

Curriculum Vitae

Jacob H. Hanna

A. Personal Details

Name: Jacob H. Hanna, M.D. Ph.D.
Date of Birth: August 26, 1979
Marital Status: Single
Place of Birth: Haifa, Israel
Citizenship: Israel

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B. Education

- 2007-2011 **Postdoctoral studies**, Whitehead Institute for Biomedical Research – MIT, Cambridge, MA, USA
Field of Study: Pluripotency and Epigenetic Reprogramming
Advisor: Prof. Rudolf Jaenisch
- 2001-2007 **M.D.**, The Hebrew University of Jerusalem – Hadassah Hospital, Jerusalem, Israel
Field of Study: Clinical Medicine (including 1-year mandatory general internship)
Graduated with distinction (**top 5% nationwide**)
- 2001-2007 **Ph.D.**, The Hebrew University of Jerusalem, Jerusalem, Israel
Field of Study: Immunology
Thesis Title: Novel Molecular and Functional Properties of Human NK Subsets
Advisor: Prof. Ofer Mandelboim
Graduated with distinction (**summa cum laude**)
- 1998-2001 **B.Med.Sc.**, The Hebrew University of Jerusalem, Jerusalem, Israel
Field of Study: Biomedical Studies
Graduated with distinction (**summa cum laude**)

C. Employment History

06/2022-present	Co-Founder and Chief Scientific Advisor Department of Molecular Genetics, Faculty of Biochemistry Renewal Bio Ltd, Rehovot,
10/2018-present	Associate Professor (with Tenure) Department of Molecular Genetics, Faculty of Biochemistry Weizmann Institute of Science, Rehovot, Israel
03/2011-10/2018	Senior Scientist (AKA Assistant Professor, Principal Investigator) Department of Molecular Genetics, Faculty of Biochemistry Weizmann Institute of Science, Rehovot, Israel

D. Academic Administration

1. The Department of Molecular Genetics Student Seminar Series, Weizmann Institute of Science, Organizer (2011-2012)
2. The Amos de-Shalit Summer School for Life Sciences, Weizmann Institute of Science, Organizer (2013)
3. Friends of the Weizmann Institute of Science - international fundraising activities: USA (2009, 2013, 2015, 2018, 2019), Canada (2011, 2014, 2016, 2020), Zurich (2013), Australia (2015), London (2016, 2022), Belgium (2017), Mexico (2017).
4. Scientific Council, Weizmann Institute of Science, Representative of the Faculty of Biochemistry Senior Scientists (2012, 2016)
5. Member of the LSV5 committee for evaluation and promotion of staff scientists at the Weizmann Institute (2020-present).

E. Other Appointments

1. Journal Editorial Board Member:
 - **Stem Cell Reports**, published by Cell Press (2013-2015)
 - **Stem Cell Reviews and Reports**, published by Springer Link (2014- present)
 - **Genomics, Proteomics and Bioinformatics**, published by Elsevier (2015- present)
 - **Cell Research**, published by Nature Publishing Group (2015- present)
 - **Journal of Stem Cell Research and Medicine**, published by Oat publishing (2016-present)
 - **Journal of Stem Cell Research and Regenerative Medicine**, published by the OMICS publishing group (2016-present)
 - **Stem Cells**, published by AlphaMed press (2016-present)
 - **Stem Journal**, published by IOS press (2020-present)
2. Scientific Advisory Board Member:

- **Renewal Bio Ltd.**, Rehovot, Israel (2022-present)
 - **Biological Industries**, Beit Haemek, Israel (2016-2020)
 - **Accelta Ltd.**, Haifa, Israel (2016-2019)
3. Executive Board Member:
 - **Israel Society for Stem Cell Research (ISCS)**, Israel (2016-present)
 4. Member, MAOF Faculty Award Committee for Early Career Faculty Arab Scientists and PhD Students in Israel, Israel (2015-2021)
 5. Tenure case and promotion confidential evaluator of candidates – from University of Singapore (A-STAR) (2021), University of Guangzhou (2019), IMBA (2018), Istanbul University (2018), Lunefeld Research Institute – University of Toronto (2018), the Salk Institute (2017, 2020), Singapore University (2016), Harvard University (2015), UCSD (2014) and UCLA (2014, 2019), MRC Laboratory of Molecular biology - LMB (2021), Memorial Sloan Kettering-MSKCC (2021), Technion (2022), University of Beijing (2022)
 6. EMBO long-term postdoctoral fellowship evaluator and interviewer (assessed ten candidates since 2013)
 7. Member, The BIRAX Fellowship exchange program selection committee, British Council and British Embassy (2013-2018)
 8. Scientific reviewer for granting agencies, including:

*Israel Science Foundation (ISF), US-Israel Bi-national Grant Program (BSF), GIF Program, ERC Starting, Consolidator and Advanced Grant Programs, The UK Biotechnology and Biological Sciences Research Council (BBSRC), Cancer Research UK, Japan-Israel Bi-National Grant Program, Consolider Grant Program from the Spanish Ministry of Industry, NOW- Dutch Division for Life Sciences, Hebrew University-Hadassah Medical School Internal Grants, A*Star Singapore Institutional Grants, Research by Design (RbD) program by the University of Toronto, Regenerative Medicine Program by the State of Minnesota, Academy of Finland, National Research Foundation of Singapore, National Research Foundation of Estonia, Research Grants Council (RGC) of Hong Kong, ETH Zurich internal grants, Human Frontiers Science Program (HFSP), Wellcome Trust, FWF Austria, Novo Nordisk Foundation*
 9. Panel review member for granting agencies:
 - Academy of Finland – Centers of Excellence (CoE) flagship program (2017, 2019)
 - Israeli Ministry of Science (MOST) – Israel-China collaborative granting program (2018)
 - BSF grant review committee (2022)
 10. Manuscript reviewer for:

Nature, Science, Cell, Cell Stem Cell, Cell Metabolism, Cell reports, Molecular Cell, eLife, Genes & Development, Science Advances, Stem Cell Reports, Nature Biotechnology, Nature Immunology, Nature Cell Biology, Nature Genetics, Nature Materials, Nature Communications, Nature Medicine, Nature Nanoscience, Nature Methods, Nature Molecular and Structural Biology, Nature Protocols, Cell Research, Stem Cells, Stem Cell Research, Stem Cells and Development, Stem Cells International, Stem Cells Reviews and Reports, PLoS Biology, PLoS Computational Biology, PLoS Genetics, PLoS One, EMBO, EMBO reports, Development,

PNAS, Scientific Reports, Gene, RNA, Nucleic Acid Research, Blood, OncoTarget, Oncolmmunology, Journal of Biological Chemistry (JBC), Genome Research, BMC Developmental Biology, Clinical Microbiology and Infection, Reproductive Biology and Endocrinology, Open Biology, JoVE, Current Medical Chemistry, BMC Cancer, Annals of the New York Academy of Sciences, iScience

11. Membership in international organizations:

2007-present: International Society for Stem Cell Research (ISSCR)
 2011-present: Israel Society for Stem Cell Research (ISCS)
 2011-present: Palestinian Society for Biomedical Research
 2011-present: The Israel Society for Developmental Biology (TISDB)
 2015-present: The Israel Society for Biochemistry and Molecular Biology (ISBMB)
 2015-present: The European Foundation for the Study of Diabetes (EFDS)
 2015-present: The International Society of Developmental Biology (SDB)

12. Teaching experience:

- Stem Cell Biology Course, Guest Lecturer, Feinberg Graduate School, Weizmann Institute (2014/2015)
- Stem Cell Biology Course, Co-organizer and Lecturer, Feinberg Graduate School, Weizmann Institute (2016/2017)

