

# Eran Meshorer, PhD

## The Arthur Gutterman Chair in Stem Cell Research

### Address

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

### 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

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

2016-present **Neurodegeneration**, graduate students  
2012-present **The Nobel Prize in Life Sciences**, course Coordinator and Lecturer, graduate students  
2011-present **The Nucleus**, course co-coordinator and Lecturer, graduate students  
2010 **Neuroimaging**, practical lab course, graduate students  
2009-2014 **Stem cells**, course Co-coordinator and Lecturer, 3rd year undergraduate students  
2008-present **Molecular Biology**, Coordinator and Lecturer, 2nd 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- **Search committee member**, Institute of Life Sciences  
2017- **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)

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

2019-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, genomics, bioinformatics and systems biology"), Paris

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

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 ("Ideas: Complex Exploratory Research Projects"), Bucharest;

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

2007- present **Reviewing papers for >70 journals**, incl. *Science, Nature, Cell, Nat Cell Biol, Nat Genet, Nat Struct Mol Biol, Nat Commun, Nat Rev Genet, PNAS, Dev Cell, Cell Stem Cell, Cell Rep, Stem Cells, Stem Cell Rev, eLife, PLoS Biol, PLoS Genet, PLoS One, Cell Res, Genes Dev, Aging Cell, Mol Syst Biol, Exp Cell Res, EMBO J, EMBO Rep, Mol Biol Cell, Mol Cell Biol, Nucleus, Nucleic Acids Res, Chromosoma, Epigenetics Chromatin, Sci Rep, J Cell Biol, J Cell Sci, Dev Biol, Front Neurosci, Front Mol Neurosci, Front Cell Neurosci, Genome Biol, Genome Med, Etc..*

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)

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)

2017-2022 **Israel Science Foundation (ISF)** "Chromatin regulators of pluripotent stem cell differentiation"  
 [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)

- 2023-2027 **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 based on genetic screening and brain organoids” \$215,000 (Role: PI)
- 2021-2025 **ISF Personalized Medicine** “Modelling and defining personalized therapies of neurological disorders using human pluripotent stem cells” \$220,000 (Role: co-PI, w Benvenisty/Levenberg/Birk)
- 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)

#### 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*)

2014-present Dr. Ayelet-Hashahar Cohen (Researcher-Teacher program)

2011-2014 Dr. Rachel Schyr

##### Postdocs

2020-present Dr. Thabat Khatib (ELSC Shimon Peres Post-doctoral Award)

##### PhD Students

2022-present Shalhevet Klemfner

2022-present Tzukit Tal (joint student with Teva)

2018-present Patrick Siang Lin Lim (*EpiSyStem* ITN Network student)  
 2018-present Juliane Viegas (*EpiSyStem* ITN Network student)  
 2018-present Tamar Segal  
 2018-present Lea Cohen (ELSC student; Muchrik award winner)  
 2018-present Daniel Batyrev (ELSC student)  
 2017-present Walaa Oweis (Neubauer PhD Fellowship)  
 2016-present Moria Maman (VATAT PhD Levtzion Fellowship)

## Alumni:

### Research Associates

2011-2014 Dr. Rachel Schyr

### Postdocs

2020-2022 Dr. Matan Sorek (ELSC Excellence Award; Hoffman scholar; Azrieli Fellow)  
 2014-2017 Dr. Gajendra Kumar Azad (Lady Davis Fellowship) (PI, Patna University, India)  
 2011-2014 Dr. Ayelet-Hashahar Cohen (Researcher-Teacher)  
 2008-2011 Dr. Anna Mattout (PI, Toulouse University, France)  
 2011-2015 Dr. Dorit Cohen (Research Manager, FutuRx, Ness-Ziona)  
 2014-2015 Dr. Divya Mundackal (Tenure Track Researcher, SCTIMST, India)  
 2013-2015 Dr. Sharon Schlesinger (PI, Hebrew University)  
 2009-2013 Dr. Raghu Ram (Research Associate, Shiekhattar lab)  
 2009-2013 Dr. Eitan Segev (Manager, *EpiSyStem*)

### PhD Students

2013-2020 Matan Sorek (ELSC Award; Hoffman scholar; Azrieli Fellow; Post-doc, Berger lab, Upenn)  
 2011-2018 Arigela Harikumar (MSc/PhD / ITN fellow; Post-doc, Shiekhattar lab)  
 2011-2017 Naveh Evantal (Research Associate, FutuRx, Ness-Ziona)  
 2011-2017 Alva Biran (Pollack prize; Clore Fellow, Post-doc, Groth Lab, Copenhagen)  
 2010-2016 Ilana Livyatan (Post-doc, Straussman & Segal labs, Weizmann Institute)  
 2007-2013 Adi Alajem (Research Associate, Ram lab, Hebrew University)  
 2008-2013 Badi Sri Sailaja (PTC Therapeutics, Hopewell, NJ)  
 2008-2012 Shai Melcer (CEO, BIOHOUSE, Jerusalem)

