Pasini is a member of the departmental council of the Department of Health Sciences (DiSS), where he also serves as member in the Joint Teaching Staff-Student Committee and the Project of Excellence Committee.

At the SEMM PhD school, Prof. Pasini has been a member of the Academic Faculty since 2010 and of the Academic Board since 2018. In 2024, he was appointed Coordinator of the new National PhD program of SEMM and became Chairman of the Faculty Board.

TEACHING

Since his appointment at the University of Milan in 2018, Prof. Pasini has been regularly teaching molecular biology at both the Medical and Biotechnology schools of the University of Milan, where he also organizes a course in OMICs approaches for Bachelor students. Since 2020, Prof. Pasini has also been part of the faculty for the Master's program in Biomedical Omics at the University of Milan, where he coordinates the Genomics and Epigenomics course. Additionally, since 2010, Prof. Pasini have been teaching at the SEMM PhD school, where he gives various lectures and organizes a course in Genomics and Epigenomics.

MAJOR COLLABORATORS

Prof. Pasini has been directly involved in several collaborative projects with high-profile laboratories worldwide, resulting in significant scientific publications. His collaborations include work with Prof. Haruiko Koseki at RIKEN in Japan, focusing on mouse genetics, and with Prof. Luciano Di Croce at CRG in Spain, where they jointly explored chromatin regulation. Additionally, Pasini has collaborated with Prof. Anton Wutz at ETH in Switzerland, Dr. Valerio Orlando and Dr. Wolfgang Fischle at KAUST in Saudi Arabia, and Prof. Adrian Bracken at Trinity College Dublin in Ireland on research related to Polycomb repression mechanisms. His work with Dr. Sandra Peiró at IMIM-Hospital del Mar in Spain was centered on EMT. He has collaborated on germline gene silencing with Prof. Paul Soloway at Cornell University in the USA, and on TET proteins molecular functions with Prof. Kristian Helin at ICR in London. Further, Prof. Pasini has collaborated with Dr. Lazzerini-Denchi at the NIH in the USA on telomere integrity regulation, and with Prof. Joerg Huelsken at EPFL in Switzerland on stem cell maintenance. His work with Prof. Karim-Jean Armache at NYU in New York, USA, focused on PR-DUB structure and activity, while his collaboration with Elisabetta Salcini at Copenhagen University in Denmark examined H3K27me3 in *C. elegans*. Prof. Pasini also worked with Prof. Maria Rescigno at Hunimed University in Milan, Italy, on the regulation of the gut vascular barrier. In addition, he has had longstanding collaborative efforts with Prof. Tiziana Bonaldi on mass spectrometry and with Dr. Bruno Amati on transcriptional control mechanisms, both of whom are part of their institutional faculty.

JURIES & COMMITTEES

2014 – 2017 Scientific evaluation committee of the French National Agency for Research (ANR)

2016 – 2019 Scientific fellowship committee of the Italian Association for Cancer Research (AIRC)

2020 – present Scientific Grant projects committee of the Italian Association for Cancer Research (AIRC)

EDITORIAL COMMITMENTS

2021 – present Associate Editor of Science Advances, journal of the American Association for the Advancement of Science's (AAAS), USA.

C. Contributions to Science

Prof. Pasini's publication record consists of 72 papers in international peer-reviewed journals, with 35 of these as first, last, or corresponding author. His work has received a total of 16,779 cumulative citations, and he has an h-index of 47 and an i10-index of 67 (according to Google Scholar). A full list of his publications can be consulted at: [Diego Pasini Google Scholar Profile](#).

List of selected recent publications in chronological order:

