

Curriculum Vitae
Igor Ulitsky, PhD
Department of Biological Regulation
Weizmann Institute of Science

A. Personal details

Date of birth: Aug 26, 1980 (St. Petersburg, Russia)

Citizenship: Israeli

Marital Status: Married, 4 children

Mailing address: Department of Immunology and Regenerative Biology, Weizmann Institute of Science, Rehovot, Israel 7610001

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Homepage: www.weizmann.ac.il/Biological_Regulation/IgorUlitsky/

B. Education

- 9/2009–8/2013 **Postdoctoral Fellow**, Whitehead Institute for Biomedical Research, Cambridge MA
Advisor: Prof. David Bartel
- 7/2004–7/2009
(awarded 5/2010) **Ph.D. (direct track) in Computer Science**, Tel Aviv University,
Advisor: Prof. Ron Shamir.
Thesis: Algorithmic methods for integrating heterogeneous biological data for disease modeling.
- 2001–2004 **B.Sc. in Computer Science (*Summa Cum Laude*) and Life Sciences (*Summa Cum Laude*)**, Tel Aviv University, combined program with an emphasis on Bioinformatics (double major).

C. Employment

- 10/2020-Current **Associate Professor**, Department of Immunology and Regenerative Biology (formerly Department of Biological Regulation) and Department of Molecular Neuroscience, Weizmann Institute of Science, Rehovot, Israel
- 8/2021-7/2022 **Visiting Scientist**, Max-Planck institute for Molecular Genetics, Berlin, Germany
- 8/2013–9/2020 **Senior Scientist**, Department of Biological Regulation, Weizmann Institute of Science, Rehovot, Israel

D. Academic administration

- 2022– Head, Abisch-Frenkel Center for RNA Therapeutics
- 2022– Head, Lorry I. Lokey Research School of Biochemical Science (vice head of the Biology Board of Studies at the Feinberg Graduate School)
- 2020– Head, Weizmann Institute Early Childhood Education Center Oversight Committee
- 2020– Weizmann Institute Scientific Council Services Committee, Member
- 2019– Member, Weizmann Institute Genomics Users Committee
- 2014–2016 Organizer of the departmental student seminars
- 2015 Organizer of the departmental retreat
- 2015–2016 Steering Committee, Amos De Shalit summer camps for high school students

E. Other appointments**Teaching activities****International schools**

4th international course on the noncoding genome @Institute Curie, Paris,
February 2014

EMBO practical course “Non-coding RNAs: From discovery to function”, Brno,
July 2015

@Weizmann

RNA World (w/ Prof. Rotem Sorek and Prof. Eran Hornstein)

2014/15,2015/16,2016/17,2017/18, 2018/19, 2019/20, 2022/22

Systems Biology 101 (w/ other lecturers) 2014/15,2015/16,2017/18

Advanced seminar on Post-transcriptional fate of mRNAs

2013/14,2015/16,2017/18,2019/20, 2022/22

Principles and Practice of Large Scale Data Analysis Using R (w/ Drs. Schraga
Schwarz and Emmanuel Levy) 2016/17,2017/18, 2018/19, 2019/20, 2020/21,
2022/23

Project course in Data Science (w/ four other PIs) 2018/19,2020/21

@MIT

Advanced undergraduate seminars on Biological networks and Post-
transcriptional fate of mRNAs 2010/2011, 2011/2012, 2012/2013

Teaching assistant @Tel-Aviv University:

Computational Genomics 2006/2007, 2007/2008, 2008/2009

Analysis of Gene Expression Data, DNA Chips and Gene Networks 2006/2007

Course instructor @Tel Aviv University:

Tools in Bioinformatics 2006/2007, 2007/2008, 2008/2009

F. International recognition**Fellowships and Awards**

| | |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021 | Humboldt Research Award |
| 2020 | Blavatnik Award for Young Scientists in Israel in Life Sciences |
| 2020-2025 | Recipient of an ERC Consolidator Grant |
| 2020 | 2020 RNA Society Early-Career Award for outstanding accomplishments by RNA scientists within their first 7 years as an independent investigator |
| 2018 | James Heineman Research award |
| 2016 | EMBO Young Investigator |
| 2015-2020 | Recipient of an ERC Starting Grant |
| 2014-2017 | Alon fellowship, Israel Council for Higher Education |
| 2010-2011 | EMBO long term postdoctoral fellowship |
| 2009 | Legacy Heritage Fund stem cells research fellowship |
| 2008 | Wolf prize for outstanding PhD students (a nation-wide prize) |
| 2005-2009 | Fellow, Edmond J. Safra Program in bioinformatics, Tel Aviv University |
| 2004-2005 | President and Rector's M.Sc. fellowship |
| 2005 | Special excellence award, Knesset education committee and university directors committee (a nation-wide prize) |
| 2004 | B.Sc. <i>summa cum laude</i> |

