

Eran Meshorer, PhD

The Arthur Gutterman Chair in Stem Cell Research

Address

Department of Genetics, The Institute of Life Sciences and The Edmond and Lily Safra Center for Brain Sciences (ELSC), The Hebrew University of Jerusalem, Edmond J. Safra Campus, Givat Ram, Jerusalem 91904; Email: eran.meshorer@mail.huji.ac.il

Websites: <http://meshorerlab.huji.ac.il>; <http://elsc.huji.ac.il/meshorer/home>

ORCID ID: 0000-0003-4777-986X

Education

1999-2003 Ph.D. in Molecular Neuroscience, Hebrew University
1997-1999 M.Sc. in Molecular Microbiology, Hebrew University
1993-1996 B.Sc. in Biology, *magna cum laude*, Hebrew University

Professional experience

2024 **Visiting Professor**, Institut Curie, Paris
2016- **Full Professor**, Department of Genetics & ELSC, Hebrew University
2014-2015 **Visiting Professor**, Whitehead Institute (MIT) and Broad Institute (Harvard/MIT)
2011-2016 **Associate Professor**, Department of Genetics, Hebrew University
2007-2011 **Senior Lecturer (Assistant Professor)**, Department of Genetics, Hebrew University
2004-2007 **Post-Doctoral Fellow**, National Cancer Institute, NIH, Bethesda, MD
1997-2004 **Teaching Assistant**, Hebrew University

Teaching experience

2024-present **Stem cells and organoids in advanced research**, graduate students
2016-present **The Molecular basis of neurodegeneration**, graduate students
2012-2022 **The Nobel Prize in Life Sciences**, Coordinator and Lecturer, graduate students
2011-2020 **The Nucleus**, Co-coordinator and Lecturer, graduate students
2008-2024 **Molecular Biology**, Coordinator and Lecturer, 2nd year undergraduate students
2010 **Neuroimaging**, practical lab course, graduate students
2009-2014 **Stem cells**, Co-coordinator and Lecturer, 3rd year undergraduate students

Academic service (HUJ)

2021- **Head**, Committee for tenure and promotions, Experimental Sciences, Hebrew University
2020- **Member, Steering Committee**, National Unit for Genetically Engineered Animals, HUJI
2019- **Member, Search committee**, Institute of Life Sciences
2017-2021 **Head**, Department of Genetics, The Institute of Life Sciences, Hebrew University
2017-2021 **Member, Tenure and Promotions Committee**, Faculty of Science, Hebrew University
2017-2021 **Member, Committee for tenure and promotions**, Medical School, Hebrew University
2016-2017 **Head**, Genetics Department teaching program
2016-2019 **Board Member**, Jerusalem Brain Community (JBC)
2015- **Head**, Psychobiology program
2015-2020 **Head**, ETGAR program (outstanding students program)
2013-2014 **Member, Search Committee**, Institute of Life Sciences
2012-2014 **Member, SMART Prize committee** (paper of the month award)
2011-2014 **Consultant**, Biology undergraduate program

Professional activities, Editorial and Societies (commission of trust)

2024-2026 **Committee member**, National Academy of Sciences Governmental report
2024 **Head**, Israel Science Foundation (ISF) grant applications committee
2023-2024 **Evaluation panel member**, National Science Centre, Poland (LS2: Genetics genomics)

2022-present **Scientific Advisory Board member**, Institute of Biophysics, the Czech Academy of Sciences

2022-present **President**, Israel Stem Cell Society

2022 **Editor** (with Kazuhiro Maeshima) *Curr Opin Cell Biol* issue on the 'Cell Nucleus'

2021-present **Head, ISSCR Publications Committee**, International Society for Stem Cell Research

2021- present **Chair**, Clore Fellowships National Committee for outstanding PhD students

2020 **Guest Editor** *Stem Cell Reports* special issue 'Chromatin and Nuclear Architecture'

2020 **Editor** (with G. Testa), *Stem Cell Epigenetics*, Elsevier

2019 **External Evaluator**, Tenure-Track Faculty Recruitment, LMU, Munich, Germany