13. Member of 16 Ph.D. student thesis and/or exam committees

14. Member of 12 M.Sc. exam committees

F. International Recognition

Prizes, Recognitions and Awards

2021	Selected as top thinker for the year 2021 by Prospect magazine (UK)
2021	Hanna lab 2021 paper on Ex Utero Embryogenesis listed among top scientific breakthroughs of the year 2021 by Science journal
2021	Research in Hanna lab was covered in a dedicated Nature Outlook article
2021	Robert Edwards honorary lecture and lifetime achievement award by the Congress on Obstetrics, Gynecology, and Infertility (COGI) meeting in Berlin.
2018	Elected as an EMBO member
2017-2024	Research Professorship grant and award, Israel Cancer Research Fund (ICRF)
2017	Consolidator Scientist Award and Grant, European Research Council (ERC-CoG Program)
2016	The Segal Family Award for Excellence in Stem Cell Biology, University of Michigan, USA

- 2016 Manuscript describing human *in vitro* germ cell differentiation among the 10 selected "**Best of Cell 2015**" publications by **Cell** journal editors
- 2014 **The Kimmel Prize** for outstanding scientist, Weizmann Institute of Science
- 2014 Selected as a member of the **Young Israel Academy**
- 2014 Selected among "**40 under 40**" most innovative young scientists by **Cell** journal
- 2013 **Robertson Innovator Award**, New York Stem Cell Foundation (**NYSCF**)
- 2013 **Krill Prize** for outstanding early career scientists, Wolf Foundation
- 2013 **Rappaport Prize** for Promising Young Researcher in the field of Biomedical Research, The Bruce and Ruth Rappaport Foundation
- 2012 EMBO Young Investigator Award (**EMBO-YIP**)
- 2011 Starting Scientist Award and Grant, European Research Council (**ERC-StG** Program)
- 2011 Inaugural Award for Excellence in Biomedical Research, **Palestinian Society for Biomedical Research**
- 2011-2014 **Alon Foundation Scholar** (program for distinguished junior faculty in Israeli academia)
- 2010 **Clore Prize** for an outstanding new scientist, Weizmann Institute of Science
- 2010 **TR35 Young Innovator Award**, for leading international innovators under the age of 35, MIT's Technology Review Magazine
- 2009-2010 **Genzyme Postdoctoral Prize** and Fellowship
- 2007-2009 Postdoctoral Fellowship, **Helen Hay Whitney Foundation** – Novartis Fellow
- 2007-2009 Postdoctoral Fellowship, **Human Frontiers Science Program** (HFSP) (declined)
- 2007-2008 Postdoctoral Fellowship, **EMBO** (declined)
- 2007 Hebrew University Medical School Excellence Award for graduating M.D.-Ph.D. students, Hebrew University of Jerusalem
- 2007 **Max Schlomiuk Award** for Ph.D. students graduating with distinction (*summa cum laude*), Hebrew University of Jerusalem
- 2007 Graduated among the top 5 percent of Israeli medical school M.D. graduates

- 2005 **Gertrude Kohn Award** for outstanding scientific work in human genetics, Hebrew University of Jerusalem
- 2005 Member of the official delegation to the 55th International Nobel Prize Laureates Symposium in Lake Constance, Germany
- 2005-2006 Israel Ministry of Education Scholarship for Ph.D. students
- 2004 Fellowship at Mt. Sinai Hospital for distinguished M.D. students, Hebrew University of Jerusalem
- 2004-2006 **Golda Meir Fund** Scholarship for Ph.D. students
- 2004-2006 **Foulkes Foundation Award** and Scholarship for M.D.- Ph.D. students, The Foulkes Foundation
- 2003 **Wolf Foundation** Award for **Ph.D. students**, Wolf Foundation
- 2002 Faculty of Medicine Award for B.Med.Sci. students graduating with distinction (*summa cum laude*), Hebrew University of Jerusalem
- 1999-2001 Medical School's **Dean's List** Excellence Award (awarded in all 3 years of undergraduate studies), Hebrew University of Jerusalem

Organization of Professional Meetings and Workshops

- 2023 Co-Organizer and Program Committee Member, International conference on "New Approaches to Early Embryogenesis and Epigenetics", Weizmann Institute, Israel (to be)
- 2021 Co-Organizer and Program Committee Member, The 4th Aegean Stem Cell Conference, Kos, Greece
- 2020 Co-Organizer, The 1st Weizmann Institute – Denmark symposium on Stem Cells and Regenerative Medicine", Copenhagen, Denmark
- 2019 Co-Organizer and Program Committee Member, The 3rd Aegean Stem Cell Conference, Crete, Greece
- 2019 Co-Organizer and Program Committee Member, The 8th International conference by the Israeli Society of Stem cell research, Tel Aviv, Israel
- 2017 Co-Organizer and Program Committee Member, The 2nd Aegean Stem Cell Conference, Rhodes, Greece
- 2015 Program Committee Member, The 12th Annual Meeting of the International Society for Stem Cell Research (ISSCR), Stockholm, Sweden.
- 2013 Organizer, The 2nd Helmsley Stem Cell Symposium, Weizmann Institute of Science

2012 Organizer, The 1st Helmsley Stem Cell Symposium, Weizmann Institute of Science

[International Meetings](#)

[Invited Talks at International Conferences:](#)

- 10/2023 The 5th International Aegean Stem Cell Conference, Crete, Greece. (to be)
- 07/2023 The Society for Developmental Biology (SDB) 2023 annual meeting, Chicago, USA. (to be)
- 06/2023 The 87th Cold Spring Harbor Laboratory Symposium on Quantitative Biology addressing Stem Cells, Cold Spring Harbor, NY, USA. (to be)
- 05/2023 The University of Washington Institute for Stem Cell & Regenerative Medicine (ISCRM) 2023 Stem Cell Symposium, Seattle, USA. (to be)
- 04/2023 The 10th International IVIRMA Congress, Malaga, Spain. (to be)
- 04/2023 The first Dutch organoid meeting (OrganoidNL), Amsterdam, the Netherlands. **(Keynote Speaker)** (to be)
- 02/2023 International conference on “New Approaches to Early Embryogenesis and Epigenetics”, Weizmann Institute, Rehovot, Israel (to be)
- 01/2023 IETS DABE (Domestic Animal Biomedical Embryology) 2023 conference, Lima, Peru (to be)
- 11/2022 Conference on “Cellular Plasticity”, Andalucía, Spain
- 07/2022 The 38th Annual Meeting of the European Society of Human Reproduction and Embryology (ESHRE), Milan, Italy
- 06/2022 Symposium on Differentiation and Regulation in Synthetic Embryoids, College De France, Paris, France
- 06/2022 EMBL-IBEC Conference on Engineering Multicellular Systems, Barcelona, Spain
- 03/2022 Ethics Symposium on Synthetic Embryology, Karolinska Institute, Stockholm, Sweden
- 03/2022 ISSCR regional meeting on stem cell biology, Jerusalem, Israel
- 12/2021 30th Annual Congress on Controversies in Obstetrics, Gynecology and Infertility (COGI), Berlin, Germany **(Edward Roberts honorary Keynote Lecture)**
- 12/2021 Regenerative Biology seminar series, Caltech, USA (*via zoom*)