Conference organization:

- Member, FISEB 2023 Scientific Organizing Committee, Eilat February 2023
- Co-organizer of EMBO/EMBL conference “The Noncoding Genome”, Heidelberg EMBL, October 2021 and October 2023
- Co-organizer of EMBO workshop “Noncoding RNAs in embryonic development and cell differentiation”, Weizmann Institute, April 2018, 150 participants
- Co-organizer of Keystone Meeting on Long Noncoding RNAs, Keystone CO, February 2018, 400 participants
- Chair of organizing committee, 19th Israeli Bioinformatics Symposium, Weizmann Institute, May 2017, 500 participants
- Co-organizer of EMBO workshop “Systems Biology of Noncoding RNAs”, Weizmann Insitute, February 2016, 100 participants

Board member: Israeli Society for Computation Biology (ISCB), 2016– (Weizmann Institute representative)

Editorial board: *Cell Reports*, *Life Science Alliance*

Scientific reviewer for granting agencies: European Research Council (ERC), NSF, Israeli Science Foundation (ISF), US-Israel binational science foundation (BSF), Austrian Science Fund (FWF), French National Research Agency’s (ANR), Israeli Cancer Association, The Wellcome Trust/DBT India Alliance, Cancer Research UK, BBSRC UK, Worldwide Cancer Research, Netherlands Organization for Scientific Research (NOW), Deutsche Forschungsgemeinschaft (DFG), National Science Center Poland, EMBO LTF, Swiss National Science Foundation (SNF)

Conference Program Committee: ISMB 2012, ISMB/ECCB 2013, ISMB 2014, ISMB/ECCB 2015, ISMB 2016, ISMB/ECCB 2017, ISMB 2018

Journal reviewing: *Nature*, *Science*, *Cell*, *Nature Genetics*, *Nature Methods*, *Cancer Cell*, *Cell Stem Cell*, *Developmental Cell*, *Nature Cell Biology*, *Nature Communications*, *Genome Research*, *Molecular Cell*, *Cell Reports*, *PNAS*, *Genome Biology*, *eLife*, *Nucleic Acids Research*, *Nature Structural & Molecular Biology*, *RNA journal*, *PLoS Computational Biology*, *PLoS One*, *Bioinformatics*, *BMC Genomics*, *BMC Bioinformatics*, *BMC Systems Biology*, *Journal of Metabolic Engineering*, *IEEE Transactions on Computational Biology and Bioinformatics*, *Molecular Biology of the Cell*, *Molecular Biology and Evolution*, *Biochimie*, *BBA Gene Regulatory Mechanisms*, *DNA Research*, *Gene*, *Developmental Biology*, *Science Translational Medicine*, *Current Biology*, *Noncoding RNA*, *Trends in Biochemical Sciences*, *Trends in Genetics*, *Life Science Alliance*, *Bioassays*

Reviewing for Conferences: RECOMB (2005, 2006, 2007, 2008), ISMB (2006, 2007, 2008, 2009), ECCB (2006), PSB (2008), RECOMB Satellite on Systems Biology (2008), ECCB (2018)

Examiner or Opponent of Ph.D. / M.Sc. theses: @Feinberg/Weizmann Graduate school, 2013-current; @Other universities (Hebrew University; Ben Gurion University; Technion; Tel Aviv University; Norwegian University of Life Sciences; University of Cyprus; University of Bern; Karolinska Institut; Institut Curie)

Industry Experience

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|-----------|--------------------------------------------------------------------------|
| 2022- | Consulting services to <i>Dexcel Pharmaceuticals</i> |
| 2021– | Scientific Advisory Board, <i>Pyxies Diagnostics</i> |
| 2019–2021 | Consulting services to <i>Flagship Ventures Labs</i> , Cambridge MA, USA |

2012– Consulting services to *Kailos Genetics*, Huntsville AL, USA
2009,2011 Consulting services to *NextBio*, Cupertino CA, USA
2004–2005 Computational biologist in *Biolog Technologies*, Netanya, Israel