2016-present **Tenure & promotion external evaluator**, both national and international

2018-2021 **Member, ISSCR Publication Committee**, International Society for Stem Cell Research

2018-2020 **Editorial Board Member**, *Cells*

2017- 2020 **Vice President**, ILANIT / FISEB

2017- 2018 **Council member**, UNESCO's International Cell Research Organization

2017-2020 **Board Member**, Jerusalem Brain Community

2017-2020 **Vice President**, FISEB

2016-2019 **Editorial Board Member**, *Systems Biomedicine*

2016-2019 **Reviewing committee member**, French ANR SVE6 ("genetics & systems biology"), Paris

2014-present **Board Member**, The Israel Genetics Society; The Israel Stem Cell Society (2016-2022);

2013-2015 **Associate Editor**, *Frontiers in Neuroscience*

2013 **Reviewing committee member**, European Union FP7 section on Stem Cells, Brussels

2012 **Editor** (with K. Plath), *The Cell Biology of Stem Cells*, Landes Bioscience / Springer

2012 **Reviewing committee member**, Research Council Romania, Bucharest;

2010-present **Reviewing abstracts**, International Society for Stem Cell Research

2007- present **Ad hoc reviewer for** *Science, Nature, Cell, Nat Cell Biol, Nat Genet, Nat Struct Mol Biol, Nat Aging, Nat Commun, Nat Rev Genet, Nat Mach Intell, PNAS, Dev Cell, Cell Stem Cell, Cell Rep, Stem Cells, Stem Cell Rev, Development, eLife, PLoS Biol, PLoS Genet, PLoS One, Cell Res, Genes Dev, Aging Cell, Mol Syst Biol, Exp Cell Res, EMBO J, EMBO Rep, Sci Rep, Mol Biol Cell, Mol Cell Biol, Nucleus, Nucleic Acids Res, Chromosoma, Epigenetics Chromatin, J Cell Biol, J Cell Sci, Dev Biol, Genome Biol, Genome Med, Genome Res, BMC journals, Frontiers...*

2007- present **Reviewing grants**: European Research Council ERC advanced grants; EU FP7 programs; MRC (South Africa); AD society (UK), MRC (UK); Wellcome Trust (UK); GENOPAT (France), ANR (France), French National Research Agency, Atip-Avenir (France); Austrian Science Fund (Austria), Czech Science Foundation (Czech Republic), as well as all agencies in Israel.

2007-present **Member**, Israel Society for Microscopy

2007-present **Member**, International Society for Stem Cell Research

2007-present **Member**, Israel Society for Neuroscience

2007-present **Member**, Israel Society for Biochemistry and Molecular Biology (ISBMB)

2007-2010 **Managing Editor**, on-line encyclopedia *Frontiers in Bioscience*, section on Stem Cell Chromatin

2007- present **PhD committee member** of 35 students

Awards and honors (selected)