- 10/2021 The 4th Aegean Stem Cell Conference, Kos, Greece
- 09/2021 Israel – Broad Institute joint annual international symposium, Cambridge, USA (via zoom)
- 07/2021 Symposium on Synthetic Developmental Biology, Kyoto University, Japan (via zoom)
- 12/2020 24th Research Postgraduate Symposium on “Leveraging the revolution in resolution: Modernizing medical data”, University of Hong Kong, Hong Kong (**Keynote Lecture**) (via zoom)
- 02/2020 The 1st Weizmann Institute – Denmark symposium on Stem Cells and Regenerative Medicine”, Copenhagen, Denmark
- 10/2019 The 3rd Aegean Stem Cell Conference, Crete, Greece
- 09/2019 Stem Cell Biology Conference. – Cold Spring Harbor Symposium, NY, USA
- 11/2018 The 6th Annual meeting of Chinese Society for Regenerative Cell Biology, Guangzhou, China
- 10/2018 EMBO Members Meeting, Heidelberg, Germany
- 04/2018 EMBL meeting on Epitranscriptomics, EMBL, Heidelberg, Germany
- 03/2018 The 4th BIRAX Stem Cell Conference, The Crick Institute, London, UK
- 02/2018 Stem Cell Symposium by the Austrian Society for Stem Cell Research, the IMP and IMBA, Vienna, Austria
- 10/2017 Mexican Society Stem Cell Research Annual Conference, Queretaro, Mexico (**Keynote speaker**)
- 09/2017 The 2nd Aegean Stem Cell Conference, Rhodes, Greece
- 11/2016 Conference on Advances in Cell Engineering, Flanders Institute of Biotechnology, University of Leuven, Leuven, Belgium
- 10/2016 Molecular Life of Stem Cells Conference, organized by Helmholtz-Muenchen, Ljubljana, Slovenia (**Keynote speaker**)
- 09/2016 EMBO Workshop on Nuclear Function and Cell Fate Choice, Kyllini, Greece
- 08/2016 The 7th International Symposium on Primate Research, Yunnan, China

- 07/2016 Annual ESHRE Meeting, European Society of Human Reproduction and Embryology, Helsinki, Finland **(Keynote speaker)**
- 06/2016 The 4th Annual Broad-ISF Cell Circuits Symposium, Broad Institute, MIT, Cambridge, USA
- 04/2016 The 3rd BIRAX Stem Cell Conference, Oxford University, Oxford, UK
- 12/2015 The 1st Hong Kong International Conference on Stem Cells and Regenerative Medicine, Hong Kong, China
- 12/2015 The 4th Annual meeting of Chinese Society for Regenerative Cell Biology, Guangzhou, China
- 11/2015 Human Models and Technology for Regenerative Medicine Conference, Karolinska Institute, Sweden
- 11/2015 NIH Workshop on Cross-Species Introduction of Human Stem Cells in Early Embryos, Bethesda, USA
- 11/2015 The 8th Spanish Society for Gene and Cell Therapy Annual Meeting, San Sebastian, Spain **(Keynote speaker)**
- 10/2015 The 2nd International Congress on Stem Cells and Cellular Therapies, Antalya, Turkey
- 10/2015 Stem Cell Biology – Cold Spring Harbor Symposium, NY,
- 08/2015 The 11th Annual Meeting of the Korean Society for Stem Cell Research, Seoul, Korea **(Keynote speaker)**
- 08/2015 Arolla EMBO Workshop on Cell and Developmental Systems, Arolla, Switzerland
- 07/2015 Genomics Frontiers Symposium, Beijing Institute of Genomics - CAS, Beijing, China **(Keynote speaker)**
- 06/2015 Stem Cell Reprogramming Mini-Symposium, University of Helsinki, Helsinki, Finland **(Keynote speaker)**
- 05/2015 The 3rd Cell Reprogramming Australia Conference, Brisbane, Australia **(Keynote speaker)**
- 05/2015 Annual Meeting of the Dutch Stem Cell Society, Utrecht, Holland **(Keynote speaker)**
- 04/2015 Broad Institute - Harvard University - Harvard Stem Cell Institute Symposium on Pluripotency and Reprogramming, Cambridge, USA

- 03/2015 Keystone Symposium on Transcriptional and Epigenetic Influences on Stem Cell States, Steamboat Springs, Colorado, USA
- 02/2015 The 5th Brain Research Institute (BRI) International Symposium: Gene Editing Technology, Nigata, Japan
- 11/2014 Annual Meeting of the Molecular Biology Society of Japan, Yokohama, Japan
- 10/2014 The 5th New York Stem Cell Foundation Meeting on Stem Cell Translation, New York, USA
- 09/2014 The 1st Annual Meeting of the Belgium Stem Cell Society, Ghent, Belgium (**Keynote speaker**)
- 06/2014 The 10th Annual Meeting of the Swiss Stem Cell Network (SSCN), Switzerland
- 05/2014 Pasteur Institute Symposium on Reprogramming, Paris, France
- 04/2014 Cold Spring Harbor Laboratory Meeting on Gene Expression & Signaling in the Immune System, Cold Spring Harbor, New York, USA
- 03/2014 Gordon Conference on Reprogramming Cell Fate, Galveston, Texas, USA
- 02/2014 Keystone Symposium on Transcriptional Regulation, Santa Fe, New Mexico, USA
- 11/2013 Singapore Stem Cell Society Annual Meeting, Singapore (**Keynote speaker**)
- 11/2013 Epigenomics of Common Diseases Conference, The Wellcome Trust, Cambridge, UK
- 10/2013 Till & McCulloch Meeting on Stem Cells, Canadian Stem Cell Network, Banff, Alberta, Canada (**Keynote speaker**)
- 10/2013 Cambridge Epigenetics Club, Cambridge, UK
- 07/2013 International Stem Cell Conference, Hebrew University, Jerusalem, Israel
- 06/2013 International Society for Stem Cell Research (ISSCR) 11th Annual Meeting, Boston, Massachusetts, USA
- 06/2013 American Association for Cancer Research (AACR) Conference - Chromatin and Epigenetics in Cancer, Atlanta, Georgia, USA
- 10/2012 EMBO Meeting on Germ Cells and Immortality, Heidelberg, Germany
- 04/2011 Cold Spring Harbor Symposium on Stem Cell and Therapeutics, Cold Spring Harbor, New York, USA

Invited Seminars and Visits to Institutes Abroad:

- 09/2023 External Seminar Series, Australian Regenerative Medicine Institute (ARMI), Melbourne Australia. (to be)
- 04/2023 Institute of Genomics and Biophysics (IGP), Consiglio Nazionale delle Ricerche, Naples, Italy (to be)
- 03/2023 MDB Seminar Series Committee at the Cincinnati Children's Hospital Research Foundation, Cincinnati, USA (to be)
- 02/2023 Hertzberg Schechter Invited Lecture, Southern California Stem Cell Seminar Series, UCSD, San Diego, USA (to be)
- 01/2023 Stem Cell Seminar series, University of Lyon, Lyon, France (to be)
- 10/2022 Medicine by Design (MbD) Initiative, Seminar Series, University of Toronto, Toronto, Canada
- 09/2022 Stem Cell Seminar series, Columbia University, NYC, USA (to be)
- 09/2022 Stem Cell Seminar series, Mount Sinai School of Medicine, Columbia University, NYC, USA
- 09/2022 Stem Cell Seminar series, Albert Einstein Stem Cell Center, NYC, USA
- 09/2022 Institute for the Advanced Study of Human Biology (WPI-ASHBi), Kyoto University, Japan
- 09/2021 Stem cell seminar series, Developmental biology program, Kumamoto University, Japan (via zoom)
- 04/2021 International online lecture series on Gastrulation (via Zoom)
- 02/2020 Department of Developmental Biology Seminar Series, University of Toronto, Toronto, Canada
- 08/2018 Stem Cell Seminar Series, University of Helsinki, Helsinki, Finland
- 12/2017 Division of Genetics, Craniofacial Center Seminar Series, UCSF, San Francisco, USA
- 12/2017 Department of Cellular Physiology, National Autonomous University of Mexico (UNAM), Mexico City, Mexico
- 12/2017 Life Science Colloquium, CINVESTAV – Polytechnic Institute, Mexico City, Mexico
- 05/2017 University of Pamplona, Pamplona, Spain
- 04/2017 Spanish National Cancer Research Center (CNIO), Madrid, Spain