Invited presentations since appointment to Senior Scientist

1. Seminar, Cambridge UK RNA Club, September 2021
2. Keynote speaker, iGE3 meeting at University of Geneva, November 2021
3. Seminar, Giessen University, November 2021
4. Seminar, University of Colonge, September 2021
5. Seminar, Serbian Student Society for Molecular Biology, September 2021
6. Seminar, Max Plank Institut for Molecular Genetics, Berlin Germany, September 2021
7. Invited Speaker, MDPI meeting on Noncoding RNA, July 2021
8. Keystone symposia on Noncoding RNAs, Palm Springs, USA, May 2021
9. Speaker, RNA Society Meeting May 2021
10. Alumni speaker, Whitehead Institute for Biological Research, Cambridge MA, February 2021
11. Speaker, Berlin RNA club, February 2021
12. RNA Society Meeting (early career award presentation), Vancouver, Canada, May 2020
13. 9th Congress of the Federation of the Israel Societies for Experimental Biology (FISEB/ILANIT), Eilat, Israel, February 2020
14. Seminar, Centre for Genomic Regulation, Barcelona, Spain, June 2020
15. Société Française du Cancer, "Dark genome and cancer" Conference, Paris, France, February 2020
16. Israeli Society for Neuroscience (ISFN) meeting, Eilat, Israel, January 2020
17. Seminar, Chinese Academy of Sciences, Shanghai, China, November 2019
18. 7th Canton Nucleic Acids Forum, Guangzhou, China, November 2019
19. EMBL Symposium The Noncoding Genome, Germany, October 2019
20. Seminar, Karolinska Universitat, Stockholm, Sweden, August 2019
21. CSHL 84th Symposium: RNA Control & Regulation, May 2019
22. EMBO workshop Chromatin and Epigenetics, Germany, May 2019
23. Keystone symposia on From Molecular Mechanism to Functional Genetics, Whistler, Canada, February 2019
24. Seminar, FMI, Basel, Switzerland, November 2018
25. RNA Biology Symposium, Singapore, September 2018 (could not attend)
26. Making Connections Systems Biology Symposium, UCL, London, September 2018
27. Seminar at University of Regensburg, July 2018
28. EMBO workshop RNA structure meets function, Stockholm, Sweden, July 2018
29. Seminar at Hebrew University, May 2018
30. Speaker/Organizer, Keystone symposia on Noncoding RNAs: Form, Function, Physiology, Keystone CO, February 2018
31. Seminar, University of Basel Biozentrum, November 2017
32. Invited Seminar, Centre for Cardiovascular Science, University of Edinburgh, October 2017
33. Invited speaker, "2017 RNA biology meeting in memory of Prof. Yossi Sperling", Hebrew University Medical School, September 2017
34. Biochemical Society meeting on "Non-Coding RNA: Recent Insights into the Mechanisms of Action", Edinburgh, UK, June 2017
35. "Microsymposium on Small RNA Biology", Vienna, Austria, May 2017
36. Seminar, Paris Diderot University, France, March 2017
37. Seminar, University of Cyprus, March 2017
38. Seminar, Ecology, Evolution and Behavior, Hebrew University, Israel, March 2017
39. Seminar, Hebrew University Medical School, February 2017
40. Seminar, Goethe-Universität, Frankfurt, Germany, November 2016

41. Computation RNA biology conference, Wellcome Genome Campus, Hinxton, UK, October 2016
42. Seminar, Cancer Research UK, Cambridge, UK, October 2016
43. Villars Symposium on "Non-coding RNAs: from Function to Evolution", Villars, Switzerland, September 2016
44. Seminar, Hebrew University, March 2016
45. Seminar, Ben Gurion University, March 2016
46. Batsheva de Rothschild Seminar on RNA regulatory circuits in infectious diseases and man, Weizmann Institute, December 2015
47. Seminar, EMBL Grenoble, France, July 2015
48. Seminar, Ben Gurion University, Beer Sheva, Israel, May 2015
49. 17th meeting of the Israeli Bioinformatics Society, Tel Aviv University, May 2015
50. Seminar, Centre for Genomic Regulation (CRG), Barcelona, Spain, February 2015
51. Seminar, Institut Pasteur, Paris, France, February 2015
52. 14th Tokyo RNA club, Tokyo, Japan, November 2014
53. 14th Molecular Biology Society of Japan, Workshop on, Yokohama, Japan, November 2014
54. Seminar, Department of Cell Research & Immunology, Tel Aviv University, Israel, November 2014
55. Seminar at the Sheba Medical Center, Tel HaShomer, Israel, October 2014
56. WIS/Karolinska Institute conference, Stockholm, Sweden, June 2014
57. Seminar, Oslo University Hospital research, Oslo, Norway, May 2014
58. Seminar, Hebrew University Medical School, Jerusalem, Israel, May 2014
59. Seminar, BioClub at Hebrew University, Jerusalem, Israel, March 2014
60. 7th Congress of the Federation of the Israel Societies for Experimental Biology (FISEB/ILANIT), February 2014
61. The Helmsley Stem Cells Symposium, Weizmann Institute, December 2013
62. Seminar, Bar Ilan University seminar series October 2013