2025 EMBO member nomination

2025 ISSCR Public Service Award (International Society for Stem Cell Research)

2022 Coordinator, EIC Pathfinder award ('RT-SuperES')

2019 Gokhman *et al.* Cell 2019 won 1st People's Choice of [Science's breakthrough of 2019](#).

2019 Gokhman *et al.* Cell 2019 was selected among the 12 scientific breakthroughs of 2019 by [Science magazine](#)

2019 Gokhman *et al.* Cell 2019 was selected among the 10 top stories of the year by [Science News](#)

2018 Coordinator, Marie Curie ITN Project award ('EpiSyStem')

2016 Gold Medal Award from the 1st Faculty of Medicine, Charles University, Prague, Czech Republic

- 2016 Named the Arthur Gutterman Chair in Stem Cell Research
- 2015 Vigevani Research Prize, Israel-Italy (with Prof. Giuseppe Testa, Milano)
- 2014 Top ten discoveries of 2014, Archaeology magazine (Gokhman et al., *Science*)
- 2013 Zelman Cowen Award for Biomedical Research, Hebrew University and University of Sydney
- 2012 Associate PI, *EpiGeneSys* (EU FP7 consortium)
- 2012 Hestrin Prize for an outstanding young researcher, Israel Society for Biochemistry and Molecular Biology
- 2012 Klachky Prize for the advancement of science, Hebrew University
- 2011 ERC starting grant award
- 2011 Excellence in teaching award, Life Sciences, Hebrew University
- 2010 Elkes Award from the National Institute for Psychobiology in Israel
- 2010 Excellence in teaching award, Woods Hole course on stem cells and regenerative medicine
- 2010 Associate PI, *EuroSyStem* (EU FP7 consortium)
- 2009 The Farkash Prize for Life Sciences, Hebrew University
- 2008 The Joseph H. and Belle R. Braun Senior Lectureship in life sciences, Hebrew University
- 2008 The Rom prize in genetics, Hebrew University
- 2007 Alon Fellowship for new faculty from the Israeli Council for Higher Education
- 2006 Fellows Award (FARE) in recognition of excellence in biomedical research, NIH
- 2005 *Lilly-Molecular Psychiatry* Award for most original significant research for 2005 (Meshorer et al., 2005)
- 2004 Golda Meir Fellow, Hebrew University
- 2003 The Israel Society for Biochemistry and Molecular Biology (ISBMB) Teva national prize for outstanding PhD

Research grants (expired)

- 2021-2024 **Israel Cancer Research Fund (ICRF)** “Histone turnover in glioblastoma”
\$180,000 (Role: PI)
- 2020-2023 **John Templeton Foundation** “The (epi)genetic basis of the modern human brain evolution”
\$750,000 (Role: co-PI, with Liran Carmel)
- 2017-2022 **Israel Science Foundation (ISF)** “Chromatin regulators of pluripotent stem cells” [1140/17]
\$500,000 (Role: PI)
- 2018-2022 **EU Marie Curie ITN network “EpiSyStem”** [765966]
€525,000 (Role: Coordinator; PI)
- 2017-2020 **MOST-DKFZ German-Israel collaboration** “The role of ATRX in glioblastoma”
€117,000 (Role: co-PI, with Karsten Rippe)
- 2015-2020 **FET-OPEN** “*CellViewer*: super-resolution systems microscopy to assess pluripotency”
€800,000 (Role: co-PI, with P. Cosma, M. Lakadamyali)
- 2016-2018 **TEVA-NNE** “A drug-screening platform for Huntington’s and Fragile-X diseases”
\$200,000 (Role: co-PI, with N. Benvenisty)
- 2015-2017 **ERC Proof of Concept (PoC) grant** “An antibody microarray for histone modifications”
€150,000 (Role: PI)
- 2015-2016 **ISF-Broad** “Defining a glioblastoma stem cell: from chromatin dynamics to cell conversion”
\$100,000 (Role: co-PI, with B. Bernstein)
- 2013-2016 **BIKURA ISF personal grant** “Reconstructing the Neandertal epigenome”
\$150,000 (Role co-PI, with Liran Carmel)
- 2013-2016 **Ministry of Science Tashtiot grant** “Israel Center for induced pluripotent stem cell technologies”
\$150,000 (Role: co-PI with H. Soreq, N. Benvenisty and B. Reubinoff)
- 2012-2016 **Israel Science Foundation** “Novel non-coding RNAs in embryonic stem cells”
\$225,000 (Role: PI)
- 2012-2016 **ISF-Morasha** “Mechanism of reprogramming human models for neurodegenerative disorders”
\$150,000 (Role: co-PI, with Nissim Benvenisty)
- 2012-2015 **Israel-Japan collaboration grant:** “Chromatin structure and dynamics in the CNS”