- 11/2016 Stem Cell Center, University of Minnesota, Minneapolis, USA
- 10/2016 Stem Cell Center, Yale University, New Haven, USA
- 10/2016 State Key Laboratory of Experimental Hematology, CAS, Tianjin, China.
- 01/2016 Center for Regenerative Medicine, University of Edinburgh, Edinburgh, UK
- 12/2015 Department of Biological Sciences Seminar Series, University of Basel, Basel, Switzerland
- 09/2015 Department of Genetics Seminar Series, Columbia University, NYC, USA
- 07/2015 Stem Cell Seminar Series, Peking University, Beijing, China
- 05/2015 Stem Cell Seminar Series, Monash University, Monash, Australia
- 05/2015 Victor Chang Research Institute, Sydney, Australia
- 11/2014 Stem Cell Seminar Series, Kyoto University, Kyoto, Japan
- 01/2014 Broad Institute Seminar Series, MIT, Cambridge, Massachusetts, USA
- 01/2014 Harvard-MGH Cancer Seminar Series, Boston, Massachusetts, USA
- 01/2014 Boston University Regenerative Medicine Seminar Series, Boston, USA
- 12/2013 Life Sciences Seminar Series, EPFL, Lausanne, Switzerland
- 12/2013 Life Sciences Seminar Series, IFOM-IEO, Milan, Italy
- 06/2013 Life Sciences Colloquium, University of Brussels, Brussels, Belgium

G. Scientific Productivity

Competitive or Solicited National and International Grant Awards

'funding ID'	Period	Total Amount (for Hanna group)
MBZUAI-WIS Joint Program for Artificial Intelligence Research - "Live Imaging and Lineage Tracing of Mouse Embryo Development ex-utero" <i>(Additional Co-PI: Prof. Hisham Cholakkal, MBZUAI, Dubai, UAE)</i>	2022-2025	450,000 \$
Kimmel Center for Stem Cell Research - Weizmann Institute -	2022-2023	35,000 \$

“Ex Utero Embryogenesis of Rabbit Embryos”		
FAMRI - “Novel humanized stem cell-based platforms for modelling lung disease and development “. (Subject to annual renewal evaluation by a dedicated scientific steering committee).	2020-2025	625,000 \$
Minerva Foundation - Weizmann Institute - “The role of Notch signaling in human naive pluripotency“	2020-2022	150,000 €
Kimmel Center for Stem Cell Research - Weizmann Institute - “Chromatin interactions during deterministic iPSC reprogramming”	2019-2020	35,000 \$
Israel Science Foundation (ISF) – Regular Research Grant - “Deciphering Molecular Mechanisms Regulating Reprogramming of Mammalian Naive iPSCs ”	2020-2024	300,000 \$
Kimmel Center for Stem Cell Research - Weizmann Institute - “Modeling FTO role in causing human microcephaly via using iPSC derived organoids”	2018-2019	35,000 \$
BSF – Research grant -“METTL3-dependent regulation of cardiac hypertrophy” <i>(Additional Co-PI: Dr. Federica Accornero, Ohio State University, USA)</i>	2018-2022	270,000 \$ (includes matching)
Israel Science Foundation (ISF) – Regular Research Grant - “Pluripotent Cell Based Dissection of the Role of m6A RNA Epigenetic Modification in Development and Disease”	2017-2019	215,000 \$
Israel Cancer Research Fund (ICRF) - Research Professorship - “New cancer therapy related mechanistic and applied frontiers with patient specific iPSCs”	2017-2024	350,000 \$
ERC Consolidator Grant (ERC-CoG) - “The molecular and functional foundations of alternative human naïve like pluripotent stem cell states”	2017-2022	2,000,000 €
Weizmann-Yale collaborative program - “Defining the role of altered m6A landscape in causing microcephaly associated with human FTO enzyme deficiency” <i>(Additional Co-PI: Prof. Andrew Xiao, Yale University, USA)</i>	2017-2018	30,000 \$
Weizmann-UK collaborative program - “Regenerative potential of human pluripotent stem cells and their differentiated progeny revealed through transplantation into mouse embryos” <i>(Additional Co-PI: Prof. Roger Pedersen, Cambridge University, UK)</i>	2017-2019	50,000 \$
ERC Proof of Concept Grant (ERC-PoC) - "FORMAT - a novel medium FOr Revolutionizing stem cell MANufacturing Technologies"	2016-2017	150,000 €
Kimmel Center for Stem Cell Research - Weizmann Institute - “Translation dynamics during iPSC reprogramming”	2016-2017	30,000 \$

Benozio Center for Neuronal Studies - Weizmann Institute - "Generating and characterizing iPSCs from FTO mutant patients"	2016-2017	20,000 \$
WIS - U. Michigan Segal Award and Program - "Toward generation of functional human oocytes" (Additional Co-PI: Dr. Ariella Shikanov, U. Michigan, USA)	2016-2017	25,000 \$
KAMIN grant by Chief Scientist Office - "Xeno free medium for manufacturing Human naïve stem cells"	2015-2017	225,000 \$
Human Frontier Research Program (HFSP) - Young Investigator Research Grant - "Deciphering chromatin dynamics during programming and reprogramming of pluripotent cells" (Additional Co-PI: Prof. William Greenleaf, Stanford University, USA)	2015-2018	375,000 \$
M.D. Moross Institute for Cancer Research - Weizmann Institute - "Translation dynamics during iPSC reprogramming"	2015-2016	50,000 \$
Kimmel Center for Stem Cell Research - Weizmann Institute - "RNA methylation in human pluripotent stem cells"	2015-2016	40,000 \$
WIS-EPFL program - "Epigenetic and transcriptional landscape alterations at endogenous retroelements during reprogramming to pluripotency" (Additional Co-PI: Prof. Didier Trono, EPFL, Switzerland)	2015-2017	100,000 \$
Israel Science Foundation (ISF) - NSFC program - "Towards optimal somatic cell reprogramming through manipulation of MBD3 and NCoR/SMRT repressor complexes " (Additional Co-PIs: Prof. Duanqing Pei and Dr. Miguel Esteban, Guangzhou University - IGBH, China)	2014-2017	415,000 \$ + 20,000 \$ (additional ISF- INCPM grant)
Israel Science Foundation (ISF) - Morasha/Legacy Biomed - "Advanced stem cell based engineered platforms for modelling of human disease and development "	2014-2017	330,000\$ + 20,000 \$ (additional ISF- INCPM grant)
Israel Cancer Research Fund (ICRF) - Research Career Development Award (2 nd Term)	2014-2017	105,000 \$
New York Stem Cell Foundation (NYSCF) - Robertson Innovator Research Award	2014-2018	1,500,000 \$
FAMRI - "Novel humanized stem cell-based platforms for modelling lung disease and development "	2014-2019	625,000 \$
Weizmann Institute - Kimmel Investigator Research Award	2014-2020	1,000,000 \$
Minerva Foundation - Weizmann Institute - "High-resolution mapping of chromatin and transcriptional dynamics during somatic cell reprogramming to pluripotency "	2014-2016	150,000 €
Israel Science Foundation (ISF) - ICORE program – "RNA & chromatin"	2013-2017	125,000 \$

British Israeli Collaborative Initiative in Regenerative Medicine (BIRAX) - "Germ line, stem cells and epigenetic determinants of reprogramming" <i>(Additional Co-PI: Prof. M. Azim Surani, Cambridge University, UK)</i>	2012-2015	200,000 £
Israel Science Foundation (ISF) - Broad Institute- "Erasure and maintenance of DNA methylation in development " <i>(Additional Co-PI: Prof. Alex Meissner, Harvard University, USA)</i>	2012-2013	50,000 \$
E-Rare-2 FP7 Program - "Understanding coenzyme Q10 deficiency syndrome with iPSCs"	2012-2014	60,000 \$
Fritz Thyssen Stiftung Foundation - "Defining and characterizing a new naïve pluripotent state in human reprogrammed iPSCs"	2012-2014	100,000 €
Israel Science Foundation (ISF) grant - "Understanding the epigenetic stability of the pluripotent and differentiated cell states"	2011-2015	195,000 \$
Israel Science Foundation (ISF) - Equipment for new starting lab	2011	100,000 \$
ERC Starting Grant (ERC-StG) - "Uncovering the mechanisms of epigenetic reprogramming of pluripotent and somatic cell states"	2011-2016	1,960,000 €
Israel Cancer Research Fund (ICRF) - Research Career Development Award – "The role of ERAS and RHO kinase signaling in human naïve pluripotency regulation"	2011-2014	105,000 \$
Israel Science Foundation (ISF) - BIKURA Individual - "Defining a new naïve pluripotent state in human iPSCs"	2011-2014	210,000 \$