### MSc students

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

## Databases and Webservers

[BindDB](#) *In-silico* reverse-CHIP analysis using publicly available CHIP-seq datasets

## Invited talks (international only, selected)

2022 Stem Cell Epigenetics international symposium, Milano, Italy  
 2022 Chair and speaker, ISSCR annual meeting, San-Francisco, CA, USA  
 2022 1st Subhash Mukhopadhyay e-symposium, Bangalore, India (online)  
 2021 Invited Seminar Series, Kumamoto University (online)  
 2021 International Cannabinoid Research Society (ICRS), Special Presidential Plenary Lecture  
 2021 Invited Seminar Series, Toulouse University (online)  
 2021 16th International Institute Curie Course on Epigenetics, Paris (online)

2020 Transgenic Technologies International Meeting (online)

2019 GIBH, Chinese Academy of Sciences, Guangzhou, China

2019 DKFZ Israel Annual Meeting, Heidelberg, Germany

2019 *CellViewer* Annual Meeting, Prague, Czech Republic

2018 Functional Organization of the Cell Nucleus, Prague, Czech Republic

2018 Israel-Strasbourg Symposium, IGBMC, Strasbourg

2018 Chromatin and Metabolism Summer School, Spetses Island, Greece

2018 Broad-Israel Annual meeting, Broad Institute, Cambridge, MA

2018 Chair and speaker, FEBS Annual meeting, Prague Czech Republic

2018 Visualizing Nuclear Structure and Epigenetics, Cyprus

2018 Institute Curie Invited speaker seminar, Paris

2018 Epigenetics and Chromatin Mini-Symposium, Brno, Czech Republic - Keynote

2018 EpiGene2Sys Annual Meeting, Munich, Germany

2017 Invited seminar series, Radboud University, Nijmegen, The Netherlands

2017 B-Debate: Epigenetic mechanisms in health and disease, Barcelona, Spain

2017 Invited seminar series, CRG, Barcelona, Spain

2017 Stem Cell Meeting, Cold Spring Harbor, NY, USA

2017 Nuclear Architecture & Function, Český Krumlov, Czech Republic - Keynote

2016 Chair and speaker, The International Congress of Cell Biology, Prague, Czech Republic

2016 14<sup>th</sup> ISSCR annual meeting, Boston, MA, USA

2016 Somatic Cell Reprogramming course and conference, CRG, Barcelona, Spain

2016 EPIGEN-MiChroNetwork chromatin seminar, Milano, Italy - Keynote

2016 Italian Association for Cell Biology (ABCD) annual congress, Bologna, Italy

2015 Creating Life in 3D conference, Brno, Czech Republic - Keynote

2015 Broad Institute invited seminar series, Cambridge, MA, USA

2014 Somatic Cell Reprogramming course and conference, CRG, Barcelona, Spain

2014 Invited seminar series, CiRA (Center for iPS Cell Research), Kyoto, Japan

2014 Israel-Broad Institute Cell Observatory Annual meeting, Boston, MA, USA

2014 Invited seminar series, Ludwig-Maximilians-Universität (LMU), Munich, Germany

2014 The Center for Integrative Genomics seminar series, Lausanne University, Switzerland

2014 Meeting on Chromatin Structure and Function, Moscow, Russia - Keynote

2014 Invited seminar series, Napoli II University, Italy

2013 EpiGeneSys annual meeting, Cambridge, UK

2013 Invited seminar series, University of Zurich, Switzerland

2013 Chromatin Changes in Differentiation and Malignancies, Egmond aan Zee, The Netherlands

2013 11<sup>th</sup> ISSCR annual meeting, Boston, MA, USA

2013 Epigen meeting, Palermo, Italy

2013 Invited seminar, Nanyang Technical University, Singapore

2013 DKFZ-Israel annual meeting, Heidelberg, Germany

2012 IGBMC Seminar Series Invited Speaker, Strasbourg, France

2012 *Nucleosome4D* annual meeting, Barcelona, Spain

2012 Chromatin, Confocal Microscopy and Living Cell Studies, Brno, Czech Republic

2012 Frontiers in Stem Cells & Regeneration, Woods Hole, MA, USA

2012 Dynamic Organization of Nuclear Function, Cold Spring Harbor Laboratories, USA

2012 NIH course on 'Stem Cells and Cancer', Howard University, Washington DC, USA

2011 EuroSyStem neuronal stem cell meeting, Milano, Italy

2011 Frontiers in Stem Cells & Regeneration, Woods Hole, MA, USA

2011 EuroSyStem annual meeting, Prague, Czech Republic

2011 EMBO workshop on Chromatin Structure, Organization and Dynamics, Prague, Czech Republic  
 2011 NIH course on 'Cancer Stem Cells'. Howard University, Washington DC, USA  
 2010 RESCUES annual meeting, Newcastle, UK  
 2010 3<sup>rd</sup> International Congress on Stem Cells and Tissue Formation, Dresden, Germany  
 2010 Frontiers in Stem Cells & Regeneration, Woods Hole, MA, USA  
 2010 8<sup>th</sup> ISSCR annual meeting, San-Francisco, CA, USA  
 2010 Mechanobiology and stem cells conference, Singapore  
 2010 Invited seminar series, UCLA  
 2009 Dissection of pluripotent stem cells – Japanese Molecular Biology Society, Yokohama, Japan  
 2009 Abcam Stem Cell meeting, Singapore

#### International meetings organization

2024 Israel Stem Cell Society International meeting, Tel-Aviv, Israel  
 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).