- \$150,000 (Role: co-PI, with Takumi Takizawa)
- 2011-2016 **ERC “ExprES: Chromatin and transcription in ESCs: from single cells to genome-wide views”**
€1,500,000 (Role: PI)
- 2011-2015 **Human Frontiers Science Program “The birth of the circadian clock”**
\$300,000 (Role: co-PI, with Aviv Regev and Sebastian Kadener)
- 2011-2014 **DKFZ-MOST “Chromatin and epigenetics in pluripotent and tumor initiating cells”**
€117,000 (Role: co-PI, with Karsten Rippe)
- 2011-2013 **Israel-Italy collaboration grant: “Senescence of stem cells and Rett Syndrome”**
\$80,000 (Role: co-PI, with Umberto Galderisi)
- 2011-2013 **Abisch-Frenkel Fund “Genome-wide and single cell alternative splicing in ES cell differentiation”**
\$90,000 (Role: PI)
- 2011 **ISF equipment: Fluorescence Activated Cell Sorter (FACS)**
\$150,000 (Role: co-PI, with Nissim Benvenisty and Koby Nahmias)
- 2009-2013 **Nucleosome4D: FP7-PEOPLE, Marie Curie Initial Training Network (ITN)**
€150,000 (Role: co-PI). The network funds an ER or ESR in each participating lab.
- 2010-2012 **Israel Psychobiology Center “Chromatin-related transcriptional memory in the mammalian brain”**
\$80,000 (Role: PI)
- 2010-2012 **Israel Cancer Research Foundation “Chromatin in embryonic and cancer stem cells”**
\$60,000 (Role: PI)
- 2010-2012 **Israel Ministry of Health “Pluripotent stem cells for Machado Joseph Disease”**
\$85,000 (Role: PI)
- 2009-2012 **ISF-Morasha “Human pluripotent stem cells for neurodegenerative diseases”**
\$150,000 (Role: co-PI, with Nissim Benvenisty)
- 2009-2012 **The Center for Complexity Science “Alternative splicing in ES cell differentiation”**
(\$150,000, Role: PI). Funding lost due to the collapse of the Horowitz fund
- 2010-2011 **The applicative grant of the Hebrew University “Improving reprogramming”**
\$40,000 (Role: PI)
- 2007-2011 **Marie Curie IRG reintegration grant “Live imaging of nuclear dynamics in ES cells”**
€100,000 (Role: PI)
- 2007-2010 **Israel Science Foundation personal grant “Identification of chromatin proteins in ES cells”**
\$150,000 (Role: PI)

Research grants (active)

- 2023-2026 **DKFZ-MOST “Heterochromatin condensates in stem cell differentiation”**
€117,000 (Role: co-PI, with Karsten Rippe)
- 2023-2027 **Horizon2020 EIC Pathfinder “RT-SuperES: Real-time high-content super-resolution imaging”**
€650,000 (Role: Coordinator)
- 2023-2027 **Israel Ministry of Science “A knowledge center for forensic DNA”**
\$100,000 (Role: co-PI)
- 2022-2025 **Israel Ministry of Science “Novel therapeutic targets for polyQ-related diseases”**
\$215,000 (Role: PI)
- 2021-2025 **ISF Personalized Medicine “Personalized therapies of neurological disorders using hPSCs”**
\$220,000 (Role: co-PI, w Benvenisty/Levenberg/Birk)

Databases and Webservers

BindDB *In-silico* reverse-ChIP analysis using publicly available ChIP-seq datasets

Invited talks (international only, selected)

2025 Genetics 2025 Conference, Moscow (by zoom due to the war); DKFZ Heidelberg; Brno Institute of Biophysics 70th Anniversary, Mendel Museum; Clinical Epigenetics, Napoli; EMBO Conference Heidelberg