Students and Postdoctoral Fellows

Current Members

1. **Alejandro Aguilera** – M.Sc. student (2017-2018), PhD. Student (2018-present)
2. **Bernardo Oldak** – Ph.D. student (2019 - present)
3. **Nir Livnat** - M.Sc. student (2019-2021), Ph.D. student (2021-present)
4. **Shadi Tarazi** – Ph.D. student (2020 - present)
5. **Shahd Ashoukhi** – M.Sc. student (2020 - present)
6. **Emilie Wildschutz** – M.Sc. student (2021 - present)
7. **Carine Joubran** – M.Sc. student (2021 - present)
8. **Dr. Francesco Roncato** Ph.D. – Postdoctoral fellow (2021-present)
9. **Dr. Vlad Bondarenko** Ph.D. – Postdoctoral fellow (2023-present)

Former Members

1. **Dr. Abed Al-Fattah Mansour** – Postdoctoral fellow (2011-2013) – An Assistant Professor at Hebrew University, Jerusalem Israel. Awarded EMBO and HFSP postdoctoral fellowships, and then ERC Starting grant as an independent investigator.
2. **Dr. Leehee Weinberger** – Ph.D. student (2011-2016) – Currently a Senior researcher at Tikro Technologies Ltd., Rehovot, Israel
3. **Vladislav Krupalnik** – Postdoctoral fellow (2016-2018); Ph.D. student (2011-2016). CEO at a BioX start-up, Rehovot, Israel.
4. **Dr. Yoach Rais** – Ph.D. student (2011-2016) – Formerly a Senior Researcher at LogicBio Therapeutics Ltd., Rehovot, Israel. Currently a Postdoc in Stelzer lab, Weizmann Institute.
5. **Dr. Asaf Zviran** – Ph.D. student (2012-2016) – Currently CEO and cofounder of C2i Genomics INC., that has in 2021-2022 raised millions of dollars and one of the most promising startups in the field of oncology blood diagnostics. Postdoctoral fellow in Prof. Dan Landau lab (NY Genome center, Cornell University, USA). Awarded an EMBO postdoctoral fellowship.
6. **Dr. Ohad Gafni** – Ph.D. student (2012-2016) – Previously an Assistant Professor, Cardiovascular Division, Department of Medicine, University of Minnesota, USA. Currently, CEO and CTO at Regeneriva Ltd (USA).
7. **Dr. Itay Maza** – M.D. Ph.D. student (2012-2016) – Currently an Attending Physician and Research Group leader, Rambam Hospital, Haifa, Israel
8. **Dr. Shay Geula** – Ph.D. student (2012-2017; graduated **summa cum laude**) – Currently a postdoctoral fellow in Prof. Sean Morrison lab (NY Genome center, Texas, USA). Awarded HFSP and EMBO postdoctoral fellowships
9. **Dr. Ariel Pribluda** – Postdoctoral fellow (2012-2013) – Currently a postdoctoral fellow in Genentech Pharmaceuticals, California, USA
10. **Inbal Caspi** – M.Sc. student (2012-2013) – Currently a Ph.D. student at Cornell University, USA
11. **Elad Chomski** - M.Sc. student (2013-2014) – Currently a Ph.D. student in Amos Tanay lab, Weizmann Institute. Deceased in 2011.
12. **Jehonatan Cohen** – M.Sc. student (2015-2017)
13. **Shani Peles** – M.Sc. student (2016- 2018) – Currently a Product Marketing Manager at Lumenis Ltd. (Israel).
14. **Dr. Yair S. Manor** – Ph.D. student (2013-2018)
15. **Dr. Jonathan Bayerl** – Ph.D. student (2015-2021) - Currently a postdoc at Stanford University in Kyle Loh lab.
16. **Shadi Tawil** – M.Sc. student (2018 - 2019) - Currently a research scientist at Supermeat Ltd.
17. **Itay Klimnik** - M.Sc. student (2018 - 2020) Currently a research scientist at Supermeat Ltd.
18. **Dr. Nofar Mor** – Ph.D. student (2015-2019); M.Sc. student (2013-2014) - Currently a senior researcher at Sheba Medical Center, Israel.
19. **Dr. Lior Lasman** – M.D. Ph.D. student (2016-2021). Currently a medical resident in Ichilov hospital.
20. **Dr. Daoud Sheban** – Ph.D. student (2016-2022). Postdoctoral Fellow with Dr. Yifat Merbl, Weizmann Institute)
21. **Dr. Tom Shani** – Ph.D. student (2017-2022). Senior Bioinformatician at OdMachine Ltd. (Israel).

National and International Collaborators

1. **Prof. M. Azim Surani**, Gurdon Institute, Cambridge University, UK
2. **Prof. Didier Trono**, EPFL, Switzerland
3. **Prof. William Greenleaf**, Stanford, USA
4. **Prof. Stefano Cassola**, IEO Milan, Italy
5. **Prof. Andrew Rhim**, University of Minnesota, USA
6. **Prof. Miguel Esteban**, Guangzhou Institute of Biomedicine and Health, China
7. **Prof. Toshio Shioda**, MGH - Harvard University, USA
8. **Prof. Andrew Xiao**, Yale University, USA
9. **Prof. Roger Pedersen**, Cambridge University, UK
10. **Prof. Robert Darnell**, Rockefeller University, USA
11. **Prof. James Darnell**, Rockefeller University, USA
12. **Dr. Mitch Guttman**, California Institute of Technology (Caltech), USA
13. **Dr. Tamer Onder**, University of Istanbul, Turkey.
14. **Prof. Alexander Meissner**, Max Planck Institute for Molecular Biology, Berlin, Germany
15. **Prof. Yechiel Elkabetz**, Max Planck Institute for Molecular Biology, Berlin, Germany
16. **Prof. Gideon Rechavi**, Tel-Hashomer Hospital - Tel Aviv University, Israel
17. **Prof. Yehudit Bergman**, The Hebrew University, Israel
18. **Prof. Ofer Mandelboim**, The Hebrew University, Israel
19. **Prof. Carmit Levi**, Tel Aviv University, Israel
20. **Prof. Dalit Ben-Yosef**, Ichilov Medical Center - Tel Aviv University, Israel
21. **Dr. Hadar Amir**, Ichilov Medical Center - Tel Aviv University, Israel
22. **Prof. Ruby Shalom-Feuerstein**, Technion Medical School, Israel
23. **Prof. Karina Yaniv**, Dept. of Biological Regulation, WIS, Israel
24. **Prof. Jakub Abramson**, Dept. of Immunology, WIS, Israel
25. **Prof. Ziv Shulman**, Dept. of Immunology, WIS, Israel
26. **Prof. Amos Tanay**, Dept. of Biological Regulation, WIS, Israel
27. **Prof. Atan Gross**, Dept. of Biological Regulation, WIS, Israel
28. **Prof. Orly Reiner**, Dept. of Molecular Genetics, WIS, Israel
29. **Prof. Ido Amit**, Dept. of Immunology, WIS, Israel
30. **Dr. Yifat Merbl**, Dept. of Immunology, WIS, Israel
31. **Prof. Noam Stern-Ginossar**, Dept. of Molecular Genetics, WIS, Israel
32. **Prof. Yitzhak Pilpel**, Dept. of Molecular Genetics, WIS, Israel
33. **Prof. Eran Hornstein**, Dept. of Molecular Genetics, WIS, Israel