## List of Publications (h-index = 45; i10-index = 86; 10,460 citations)

### I. Research articles

1. Viegas JO, Azad GK, Lv Y, Paltiel T, Pattabiraman S, Park JE, Kaganovich D, Sze SK, Rabani M, Esteban M and **Meshorer E** (2022) CAPRIN1-XRN2-mediated RNA degradation is required for eliminating developmental transcripts during embryonic stem cell differentiation. *Dev Cell*. doi:10.1016.devcel.202211014
2. Cohen LRZ\*, Kaffe B, Deri E, Leibson C, Nissim-Rafinia M, Ben-Yishai M, Harpaz N, Ron G, Shema E and **Meshorer E** (2022) PRC2-independent actions of H3.3K27M in embryonic stem cell differentiation. *Nucleic Acids Res*. doi: 10.1093/nar/gkac800. (cover)
3. Sorek M\*, **Meshorer E\*** and Schlesinger S\* (2022) Impaired activation of Transposable Elements in SARS-CoV-2 infection. *EMBO Rep*. e55101. doi: 10.15252/embr.202255101
4. Bar S, Vershkov D, Cleitman G, Meller N, Yilmaz A, Yanuka O, Nissim-Rafinia M, **Meshorer E**, Eldar-Geva T and Benvenisty N (2021) Identifying regulators of parental imprinting by CRISPR/Cas9 screening in haploid human embryonic stem cells. *Nat Commun*. **12**(1):6718. doi: 10.1038/s41467-021-26949-7.
5. Leader Y, Lev Maor G, Sorek M, Shayevitch R, Hussein M, Hameiri O, Tammer L, Zonszain J, Keydar I, Hollander D, **Meshorer E**, Ast G (2021) The upstream 5' splice site remains associated to the transcription machinery during intron synthesis. *Nat Commun*. **12**(1):4545. doi: 10.1038/s41467-021-24774-6
6. Bavli D, Sun X, Kozulin C, Ennis D, Motzik A, Biran A, Brielle S, Alajem A, **Meshorer E**, Buxboim A and Ram O (2021) CloneSeq: A highly sensitive analysis platform for the characterization of 3D cultured single cell derived clones. *Dev Cell*. S1534-5807(21)00395-6. doi: 10.1016/j.devcel.2021.04.026. (Cover)
7. Sorek M, Oweis W, Nissim-Rafinia M, Maman M, Simon S, Hession CC, Adiconis X, Simmons SK, Sanjana N, Shi X, Lu C, Pan JQ, Xu X, Pouladi MA, Ellerby LM, Zhang F, Levin JZ and **Meshorer E** (2021) Pluripotent stem cell derived models of neurological diseases reveal early transcriptional heterogeneity. *Genome Biol*. **22**(1):73. doi: 10.1186/s13059-021-02301-6.
8. Gomez-Garcia PA, Portillo-Ledesma S, Neguembor MV, Pesaresi M, Oweis W, Rohrlich T, Wieser S, **Meshorer E**, Schlick T, Cosma MP, Lakadamyali M (2021) Mesoscale modeling and single nucleosome tracking reveal remodeling of clutch folding and dynamics in stem cell differentiation. *Cell Rep*. **34**(2):108614. doi: 10.1016/j.celrep.2020.108614.
9. Monderer-Rothkoff G, Tal N, Risman M, Shani O, Nissim-Rafinia M, Malki-Feldman L, Medvedeva V, Groszer M, **Meshorer E** and Shifman S (2021) AUTS2 isoforms control neuronal differentiation. *Mol Psychiatry*. **26**(2):666-681. doi: 10.1038/s41380-019-0409-1
10. Harikumar A\*, Lim PSL\*, Nissim-Rafinia M, Park JE, Sze SK and **Meshorer E** (2020) Embryonic stem cell differentiation is regulated by SET through interactions with p53 and  $\beta$ -catenin. *Stem Cell Reports*, **15**(6):1260-1274 (cover).