- 2024 Australian Society for Stem Cell Research (ASSCR), Adelaide; FMI, Basel; Univ of Luxembourg; Institut Curie Orsay; Institut Curie Paris; Medical University Innsbruck; Institute of Biochemistry & Biophysics, Polish Academy of Sciences, Warsaw; Whitehead Institute, MIT, Cambridge, MA
- 2023 Nencki Institute, Warsaw
- 2022 Stem Cell Epigenetics international symposium, Milano; ISSCR annual meeting, San-Francisco (Chair and speaker); 1st Subhash Mukhopadhyay e-symposium, Bangalore, India (online)
- 2021 Kumamoto University (online); International Cannabinoid Research Society (ICRS), Special Presidential Plenary Lecture; Toulouse University (online); 16th International Institute Curie Course on Epigenetics, Paris (online);
- Selected older: Transgenic Technologies International Meeting (online); GIBH, Chinese Academy of Sciences, Guangzhou, China (2020); DKFZ Israel Annual Meeting, Heidelberg (2019); *CellViewer* Annual Meeting, Prague (2019); Functional Organization of the Cell Nucleus, Prague (2018); Chromatin and Metabolism Summer School, Spetses Island, Greece (2018); FEBS Annual meeting, Prague (Chair and speaker, 2018); Institute Curie Invited speaker seminar, Paris (2018); Epigenetics and Chromatin Mini-Symposium, Brno, Czech Republic (Keynote, 2018); Radboud University, Nijmegen (2017); B-Debate: Epigenetic mechanisms in health and disease, Barcelona (2017); Cold Spring Harbor Stem Cell Meeting (2017); Nuclear Architecture & Function, Český Krumlov (Keynote, 2017); The International Congress of Cell Biology, Prague (Chair and speaker, 2016); 14th ISSCR annual meeting, Boston (2016); Somatic Cell Reprogramming course and conference, CRG, Barcelona (2016, 2014); EPIGEN-MiChroNetwork chromatin seminar, Milano (2016); Italian Association for Cell Biology (ABCD) annual congress, Bologna (2016); Creating Life in 3D conference, Brno, Czech Republic (Keynote, 2015); Broad Institute invited seminar series, Cambridge, MA (2015); CiRA (Center for iPS Cell Research), Kyoto (2014); Ludwig-Maximilians-Universität (LMU), Munich (2014); The Center for Integrative Genomics seminar series, Lausanne University (2014); Chromatin Structure and Function, Moscow (Keynote, 2014); Napoli II University (2014); University of Zurich (2013); EpiGeneSys annual meeting, Cambridge, UK (2013); Chromatin Changes in Differentiation and Malignancies, Egmond aan Zee, The Netherlands (2013); 11th ISSCR annual meeting, Boston, MA (2013); Epigen meeting, Palermo (2013); Nanyang Technical University, Singapore (2013); IGBMC Seminar Series, Strasbourg (2013); *Nucleosome4D* annual meeting, Barcelona (2012); Chromatin, Confocal Microscopy and Living Cell Studies, Brno (2012); Frontiers in Stem Cells & Regeneration, Woods Hole, MA (2012, 2011); Dynamic Organization of Nuclear Function, CSHL (2012); 'Stem Cells and Cancer' NIH course, Howard University, Washington DC (2012, 2011, 2010); EuroSyStem neuronal stem cell meeting, Milano (2012); EuroSyStem annual meeting, Prague (2011); EMBO Workshop on Chromatin Structure, Organization and Dynamics, Prague (2011); RESCUES annual meeting, Newcastle, UK (2011); 3rd International Congress on Stem Cells and Tissue Formation, Dresden (2010); 8th ISSCR annual meeting, San-Francisco (2010); Mechanobiology and stem cells conference, Singapore (2010); UCLA seminar series (2010); Dissection of pluripotent stem cells – Japanese Molecular Biology Society, Yokohama (2009); Abcam Stem Cell meeting, Singapore (2009)

International meetings organization

- 2023 *EpiSyStem* Annual Meeting, Milano, Italy
- 2022 ISSCR regional international meeting. Jerusalem, Israel
- 2021 Human Genome Meeting 2021 (Vice President), Tel-Aviv, Israel
- 2020 *Chromatin and nuclear architecture in stem cells*. Stem Cell Reports / ISSCR. Online
- 2020 *Condensates and phase separation in biology*. Israel Institute for Advanced Studies. Online.
- 2020 FISEB/ILANIT Vice President, Eilat, Israel