34. **Prof. Daniel Garry**, Dept. of Medicine, University of Minnesota, USA
35. **Prof. Adi Kimchi**, Dept. of Molecular Genetics, WIS, Israel
36. **Prof. Schraga Schwartz**, Dept. of Molecular Genetics, WIS, Israel
37. **Dr. Yonatan Stelzer**, Dept. of Molecular Cell Biology, WIS, Israel
38. **Prof. Varda Rotter**, Dept. of Molecular Cell Biology, WIS, Israel
39. **Prof. Moshe Oren**, Dept. of Molecular Cell Biology, WIS, Israel
40. **Prof. Alon Chen**, Dept. of Neurobiology, WIS, Israel
41. **Dr. Jun Wu, UT Southwestern**, Department of Molecular Biology, Texas, USA
42. **Prof. Gene Yeo**, Department of Cellular and Molecular Medicine, UCSD, USA
43. **Prof. Marella de Bruijn**, MRC Molecular Hematology Unit, University of Oxford, UK

H. Patents

1. " Reprogramming of Somatic Cells". Filed in 2008 by *Whitehead Institute, Cambridge, USA.* (9714414 – *Granted in USA and EU*). **This patent was recently re-licensed in 2020 to Fate Therapeutics INC. for 2.5 Million USD.**
2. "ISOLATED NAIVE PLURIPOTENT STEM CELLS AND METHODS OF GENERATING SAME" Filed in 2013 by Weizmann Institute of Science – YEDA. (10920192 – *Granted in USA and EU*) **This patent was licensed and commercialized by Stem Cell Technologies Inc. (Vancouver, Canada) as RSeT™, the first defined human naïve pluripotency growth media commercialized**

<https://www.stemcell.com/rset-human-pluripotent-stem-cells.html> ;

<https://www.stemcell.com/rset-medium-2-component.html>
3. "MEDIA FOR CULTURING NAIVE PLURIPOTENT STEM CELLS". Filed in 2015 by Weizmann Institute of Science – YEDA. (Provisional – US 15/500,163).
4. "CULTURE MEDIA FOR PLURIPOTENT STEM CELLS". Filed in 2019 by Weizmann Institute of Science – YEDA. (Provisional)
5. "METHODS AND DEVICES FOR EX-UTERO MOUSE EMBRYONIC DEVELOPMENT". Filed in 2021 by Weizmann Institute of Science – YEDA. (Provisional)
6. "METHODS OF GENERATING A SYNTHETIC EMBRYO". Filed in 2022 by Weizmann Institute of Science – YEDA. (Provisional)

I. Language Proficiency

Scale: 1 (basic) to 3 (fluent)

1. **Arabic:** Reading (3), Writing (3), Speaking (3)
2. **Hebrew:** Reading (3), Writing (3), Speaking (3)
3. **English:** Reading (3), Writing (3), Speaking (3)

List of publications: Jacob H. Hanna

J. Graduate studies

1. Markel G, Wolf D, Hanna J, Gazit R, Goldman-Wahl D, Lavi Y, Yagel S, and Mandelboim O. "Pivotal role of CEACAM1 protein in the inhibition of activated decidual lymphocyte functions." *Journal of Clinical Investigation* (2002) 110:943-953. [\[URL\]](#)
2. Gonen-Gross T, Achdout H, Gazit R, Hanna J, Mizrahi S, Markel G, Goldman-Wohl D, Yagel S, Horejší V, Levy O, Baniyash M, and Mandelboim O. "Complexes of HLA-G protein on the cell surface are important for the LIR-1 function." *Journal of Immunology* (2003) 171:1343-1351. [\[URL\]](#)
3. Beider K, Nagler A, Wald O, Franitza S, Dagan-Berger M, Wald H, Giladi H, Brocke S, Hanna J, Mandelboim O, Darash-Yahana M, Galun E, and Peled A. "Involvement of CXCR4 and IL-2 in the homing and retention of human NK and NK T cells to the bone marrow and spleen of NOD/SCID mice." *Blood* (2003) 102:1951-1958. [\[URL\]](#)
4. Gonen-Gross T, Gazit R, Achdout H, Hanna J, Mizrahi S, Markel G, Hořejší V, and Mandelboim O. "Special organization of the HLA-G protein on the cell surface." *Human Immunology* (2003) 64:802-810. [\[URL\]](#)
5. **Hanna J, Wald O, Goldman-Wohl D, Prus D, Markel G, Gazit R, Katz G, Yagel S, Peled A, and Mandelboim O. "CXCL12 expression by invasive decidual trophoblasts induces the specific migration of CD16 negative human natural killer cells." *Blood* (2003) 102:1569-1577. {cover caption} [\[URL\]](#)**
6. **Hanna J, Bechtel P, Zhai Y, Youssef F, McLachlan K, and Mandelboim O. "Novel insights on human natural killer cells immunological modalities revealed by gene expression profiling." *Journal of Immunology* (2004) 173:6547-6563. [\[URL\]](#)**
7. Markel G, Mussaffi H, Ling KL, Salio M, Gadola S, Steuer G, Blau H, Achdout H, de Miguel M, Gonen-Gross T, Hanna J, Arnon TI, Qimron U, Volkovich I, Eisenbach L, Blumberg RS, Porgador A, Cerundolo V, and Mandelboim O. "The mechanisms controlling NK cell autoreactivity in TAP2-deficient patients." *Blood* (2004) 103:1770-1778. [\[URL\]](#)
8. Gazit R, Garty B, Monselise Y, Hoffer V, Finkelstein Y, Markel G, Katz G, Hanna J, Achdout H, Gruda R, Gonen-Gross T, and Mandelboim O. "Expression of KIR2DL1 on the entire NK cell population: A possible novel immunodeficiency syndrome." *Blood* (2004) 103:1965-1966. [\[URL\]](#)
9. Wald O, Pappo O, Safadi R, Dagan-Berger M, Beider K, Wald H, Franitza S, Weiss I, Avniel S, Boaz P, Hanna J, Zamir G, Eid A, Mandelboim O, Spengler U, Galun E, and Peled A. "Involvement of the CXCL12/CXCR4 pathway in the advanced liver disease that is associated with hepatitis C virus or hepatitis B virus." *European Journal of Immunology* (2004) 34:1164-1174. [\[URL\]](#)
10. Markel G, Achdout H, Katz G, Ling KL, Salio M, Gruda R, Gazit R, Mizrahi S, Hanna J, Gonen-Gross T, Arnon TI, Lieberman N, Stren N, Nachmias B, Blumberg RS, Steuer