11. Pattabiraman S, Azad GK, Amen T, Brielle S, Park JE, Sze SK, **Meshorer E\*** and Kaganovich D\* (2020) Vimentin protects differentiating stem cells from stress. *Sci Rep*. **10**(1):19525.
12. Hanan M, Simchovitz A, Yayon N, Vaknine S, Cohen-Fultheim R, Karmon M, Madrer N, Rohrlich TM, Maman M, Bennett ER, Greenberg DS, **Meshorer E**, Levanon EY, Soreq H and Kadener S (2020) A Parkinson's disease CircRNAs Resource reveals a link between circSLC8A1 and oxidative stress. *EMBO Mol Med*. **12**(9):e11942. doi: 10.15252/emmm.201911942.
13. Ben-Ami R, Klochendler A, Seidel M, Sido T, Gurel-Gurevich O, Yassour M, **Meshorer E**, Benedek G, Fogel I, Oiknine-Djian E, Gertler A, Rotstein Z, Lavi B, Dor Y, Wolf DG, Salton M, Drier Y; Hebrew University-Hadassah COVID-19 diagnosis team (2020) Large-scale implementation of pooled RNA extraction and RT-PCR for SARS-CoV-2 detection. *Clin Microbiol Infect*. **6**(9):1248-53
14. Lezmi E, Weissbein U, Golan-Lev T, Nissim-Rafinia M, **Meshorer E\*** & Benvenisty N\* (2020) The chromatin regulator ZMYM2 restricts human pluripotent stem cell growth and is essential for teratoma formation. *Stem Cell Reports*. **15**(6):1275-1286. doi: 10.1016/j.stemcr.2020.05.014 (cover).
15. Mandemaker IK, Zhou D, Bruens ST, Dekkers DH, Verschure PJ, Edupuganti RR, **Meshorer E**, Demmers JA, and Marteijn JA (2020) Histone H1 eviction by the histone chaperone SET reduces cell survival following DNA damage. *J Cell Sci*. **133**(9). doi:10.1242/jcs.235473.
16. Goldshtein M, Mellul M, Deutch G, Imashimizu M, Takeuchi K, **Meshorer E**, Ram O and Lukatsky DB (2020) Transcription factor binding in embryonic stem cells is constrained by DNA sequence repeat symmetry. *Biophys J*. **118**(8):2015-2026 (cover)
17. Gokhman D, Agranat L, Housman G, Nissim-Rafinia M, Colon MN, Gu H, Ferrando M, Gelabert P, Lipende I, Quillen EE, Meissner A, Stone AC, Pusey AE, Mjunga D, Kandel L, Liebergall M, Prada ME, Vidal JM,



- Krause J, Yakir B, Reich D, Fox CL, Marques-Bonet T, **Meshorer E\*** and Carmel L\* (2020) Differential DNA methylation of vocal and facial anatomy genes in modern humans. *Nat Commun.* **11**(1):1189. doi: 10.1038/s41467-020-15020-6
18. Batyrev D, Lapid E, Carmel L\* and **Meshorer E\*** (2020) Predicted Archaic 3D Genome Organization Reveals Genes Related to Head and Spinal Cord Separating Modern from Archaic Humans. *Cells.* **179**(1):180-192. pii: E48. doi: 10.3390/cells9010048.
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  20. Cohen-Carmon D, Sorek M, Lerner V, Nissim-Rafinia M, Yarom Y and **Meshorer E** (2020) Progerin-induced transcriptional changes in Huntington's disease human pluripotent stem cells-derived neurons. *Mol Neurobiol.* **57**(3):1768-1777
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#### VI. Editorial

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2. 'Stem Cell Chromatin' special issue in Stem Cell Reports (2020), **E Meshorer** & K. Plat, Guest Editors
3. *Stem Cell Epigenetics* (2020), Elsevier. **E. Meshorer** & G. Testa, Editors.  
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