- 2019 *Seeing and decoding nuclear function and structure*, CRG, Barcelona
- 2018 *What Makes us Human* (with A. Mezer & I. Segev), ELSC, Givat Ram, Jerusalem
- 2017 *Imaging Chromatin* international mini-symposium, The Institute of Life Sciences, HUJ
- 2017 The UK-Israel Stem Cell young researcher conference, Bet-Belgia, Givat Ram, Jerusalem
- 2017 The ELSC international meeting for molecular neuroscience: *From generation to degeneration*
- 2014 Institute for Advanced Studies–Peking Univ. workshop: *'Design Principles in Cellular Systems'*
- 2013 Israel-China ISF-NSFC joint workshop on Epigenetics and genetics of human diseases
- 2013 Co-organizer, the Kornberg 2013 Summer Course on Regenerative Biology (HUJ).
- 2012 The Annual Meeting of the *Nucleosome4D* European Consortium (Barcelona, Spain).
- 2010 The Annual Meeting of the Israel Live Imaging Forum (ILIF) – organizer and chair (HUJ).

Student supervision, current lab members:

Administrator

- 2011-present Yael Riback (best employee award, 2018)

Research Associates

- 2007-present Dr. Malka Nissim-Rafinia (best employee award, 2013)
- 2013-present Dr. Eitan Segev (Network manager, *EpiSyStem* ITN; *RT-SuperES* Pathfinder)
- 2014-present Dr. Ayelet-Hashahar Cohen (Researcher-Teacher program)

Postdocs

- 2023-present Dr. Walaa Oweis (ELSC post-doctoral fellowship)
- 2025-present Dr. Tamar Segal (ELSC post-doctoral fellowship)

PhD Students

- 2024-present Ziv Brodie
- 2023-present Avital Pushet
- 2022-present Shalhevet Klemfner
- 2022-present Tzukit Tal (joint student with Teva)
- 2011-present Elad Dvir (joint student with Sagiv Shifman. Direct track. Azrieli Fellow from 2024)

MSc students

- 2024-present Liora Feshbach
- 2024-present Rivka Masar
- 2024-present Shira Siegel
- 2024-present Eden Mishne
- 2023-present Shira Horev

Alumni:

Research Associates

- 2011-2014 Dr. Rachel Schyr

Postdocs

- 2020-2024 Dr. Thabat Khatib (Shimon Peres Post-doc Award; now Lecturer @American Univ. Bethlehem)
- 2020-2022 Dr. Matan Sorek (ELSC Excellence Award; Hoffman scholar; Azrieli Fellow; now @Berger Lab)
- 2014-2017 Dr. Gajendra Kumar Azad (Lady Davis Fellowship) (now PI, Patna University, India)
- 2011-2014 Dr. Ayelet-Hashahar Cohen (Researcher-Teacher)
- 2008-2011 Dr. Anna Mattout (now PI, Toulouse University, France)
- 2011-2015 Dr. Dorit Cohen (now Research Manager, FutuRx, Ness-Ziona)
- 2014-2015 Dr. Divya Mundackal (now Tenure Track Researcher, SCTIMST, India)

2013-2015 Dr. Sharon Schlesinger (now PI, Hebrew University)
2009-2013 Dr. Raghu Ram (now Research Associate, Shiekhattar lab)
2009-2013 Dr. Eitan Segev (now Manager, *RT-SuperES* EIC-Pathfinder)