- G, Blau H, Cerundolo V, Mussaffi H, and Mandelboim O. "Biological function of the soluble CEACAM1 protein and implications in TAP2-deficient patients." *European Journal of Immunology* (2004) 34:2138-2148. [\[URL\]](#)
11. Arnon TI, Achdout A, Levi O, Markel G, Saleh N, Katz G, Gazit R, Gonen-Gross T, Hanna J, Nahari E, Porgador A, Honigman A, Plachter B, Mevorach D, Wolf DG, and Mandelboim O. "Inhibition of the NKp30 activating receptor by pp65 of human cytomegalovirus." *Nature Immunology* (2005) 7(5):517-523. [\[URL\]](#)
 12. Azuz-Lieberman N, Markel G, Mizrahi S, Gazit R, Hanna J, Achdout H, Gruda R, Batat S, Zamir E, Adawi M, Made R, and Mandelboim O. "Natural killer cells and CEACAM1 in Ankylosing Spondylitis." *International Immunology* (2005) Jul;17(7):837-845. [\[URL\]](#)
 13. Hanna J, Fitchett J, Rowe T, Daniels M, Heller M, Gonen-Gross T, Manaster E, Cho SY, Labarre MJ, and Mandelboim O. "Proteomic analysis of human natural killer cells: insights on new potential NK immune functions." *Molecular Immunology* (2005) 42:425-431. [\[URL\]](#)
 14. Hanna J, Mussaffi H, Steuer G, Hanna S, Deeb M, Blau H, Arnon TI, Weizman N, and Mandelboim O. "Functional aberrant expression of CCR2 receptor on chronically activated NK cells in TAP2-deficient patients." *Blood* (2005) 106(10):3465-3473. [\[URL\]](#)
 15. Gazit R, Gruda R, Elboim M, Arnon TI, Katz G, Achdout H, Hanna J, Qimron U, Landau G, Greenbaum E, Zakay-Rones Z, Porgador A, and Mandelboim O. "Lethal influenza infection in the absence of the natural killer receptor gene NCR1." *Nature Immunology* (2006) 6:515-523. [\[URL\]](#)
 16. Hanna J, Goldman-Wohl D, Hamani Y, Avraham I, Greenfield C, Nathanson-Yaron S, Prus D, Cohn-Daniel L, Arnon TI, Manaster I, Gazit R, Yutkin V, Benharroch D, Porgador A, Keshet E, Yagel S, and Mandelboim O. "Decidual NK Cells regulate key developmental processes at the human fetal-maternal interface." *Nature Medicine* (2006) 12(9):1065-1074. [\[URL\]](#)
 - Preview: Le Bouteiller P and Tabiasco J. "Killers become helpers during pregnancy." *Nature Medicine* (2006) 12(9):991-992.
 - Preview: Karimi K, Blois SM and Arck PC. "The upside of natural killers." *Nature Medicine* (2008) 14(11):1184-1185.
 - Selected as the most influential paper in Reproductive Immunology published between 2005-2008 by *Nature Medicine, Special Focus on Reproductive Immunology*, June 2008.
 17. Arnon TI, Markel G, Bar-Ilan A, Hanna J, Fima E, Benchetrit F, Galili R, Cerwenka A, Benharroch D, Sion-Vardy N, Porgador A, and Mandelboim O. "Harnessing soluble NK cell killer receptors for the generation of novel cancer immune therapy." *PLoS ONE* (2008) 3(5):e2150. [\[URL\]](#)

K. Postdoctoral studies

18. Hanna J, Wernig M, Markoulaki S, Sun CW, Meissner A, Cassady JP, Beard C, Bambrink T, Wu LC, Townes T, and Jaenisch R. "Treatment of sickle cell anemia mouse model with iPS cells generated from autologous skin." *Science* (2007) 318:1920-1923. [\[URL\]](#)
 - Selected for Faculty of 1000 Biology.
 - Preview: Cibelli J. "Is therapeutic cloning dead?" *Science* (2007) 9318(5858):1879-80.
 - Editor's Highlights: *Cell* (2008).
 - Featured on: *Nature news*, *Science news*, MSNBC, *Washington Post*, *LA Times*, BBC, *The Guardian*, *Haaretz*.

19. Hanna J, Markoulaki S, Schorderet P, Carey BW, Beard C, Wernig M, Creighton MP, Steine EJ, Cassady JP, Foreman R, Lengner CJ, Dausman JA, and Jaenisch R. "Direct reprogramming of terminally differentiated mature B lymphocytes to pluripotency." *Cell* (2008) 133(2):250-264. [\[URL\]](#)
 - Selected for Faculty of 1000 Biology.
 - Preview: Graf T and Busslinger M. "B young again." *Immunity* (2008) 28(5):606-8.

20. Mikkelsen TS, Hanna J, Zhang X, Ku M, Wernig M, Schorderet P, Bernstein B, Jaenisch R, Lander ES, and Meissner A. "Dissecting direct reprogramming through integrative genomic analysis." *Nature* (2008) 454(7205):794. [\[URL\]](#)
 - Selected for Faculty of 1000 Biology.

21. Meissner A, Mikkelsen TS, Gu H, Wernig M, Hanna J, Sivachenko A, Zhang X, Bernstein BE, Nusbaum C, Jaenisch R, and Lander ES. "Genome scale DNA methylation maps of pluripotent and differentiated cells." *Nature* (2008) 454(7205):766-770. [\[URL\]](#)

22. Wernig M, Lengner CJ, Hanna J, Lodato MA, Foreman R, Staerk J, Markoulaki S, and Jaenisch R. "A drug inducible transgenic system for direct reprogramming of multiple somatic cell types." *Nature Biotechnology* (2008) 26(8):916-924. [\[URL\]](#)

23. Creighton M, Markoulaki S, Levine S, Hanna J, Lodato MA, Sha K, Young RA, Jaenisch R and Boyer LA. "H2AZ is enriched at polycomb Group proteins target genes in ES cells and is required for proper execution of developmental programs." *Cell* (2008) 135(4):649-661. [\[URL\]](#)
 - Selected for Faculty of 1000 Biology.

24. Carey BW, Markoulaki S, Hanna J, Saha K, Gao Q, Mitalipova M, and Jaenisch R. "Generation of mouse and human induced pluripotent stem cells with a single polycistronic virus." *PNAS* (2008) 6;106(1):157-162. [\[URL\]](#)

25. Markoulaki S*, Hanna J*, Beard C, Carey BW, Cheng AW, Lengner CJ, Dausman JA, Fu D, Gao Q, Wu S, and Jaenisch R. "Generation of transgenic mice with defined combinations of reprogramming factors." *Nature Biotechnology* (2009) 27(2):169-171. (*Equal co-first author contribution) [\[URL\]](#)
26. Hanna J*, Markoulaki S, Mitalipova M, Cheng AW, Cassady JP, Staerk J, Carey BW, Lengner CJ, Foreman R, Love J, Gao Q, Kim J, and Jaenisch R. "Metastable pluripotency states in NOD derived ES cells." *Cell Stem Cell* 2009 4(6):513-524. (*First and co-corresponding author) [\[URL\]](#)
27. Lyssiotis CA, Foreman RK, Staerk J, Garcia M, Mathur D, Markoulaki S, Hanna J, Lairson LL, Charetter BD, Bouchez LC, Bollong M, Kunick C, Brinker A, Cho SY, Schultz PG, and Jaenisch R. "Reprogramming of murine fibroblast induced pluripotent stem cells with chemical complementation of Klf4." *PNAS* (2009) 106(22):8912-8917. [\[URL\]](#)
28. Hanna J*, Saha K, Pando B, van Zon J, Lengner CJ, Creighton MP, van Oudenaarden A, and Jaenisch R. "Direct cell reprogramming is a stochastic process amenable to acceleration." *Nature* (2009) 462(7273):595-601. (*First and co-corresponding author) [\[URL\]](#)
- Selected for Faculty of 1000 Biology.
 - Highlight: Ascheim K. *Nature Biotechnology* (2009) 27:1134.
29. Carey BW, Markoulaki S, Beard C, Hanna J, and Jaenisch R. "Single-gene transgenic mouse strains for reprogramming adult somatic cells." *Nature Methods* (2010) 7(1):56-59. [\[URL\]](#)
30. Hanna J*, Cheng AW, Saha K, Kim J, Lengner CJ, Soldner F, Cassady JP, Muffat J, Carey BW, and Jaenisch R. "Human embryonic stem cells with biological and epigenetic characteristics similar to those of mouse ESCs." *PNAS* (2010) 107(20):9222-7. (*First and co-corresponding author) [\[URL\]](#)
- Selected for Faculty of 1000 Biology.
 - Preview: Kerr CL & Cheng L. Multiple, interconvertible states of human pluripotent stem cell. *Cell Stem Cell* (2010) 6(6):497-9.
31. Staerk J, Dawlaty M, Gao Q, Maetzel D, Hanna J, Sommer CA, Mostoslavsky G, and Jaenisch R. "Reprogramming of human peripheral blood cells to induced pluripotent stem cells." *Cell Stem Cell* (2010) 7(1):20-24. [\[URL\]](#)
32. Kim K, Doi A, Wen B, Ng K, Zhao R, Cahan P, Kim J, Aryee MJ, Ji H, Ehrlich Li, Yabuuchi A, Takeuchi A, Cunniff KC, Hongguang H, McKinney-Freeman S, Naveiras O, Yoon TJ, Irizarry RA, Jung N, Seita J, Hanna J, Murakami P, Jaenisch R, Weissleder R, Orkin SH, Weissman IL, Feinberg AP, and Daley GQ. "Epigenetic memory in induced pluripotent stem cells." *Nature* (2010) 467(7313):285-290. [\[URL\]](#)
- Selected for Faculty of 1000 Biology.
33. Creighton M., Cheng A, Welstead GG, Kooistra T, Carey BW, Sharp P, Stein E, Hanna J, Lodato M, Frampton G, Boyer L, Young R, and Jaenisch R. "Histone H3K27ac

separates active from poised enhancers and predicts developmental state." *PNAS* (2010) 107(50):21931-21936. [\[URL\]](#)

- Selected for Faculty of 1000 Biology.