- Tamburri S, Rustichelli S, Amato S, Pasini D. *Navigating the complexity of Polycomb repression: Enzymatic cores and regulatory modules*. **Molecular Cell** 2024.
- Mule P, Fernandez-Perez D, Amato S, Manganaro D, Oldani P, Brandini S, Diaferia G, Cuomo A, Recordati C, Soriani C, Dondi A, Zanotti M, Rustichelli S, Bisso A, Pece S, Rodighiero S, Natoli G, Amati B, Ferrari KJ, Chiacchiera F, Pasini D. *WNT Oncogenic Transcription Requires MYC Suppression of Lysosomal Activity and EPCAM Stabilization in Gastric Tumors*. **Gastroenterology** 2024. PMID:38971196.
- Del Vecchio A, Mulé P, Fernández-Pérez D, Amato S, Lattanzi G, Zanotti M, Rustichelli S, Pivetti S, Oldani P, Mariani A, Iommazzo F, Koseki H, Facciotti F, Tamburri S, Ferrari KJ, Pasini D. *PCGF6 controls murine Tuft cell differentiation via H3K9me2 modification independently of Polycomb repression*. **Developmental Cell** 2024. PMID:38228142.
- D'Ambrosio A, Bressan D, Ferracci E, Carbone F, Mulè P, Rossi F, Barbieri C, Sorrenti E, Fiaccadori G, Detone T, Vezzoli E, Bianchi S, Sartori C, Corso S, Fukuda A, Bertalot G, Falqui A, Barbareschi M, Romanel A, Pasini D, Chiacchiera F. *Increased genomic instability and reshaping of tissue microenvironment underlie oncogenic properties of Arid1a mutations*. **Science Advances** 2024. PMID:38489371.
- Thomas JF, Valencia-Sánchez MI, Tamburri S, Gloor SL, Rustichelli S, Godínez-López V, De Ioannes P, Lee R, Abini-Agbomson S, Gretarsson K, Burg JM, Hickman AR, Sun L, Gopinath S, Taylor HF, Sun ZW, Ezell RJ, Vaidya A, Meiners MJ, Cheek MA, Rice WJ, Svetlov V, Nudler E, Lu C, Keogh MC, Pasini D, Armache KJ. *Structural basis of histone H2A lysine 119 deubiquitination by Polycomb repressive deubiquitinase BAP1/ASXL1*. **Science Advances** 2023. PMID:37556531.
- Glancy E, Wang C, Tuck E, Healy E, Amato S, Neikes HK, Mariani A, Mucha M, Vermeulen M, Pasini D, Bracken AP. *PRC2.1- and PRC2.2-specific accessory proteins drive recruitment of different forms of canonical PRC1*. **Molecular Cell** 2023. PMID:37030288.
- Tamburri S, Conway E, Pasini D. *Polycomb-dependent histone H2A ubiquitination links developmental disorders with cancer*. **Trends in Genetics** 2022. PMID:34426021.
- Zaghet N, Madsen K, Rossi F, Perez DF, Amendola PG, Demharter S, Pfisterer U, Khodosevich K, Pasini D, Salcini AE. *Coordinated maintenance of H3K36/K27 methylation by histone demethylases preserves germ cell identity and immortality*. **Cell Reports** 2021. PMID:34818537.
- Ferrari KJ, Amato S, Noberini R, Toscani C, Fernández-Pérez D, Rossi A, Conforti P, Zanotti M, Bonaldi T, Tamburri S, Pasini D. *Intestinal differentiation involves cleavage of histone H3 N-terminal tails by multiple proteases*. **Nucleic Acids Research** 2021. PMID:33398338.
- Conway E, Rossi F, Fernandez-Perez D, Ponzo E, Ferrari KJ, Zanotti M, Manganaro D, Rodighiero S, Tamburri S, Pasini D. *BAP1 enhances Polycomb repression by counteracting widespread H2AK119ub1 deposition and chromatin condensation*. **Molecular Cell** 2021. PMID:34186021.
- Carloni S, Bertocchi A, Mancinelli S, Bellini M, Erreni M, Borreca A, Braga D, Giugliano S, Mozzarelli AM, Manganaro D, Fernandez Perez D, Colombo F, Di Sabatino A, Pasini D, Penna G, Matteoli M, Lodato S, Rescigno M. *Identification of a choroid plexus vascular barrier closing during intestinal inflammation*. **Science** 2021. PMID:34672740.
- Biferali B, Bianconi V, Perez DF, Kronawitter SP, Marullo F, Maggio R, Santini T, Polverino F, Biagioni S, Summa V, Toniatti C, Pasini D, Stricker S, Di Fabio R, Chiacchiera F, Peruzzi G, Mozzetta C. *Prdm16-mediated H3K9 methylation controls fibro-adipogenic progenitors identity during skeletal muscle repair*. **Science Advances** 2021. PMID:34078594.
- Tamburri S, Lavarone E, Fernández-Pérez D, Conway E, Zanotti M, Manganaro D, Pasini D. *Histone H2AK119 Mono-Ubiquitination Is Essential for Polycomb-Mediated Transcriptional Repression*. **Molecular Cell** 2020. PMID:31883952.
- Musiani D, Giamb Bruno R, Massignani E, Ippolito MR, Maniaci M, Jammula S, Manganaro D, Cuomo A, Nicosia L, Pasini D, Bonaldi T. *PRMT1 Is Recruited via DNA-PK to Chromatin Where It Sustains the Senescence-Associated Secretory Phenotype in Response to Cisplatin*. **Cell Reports** 2020. PMID:31995759.
- Lupo B, Sassi F, Pinnelli M, Galimi F, Zanella ER, Vurchio V, Migliardi G, Gagliardi PA, Puliafito A, Manganaro D, Luraghi P, Kragh M, Pedersen MW, Horak ID, Boccaccio C, Medico E, Primo L, Nichol

D, Spiteri I, Heide T, Vatsiou A, Graham TA, Élez E, Argiles G, Nuciforo P, Sottoriva A, Dienstmann R, Pasini D, Grassi E, Isella C, Bertotti A, Trusolino L. *Colorectal cancer residual disease at maximal response to EGFR blockade displays a druggable Paneth cell-like phenotype*. **Science Translational Medicine** 2020. PMID:32759276.