PhD Students

2018-2025 Tamar Segal
2018-2024 Patrick Siang Lin Lim (*EpiSyStem* ITN Network student; post-doc @MIT)
2018-2023 Juliane Viegas (*EpiSyStem* ITN Network student; SMaRT paper prize; post-doc @Harvard)
2018-2023 Daniel Batyrev (ELSC student)
2018-2023 Lea Cohen (Muchrik award winner; ELSC paper award; post-doc @Cambridge)
2017-2023 Dr. Walaa Oweis (Neubauer PhD Fellowship; post-doc in the lab)
2016-2022 Dr. Moria Maman (VATAT PhD Levtzion Fellowship; now Res. Assoc. @Genetika+)
2013-2020 Dr. Matan Sorek (ELSC Award; Hoffman scholar; Azrieli Fellow; now @Berger lab, Upenn)
2011-2018 Dr. Arigela Harikumar (MSc/PhD / ITN fellow; now Post-doc @Shiekhattar lab)
2011-2017 Naveh Evantal (now Research Associate, FutuRx, Ness-Ziona)
2011-2017 Dr. Alva Biran (Pollack prize; Clore Fellow, Post-doc, now @Groth Lab, Copenhagen)
2010-2016 Dr. Ilana Livyatan (now PI, Hadassah Medical Center, Jerusalem)
2007-2013 Dr. Adi Alajem (now Research Associate, Ram lab, Hebrew University)
2008-2013 Dr. Badi Sri Sailaja (now PTC Therapeutics, Hopewell, NJ)
2008-2012 Dr. Shai Melcer (now CEO, BIOHOUSE, Jerusalem)

MSc students

2017-2020 Talia Rohrlich (MD studies, Tel-Aviv University)
2012-2014 Nuphar Salts (completed MD studies at TAU)
2011-2014 Yair Aaronson (now @Algotec, Israel)
2010-2011 David Gokhman (now PI, Weizmann Institute)
2009-2011 Hadas Hezroni (Pollack prize, Ulitsky lab, now @Weizmann Institute)
2008-2010 Adva Maimon (now @Biological Industries, Israel)

List of Publications (h-index = 49; i10-index = 100; >12,500 citations)