Other presentations (competitively selected abstracts)

1. Selected Abstract, RNA Society meeting, Krakow, Poland, May 2019
2. Selected Abstract, EMBL Noncoding Genome Conference, Heidelberg, Germany, September 2017
3. Selected abstract, 2017 RNA Society meeting, Prague, Czech Republic, May 2017
4. Selected abstract, Keystone meeting on Noncoding RNAs, Banff, Canada, February 2017
5. Selected abstract, EMBL/EMBO Symposium The Noncoding Genome. EMBL Heidelberg, October 2015
6. Selected abstract, EMBO/ESF meeting on Long Regulatory RNAs, Poltusk, Poland, September 2014
7. Selected abstract, Keystone meeting on Long Noncoding RNAs, Santa Fe, March 2014
8. Selected abstract, The Noncoding Genome meeting, EMBL, October 2013

G. Scientific Productivity**National and International Research Grants**

| Year | Duration (years) | Agency | Title | Total amount to the lab |
|-------------|-------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| 2020-2021 | 1 | Abisch-Frenkel foundation | Characterization of effective endogenous and synthetic 3' end sequences for human genes | \$60,000 |
| 2020-2025 | 5 | European Research Council (ERC) Consolidator Grant | Long noncoding RNAs: Impact on Gene Regulatory Networks | 2,000,000€ |
| 2019-2022 | 3 | NRF (Singapore)-ISF | Structures and functions of vertebrate long noncoding RNAs | 1,020,000 NIS |
| 2019-2024 | 5 | ISF | Identifying sequences driving subcellular localization of long RNAs in mammalian cells | 1,650,000 NIS |
| 2018–2021 | 3 | MOST-PRC (France) | Conserved Functions of Rapidly Evolving Long Noncoding RNAs | 75,000 NIS |
| 2018–2021 | 3 | ISF-NSFC (China) | Determinants of the post-transcriptional fate of long RNAs in human cells. | 900,000 NIS |
| 2019–2021 | 3 | German-Israel foundation for Scientific Research and Development (GIF) | Identifying sequences driving subcellular localization of long RNAs in mammalian cells | 88,000€ |
| 2018–2021 | 3 | The EU Joint Programme – Neurodegenerative Disease Research (JPND ERA-Net) | Common architecture of local proteome, transcriptome and translome across Motor Neuron disorders | 100,000€ |
| 2018–2021 | 3 | BIRAX - Britain Israel Research and Academic Exchange Partnership | Control of endothelial cell commitment and specification by long non-coding RNA | 200,000£ |
| 2016-2020 | 4 | United States-Israel Binational Science Foundation | Global analysis of expression patterns and roles of long noncoding RNAs during differentiation towards pancreatic and hepatic cell fates | \$90,000 |

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| 2015–2020 | 5 | European Research Council (ERC) Starting Grant | lincSAFARI – Sequence and Function Relationships in Long Intervening Noncoding RNAs | 1,500,000€ |
| 2015–2018 | 3 | Minerva foundation | Co-transcriptional and post-transcriptional functions of long noncoding RNA genes in endodermal differentiation | 150,000€ |
| 2014–2019 | 5 | ISF (research grant) | Computational and experimental methods for identification of functional domains in long noncoding RNAs | 1,650,000 NIS |
| 2014–2017 | 3 | Fritz Thyssen Stiftung | An Interdisciplinary Approach for Studying the Functions of Long Noncoding RNAs during Neurogenesis and in Neurological Diseases | 120,000€ |
| 2013–2018 | 5 | ISF (I-CORE) | Chromatin and RNA I-CORE | 1,500,000 NIS |

Students and Postdoctoral Fellows

MSc students (7)

Aviv Rom (2014–2015) – “linc-Chd2 - a conserved long noncoding RNA regulator of Chd2 activity”. Later – PhD student, Ulitsky lab. Currently – Scientist, Aleph Farms.

Alexandra Avrutin (2014–2016) – “The regulatory circuitry and the involvement of lincRNA Pvt1 in breast cancer”. Currently – scientific writer at the Davidson Institute of Science Education.

Gali Housman (2014–2016) – “The regulatory roles of short open reading frames in long non-coding RNAs”. Currently – Product Manager at Tabula.

Maya Ron (2016–2018) – “LincRNA Pvt1 and its role in carcinogenesis”. Currently – PhD student, Ulitsky lab.