34. Kim J, Lengner CJ, Kirak O, Hanna J, Cassady JP, Lodato MA, Wu S, Faddah DA, Steine EJ, Gao Q, Fu D, Dawlaty M, and Jaenisch R. "Reprogramming of postnatal neuron into induced pluripotent stem cells by defined factors." *Stem Cells* (2011) 29(6):992-1000. [\[URL\]](#)

L. As an Independent Assistant Professor

35. Carey BW, Markoulaki S, Hanna JH, Fadah DA, Buganim Y, Kim J, Ganz K, Steinle EJ, Cassady JP, Creghton MP, Welstead GG, Gao Q, and Jaenisch R. "Reprogramming factor stoichiometry profoundly influences the epigenetic state and pluripotency of induced pluripotent stem cells." *Cell Stem Cell* (2011) 2;9(6):588-598. [\[URL\]](#)

36. Fuchs G, Shema E, Vesterman R, Kotler E, Wolchinsky Z, Wilder S, Golomb L, Pribluda A, Zhang F, Haj-Yahya M, Feldmesser E, Brik A, Yu X, Hanna JH, Aberdam D, Domany E, and Oren M. "RNF20 and USP44 regulate stem cell differentiation by modulating H2B monoubiquitylation." *Molecular Cell* (2012) 8;46(5):662-673. [\[URL\]](#)

37. Farago M, Rosenbluh C, Tevlin M, Fraenkel S, Schlesinger S, Masika H, Gouzman M, Teng G, Schatz D, Rais Y, Hanna JH, Mildner A, Jung S, Mostoslavsky G, Cedar H, and Bergman Y. "Clonal allelic predetermination of immunoglobulin- κ rearrangement." *Nature* (2012) 490(7421):561-565. [\[URL\]](#)

38. **Mansour AA, Gafni O, Weinberger L, Zviran A, Ayyash M, Rais Y, Krupalnik V, Zerbib M, Aman-Zalcenstein D, Maza I, Geula S, Viukov S, Holtzman L, Pribluda A, Canaani E, Horn-Saban S, Amit I, Novershtern N, and Hanna JH. "The H3K27 demethylase Utx regulates somatic and germ cell epigenetic reprogramming." *Nature* (2012) 16;488(7411):409-413. [\[URL\]](#)**

- Selected for Faculty of 1000 Biology.

39. Gur C, Enk J, Weitman E, Bachar E, Suissa Y, Cohen G, Schyr RB, Sabanay H, Horwitz E, Glaser B, Dor Y, Pribluda A, Hanna JH, Leibowitz G, and Mandelboim O. "The expression of the beta cell-derived autoimmune ligand for the killer receptor nkp46 is attenuated in type 2 diabetes." *PLoS One* (2013) 8(8):e74033. [\[URL\]](#)

40. **Rais Y, Zviran A, Geula S, Gafni O, Chomsky E, Viukov S, Mansour AA, Caspi I, Krupalnik V, Zerbib M, Maza I, Mor N, Baran D, Weinberger L, Jaitin DA, Lara-Astiaso, Blecher-Gonen R, Shipony Z, Mukamel Z, Hagai T, Gilad S, Amann-Zalcenstein D, Tanay A, Amit I, Novershtern N, and Hanna JH. "Deterministic direct reprogramming of somatic cells to pluripotency." *Nature* (2013) 502(7469):65-70. [\[URL\]](#)**

- Selected for Faculty of 1000 Biology.

- Featured on: *Nature news*, *Science news*, *LA Times*, BBC news, Reuters, *Haaretz*.
 - Preview: Loh KM and Lim B. "Close encounter with full potential." *Nature* (2013) 502(7496):41-42.
 - Preview: De Souza N. "Roadblocks to reprogramming, cleared." *Nature Methods* (2013) 10(11):1051.
 - Preview: Brumbaugh J and Hochedlinger K. "Removing reprogramming roadblocks Mbd3 depletion allows deterministic iPSC generation." *Cell Stem Cell* (2013) 13(4):379-81.
 - Preview: Eggen K. "Picking the lock on Pluripotency." *NEJM* (2013) 399:2150-2151.
41. **Gafni O, Weinberger L, Mansour AA, Manor YS, Chomsky E, Ben-Yosef D, Kalma Y, Viukov S, Maza I, Zviran A, Rais Y, Shipony Z, Mukamel Z, Krupalnik V, Zerbib M, Geula S, Caspi I, Schneir D, Shwartz T, Gila S, Amann-Zalcenstein, Benjamin S, Amit I, Tanay A, Massarwa R, Novershtern N, and Hanna JH.** "Derivation of novel human ground state naïve pluripotent stem cells." *Nature* (2013) 504(7479):282-286. [\[URL\]](#)
- Selected for Faculty of 1000 Biology.
 - Preview: Mascetti VL and Pedersen RA. "Naivete of the human pluripotent stem cell." *Nature Biotechnology* (2013) 32(1) 4:68-70.
 - Highlight: De Souza N. "Naïve human pluripotent stem cells." *Nature Methods* (2013) 10:1144-1145.
42. Liu P, Kaplan A, Yuan B, Hanna JH, Lupski JR, and Reiner O. "Passage number is a major contributor to genomic structural variations in mouse iPS cells." *Stem Cells* (2014) 32(10):2657-2667. [\[URL\]](#)
43. **Irie N, Weinberger L, Tang W, Kobayashi T, Viukov S, Manor YS, Dietmann S, Hanna JH[#], and Surani A[#].** "SOX17 is a critical specifier of human primordial germ cell fate." *Cell* (2015) 160(1-2):253-268. **([#]Equal contribution and [#]Equal co-corresponding author)** [\[URL\]](#)
- Featured on: *Nature news*, Channel 1 Israel news, *LA Times*, *The Sunday Times*, CBS news, MSNBC news, Yahoo news, *Haaretz*, *Jerusalem Post*, *The Guardian*.
 - Preview: Schubert C. "The world of reproduction: Human primordial germ cells in a dish." *Biology of Reproduction* (2015) 91:114.
 - Highlight: Baumann K. "Human Primordial germ cells in a dish." *Nature Reviews in Molecular and Cell Biology* (2015) 16:68.
44. **Geula S, Moshitch-Moshkovitz S, Dominissini D, Mansour AA, Kol N, Salmon-Divon M, Hershkovitz V, Peer E, Mor N, Manor YS, Ben Haim MS, Eyal E, Yunger S, Pinto Y, Jaitin DA, Viukov S, Rais Y, Krupalnik V, Chomsky E, Zerbib M, Maza I, Rechavi Y, Massarwa R, Hanna S, Amit I, Levanon EY, Amariglio N, Stern-Ginossar N, Novershtern N, Rechavi G, and Hanna JH.** "m⁶A mRNA methylation facilitates resolution of naïve pluripotency toward differentiation." *Science* (2015) 347(6225):1002-1006. [\[URL\]](#)

- Preview: Stunnenberg GH, Vermeulen M and Atlasi Y. "A Me6Age for pluripotency." *Science* (2015) 347(6222):614-615.
 - Preview: Zhao BS and He C. "Fate by RNA methylation: m⁶A steers stem cell pluripotency." *Genome Biology* (2015) 16:43.
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