I. Research articles

1. Mathov Y, Rosen N, Leibson C, **Meshorer E**, Yakir BY and Carmel L (2025) RoAM: computational reconstruction of ancient methylomes and identification of differentially methylated regions. *Genome Biol.* **26**(1):266. doi: [10.1186/s13059-025-03702-7](https://doi.org/10.1186/s13059-025-03702-7).
2. Arfè S, Karagyozova T, Forest A, Bingham D, Hmidan H, Mazaud D, Garnier M, Le Baccon P, **Meshorer E**, Quivy JP and Almouzni G (2025) H3.3 deposition counteracts the replication-dependent enrichment of H3.1 at chromocenters in embryonic stem cells. *Nat Commun.* **16**(1):5138. doi: [10.1038/s41467-025-60430-z](https://doi.org/10.1038/s41467-025-60430-z).
3. Maman M*, Dvir E*, Sun X, Ram O, Shifman S and **Meshorer E** (2024) Mutant Huntingtin disrupts global DNA methylation in human iPSC-derived cerebral organoids. Cell Press Sneak Peak preprint. papers.ssrn.com/sol3/papers.cfm?abstract_id=4489795
4. Razvag Y, Paz D, Klemfner S, **Meshorer E**, and Lerner E (2025) FRET-sensitized acceptor emission localization (FRETsael) - nanometer localization of biomolecular interactions using fluorescence lifetime imaging. *Biophys J.* **124**:1-16. doi.org/10.1016/j.bpj.2025.02.017
5. Mathov Y, Nissim-Rafinia M, Leibson C, Galun N, Marques-Bonet T, Kandel A, Liebergal M, **Meshorer E*** & Carmel L* (2025) Inferring DNA methylation in non-skeletal tissues of ancient specimens. *Nat Ecol Evol.* **9**(1):153-165. doi:10.1038/s41559-024-02571.
6. Sawyer S, Gelabert P, Yakir B, Lizcano AL, Sperduti A, Bondioli L, Cheronet O, Neugebauer-Maresch C, Teschler-Nicola M, Novak M, Pap I, Szikossy I, Hajdu T, **Meshorer E**, Carmel L and Pinhasi R (2024) Improved detection of methylation in ancient DNA. *Genome Biol.* **25**(1):261. doi:10.1186/s13059-024-03405-5
7. Kinreich S, Bialer-Tsypin A, Viner-Breuer R, Keshet G, Suhler R, Lin Lim PS, Golan-Lev T, Yanuka O, Turjeman A, Ram O, **Meshorer E**, Egli D, Yilmaz A and Benvenisty N (2024) Genome-wide screening reveals essential roles for HOX genes and imprinted genes during caudal neurogenesis of human embryonic stem cells. *Stem Cell Reports.* S2213-6711(24)00288-1. doi:10.1016/j.stemcr.2024.09.009
8. Patra M, Klochendler A, Condiotti R, Kaffe B, Elgavish S, Drawshy Z, Avrahami D, Narita M, Hofree M, Drier Y, **Meshorer E**, Dor Y and Ben-Porath I (2024) Senescence of human pancreatic beta cells enhances functional maturation through chromatin reorganization and promotes interferon responsiveness. *Nucleic Acids Res.* **52**(11):6298-6316. doi:10.1093/nar/gkae313.
9. Barouch A, Mathov Y, **Meshorer E**, Yakir B and Carmel L (2024) Reconstructing DNA methylation maps of ancient populations. *Nucleic Acids Res.* doi:10.1093/nar/gkad1232.
10. Pascal C, Zonszain J, Hameiri O, Tammer L, Ben-Salmon S, Roy VR, Levy T, Rabe'a SA, Gargi-Levy C, Shalev N, Elbaz L, Hakim T, Lev-Maor G, Jordan A, **Meshorer E** and Ast G (2023) Human histone H1 variants impact splicing outcome by controlling RNA polymerase II elongation rate. *Mol Cell.* **83**(21):3801-3817.e8. doi:10.1016/j.molcel.2023.10.003
11. Sebastian-Perez R, Nakagawa S, Tu X, Aranda S, Pesaresi M, Gomez-Garcia PA, Alcoverro-Bertran M, Gomez-Vazquez JL, Carnevali D, Borrás E, Sabido E, Martin L, Nissim-Rafinia M, **Meshorer E**, Noguera-V, Di Croce L and Cosma MP (2023) SMARCD1 and TOPBP1 contribute to heterochromatin maintenance at the transition from the 2C-like to the pluripotent state. *eLife.* doi.org/10.7554/eLife.87742.1
12. Viegas JO, Fishman L, **Meshorer E*** and Rabani M* (2023) Calculating RNA degradation rates using large scale normalization in mouse embryonic stem cells. *STAR Protoc.* **4**(3):102534. [10.1016/j.xpro.2023.102534](https://doi.org/10.1016/j.xpro.2023.102534)
13. Joron K*, Viegas JO*, Haas-Neill L, Bier S, Drori P, Dvir S, Lim PSL, Rauscher S, **Meshorer E*** and Lerner E* (2023) Fluorescent protein lifetimes report increased local densities and phases of nuclear condensates during embryonic stem cell differentiation. *Nat Commun.* **14**(1):4885. doi: [10.1038/s41467-023-40647-6](https://doi.org/10.1038/s41467-023-40647-6)
14. Omer D, Cohen-Zontag O, Gnatek Y, Harari-Steinberg O, Pleniceanu O, Namestnikov M, Cohen AH, Nissim-Rafinia M, Dotan Z, Tam G, Kalisky T, **Meshorer E** and Dekel B (2023) OCT4 induces long-lived dedifferentiated kidney progenitors poised to re-differentiation in 3D-kidney spheroids progenitors. *Mol Ther Methods Clin Dev.* **29**:329-346. doi: [10.1016/j.omtm.2023.04.005](https://doi.org/10.1016/j.omtm.2023.04.005)
15. Cohen LRZ*, Kaffe B*, Deri E, Leibson C, Nissim-Rafinia M, Ben-Yishai M, Harpaz N, Ron G, Shema E and **Meshorer E** (2023) PRC2-independent actions of H3.3K27M in embryonic stem cell differentiation. *Nucleic Acids Res.* **51**(4):1662-1673. doi: [10.1093/nar/gkac800](https://doi.org/10.1093/nar/gkac800). (cover)
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III. Short reviews, News & Views, and Editorial comments

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IV. Chapters

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3. *Stem Cell Epigenetics* (2020), Elsevier. **E. Meshorer** & G. Testa, Editors.
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