Liliya Melamed (2017–2019) – “The role of *Chaserr* in the regulation of *CHD2*: A potential treatment for epilepsy”. Currently – Infinity Labs R&D

Micah Goldrich (2018–2020) – “A high-throughput screen for sequences mediating sensitivity to nonsense mediated decay (NMD)”. Currently – PhD student, Ulitsky lab

Noa Nissani (2019–2021) – “Genomic determinants of RNA Pol 2 transcription termination”. Currently – Research associate, Ulitsky lab.

Ameera Egbaria (2021–)

PhD students (7)

Hadas Hezroni (2013–2018) “The roles of Long Noncoding RNAs during neuronal differentiation”. Recipient of the Gad Reshef Memorial Prize from the Fienberg Graduate School for excellent PhD students. Currently – Postdoctoral Fellow, Ulitsky lab.

Neta Degani (2014–2020) “The role of HOXA-AS3 and HOXB-AS3 in endodermal

development and differentiation”

Noa Gil (2014–2020) “Long non-coding RNAs as regulators of gene expression in cis”.
Currently – Postdoctoral Fellow, Dirk Schubeler lab, FMI Basel

Aviv Rom (2015–2020) “Regulation of CHD2 expression by the Chaserr long noncoding RNA
gene is essential for viability”

Binyamin Zuckerman (2016–2021) “Transcript features and cellular factors mediated nuclear
RNA export”

Maya Ron (2018–)

Alan Monziani (2020–)

Micah Goldrich (2020–)

Rotem Nevo (2021–)

Noa Balaban (2022–)

Postdoctoral fellows (4)

Ailone Tichon (2014–2017). Currently Postdoctoral fellow at Storici lab @ Georgia Tech, GA

Filipa Marques (2017–)

Svetlana Farberov (2018–)

Caroline Ross (2019–)

Juan Pablo Unfried (2021–)

Senior interns/Visiting scientists/Staff scientists

Yoav Lubelsky (Senior intern, 2013–2018, Project Scientist 2018–)

Rotem Ben-Tov Perry (Senior intern 2015–2017, Assistant Staff Scientist 2017–)

Miriam Rosenberg (Marie Curie fellow, 2015–2018). Currently visiting scientist at Bar Ilan
University.

Visiting students

Nate Swetlitz (6–8/2014) – Visiting undergraduate student from Yale University

Katharina Holzer (10–12/2014) – Visiting student from Tübingen Master of Biochemistry
program

Florian Deckert (8–10/2016) – Visiting student from master student at Ludwig-Maximilian-
University Munich Master of Biology program.

Aleksandra Kornienko (4/2018) – Visiting postdoctoral fellow from GMI, Vienna.

Royi Brezner (6-8/2019) – Visiting Undergraduate student from University of Western Ontario

Melanie Royer (10-12/2019) – Visiting student from Regensburg University, Germany.

Todor Cvetanovic (7-8/2022) – Visiting student from University of Belgrade, Serbia

National and International Collaborators

Alena Shkumatava, Institut Curie, Paris – Conservation of lncRNA roles in zebrafish.

Marina Chekulaeva, MDC, Berlin – RNA localization in neurites.

Andrew Baker, University of Edinburgh – lncRNAs in differentiation of endothelial stem cells.

Amos Tanay, Weizmann Institute – Methods for mapping spatial contacts between enhancers
and promoters.

Yosef Yarden, Weizmann Institute – lncRNAs in cancer

Louise Laurent, UCSD – lncRNA roles during differentiation of pluripotent cells towards pancreatic and hepatic fates.

Karen Avraham, Tel Aviv University – lncRNAs in the physiology of the inner ear.

Lingling Chen, CAS Shanghai – lncRNA localization and nuclear export.

Yue Wan, A-STAR Singapore – High throughput methods for determination of RNA structure.

Jacob Hanna, Weizmann Institute – Gene regulatory networks in embryonic stem cells.

Rivka Dikstein, Weizmann Institute – Transcriptional regulation, and single-nucleotide resolution mapping of transcription start sites.

Yardena Samuels, Weizmann Institute – Gene expression signatures in cancers.

Ayelet Erez, Weizmann Institute – Gene expression landscape in cancer

Shalev Itzkovitz, Weizmann Institute – lncRNA localization

H. Patents

COMPOSITIONS FOR USE IN THE TREATMENT OF CHD2 HAPLOINSUFFICIENCY AND METHODS OF IDENTIFYING SAME

International application number PCT/IL2021/051503

I. Languages

Hebrew: Reading (3), Writing (3), Speaking (3)

English: Reading (3), Writing (3), Speaking (3)

Russian: Reading (2), Writing (1), Speaking (3)

German: Reading (1), Writing (1), Speaking (1)