- Bianchi A, Mozzetta C, Pegoli G, Lucini F, Valsoni S, Rosti V, Petrini C, Cortesi A, Gregoret F, Antonelli L, Oliva G, De Bardi M, Rizzi R, Bodega B, Pasini D, Ferrari F, Bearzi C, Lanzaolo C. *Dysfunctional polycomb transcriptional repression contributes to lamin A/C-dependent muscular dystrophy*. **Journal of Clinical Investigation** 2020. PMID:31999646.
- Scelfo A, Fernández-Pérez D, Tamburri S, Zanotti M, Lavarone E, Soldi M, Bonaldi T, Ferrari KJ, Pasini D. *Functional Landscape of PCGF Proteins Reveals Both RING1A/B-Dependent-and RING1A/B-Independent-Specific Activities*. **Molecular Cell** 2019. PMID:31029542.
- Pivetti S, Fernandez-Perez D, D'Ambrosio A, Barbieri CM, Manganaro D, Rossi A, Barnabei L, Zanotti M, Scelfo A, Chiacchiera F, Pasini D. *Loss of PRC1 activity in different stem cell compartments activates a common transcriptional program with cell type-dependent outcomes*. **Science Advances** 2019. PMID:31106267.
- Lavarone E, Barbieri CM, Pasini D. *Dissecting the role of H3K27 acetylation and methylation in PRC2 mediated control of cellular identity*. **Nature Communications** 2019. PMID:30976011.
- Streubel G, Watson A, Jammula SG, Scelfo A, Fitzpatrick DJ, Oliviero G, McCole R, Conway E, Glancy E, Negri GL, Dillon E, Wynne K, Pasini D, Krogan NJ, Bracken AP, Cagney G. *The H3K36me2 Methyltransferase Nsd1 Demarcates PRC2-Mediated H3K27me2 and H3K27me3 Domains in Embryonic Stem Cells*. **Molecular Cell** 2018. PMID:29606589.
- Apicella M, Giannoni E, Fiore S, Ferrari KJ, Fernández-Pérez D, Isella C, Granchi C, Minutolo F, Sottile A, Comoglio PM, Medico E, Pietrantonio F, Volante M, Pasini D, Chiarugi P, Giordano S, Corso S. *Increased Lactate Secretion by Cancer Cells Sustains Non-cell-autonomous Adaptive Resistance to MET and EGFR Targeted Therapies*. **Cell Metabolism** 2018. PMID:30174307.
- Streubel G, Fitzpatrick DJ, Oliviero G, Scelfo A, Moran B, Das S, Munawar N, Watson A, Wynne K, Negri GL, Dillon ET, Jammula S, Hokamp K, O'Connor DP, Pasini D, Cagney G, Bracken AP. *Fam60a defines a variant Sin3a-Hdac complex in embryonic stem cells required for self-renewal*. **EMBO Journal** 2017. PMID:28554894.
- Chiacchiera F, Pasini D. *Control of adult intestinal identity by the Polycomb repressive machinery*. **Cell Cycle** 2017. PMID:27846373.
- Rossi A, Ferrari KJ, Piunti A, Jammula S, Chiacchiera F, Mazzarella L, Scelfo A, Pelicci PG, Pasini D. *Maintenance of leukemic cell identity by the activity of the Polycomb complex PRC1 in mice*. **Science Advances** 2016. PMID:27730210.
- Jammula S, Pasini D. *EpiMINE, a computational program for mining epigenomic data*. **Epigenetics Chromatin** 2016. PMID:27708717.
- Chiacchiera F, Rossi A, Jammula S, Zanotti M, Pasini D. *PRC2 preserves intestinal progenitors and restricts secretory lineage commitment*. **EMBO Journal** 2016. PMID:27585866.
- Chiacchiera F, Rossi A, Jammula S, Piunti A, Scelfo A, Ordóñez-Morán P, Huelken J, Koseki H, Pasini D. *Polycomb Complex PRC1 Preserves Intestinal Stem Cell Identity by Sustaining Wnt/ β -Catenin Transcriptional Activity*. **Cell Stem Cell** 2016. PMID:26526724.
- Piunti A, Rossi A, Cerutti A, Albert M, Jammula S, Scelfo A, Cedrone L, Fragola G, Olsson L, Koseki H, Testa G, Casola S, Helin K, d'Adda di Fagagna F, Pasini D. *Polycomb proteins control proliferation and transformation independently of cell cycle checkpoints by regulating DNA replication*. **Nature Communications** 2014. PMID:24728135.
- Ferrari KJ, Scelfo A, Jammula S, Cuomo A, Barozzi I, Stützer A, Fischle W, Bonaldi T, Pasini D. *Polycomb-dependent H3K27me1 and H3K27me2 regulate active transcription and enhancer fidelity*. **Molecular Cell** 2014. PMID:24289921.
- Bartocci C, Diedrich JK, Ouzounov I, Li J, Piunti A, Pasini D, Yates JR, 3rd, Lazzerini Denchi E. *Isolation of chromatin from dysfunctional telomeres reveals an important role for Ring1b in NHEJ-mediated chromosome fusions*. **Cell Reports** 2014. PMID:24813883.
- Vella P, Scelfo A, Jammula S, Chiacchiera F, Williams K, Cuomo A, Roberto A, Christensen J, Bonaldi T, Helin K, Pasini D. *Tet proteins connect the O-linked N-acetylglucosamine transferase Ogt to chromatin in embryonic stem cells*. **Molecular Cell** 2013. PMID:23352454.