

Yoav Voichek

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Education

- 2010-2016 **PhD**, The Weizmann Institute of Science, Israel
 Advisor: Naama Barkai
 Dissertation: Chromatin and Expression Dynamics during DNA Replication
- 2001-2008 **BSc, Mathematics**, The Open University, Israel
 Magna Cum Laude (Mainly carried out during high school)

Employment

- 2020- **Post-Doctoral Fellow**, Advisor – Magnus Nordborg
 Gregor Mendel Institute of Molecular Plant Biology, Austria
- 2018-2019 **Post-Doctoral Fellow**, Advisor – Detlef Weigel
 Max Planck Institute for Developmental Biology, Germany
- 2017 **Bridging post-doc**, Advisor – Naama Barkai
 The Weizmann Institute of Science, Israel
- 2009 **Research assistance**, Amos Tanay's group
 The Weizmann Institute of Science, Israel

Fellowships & Awards

- 2021 Marie Curie Individual Fellowship (101028014)
- 2020 VIP² three-year postdoctoral fellowship
- 2019 Marie Curie Individual Fellowship (844055), graciously declined
- 2014 Carl Singer Foundation Scholar for best lecture, FASEB conference, USA
- 2014 Student Innovative use of high-throughput sequencing award
 The Weizmann Institute of Science, Israel

Presentations

- 2024 International Conference on Arabidopsis Research (ICAR 2024), USA
- 2024 Salk Institute for Biological Studies, USA
- 2024 EMBL Symposium: Diversity of plants: from genomes to metabolism, Germany
- 2023 Max Planck Institute of Molecular Plant Physiology, Germany
- 2023 Plant Biology Europe (PBE2023), France
- 2023 Mendel Early Career Symposium, Austria
- 2023 Vienna Postdoc Networking Day (PoND), Austria
- 2023 ILANIT/FISEB Conference, Israel
- 2022 FEBS Advanced Courses: 4th Danube Conference on Epigenetics, Hungary
- 2021 2nd VIP2 Annual Meeting, Austria
- 2020 ScienceAbroad super-group lecture series
- 2020 Mutations2globalchange, Plant Biology Stanford & Carnegie, USA
- 2020 evolVienna, Austria
- 2019 Plant Genomes in a Changing Environment, Wellcome genome campus, UK
- 2019 Bioinformatics resources in plant science workshop, Wellcome genome campus, UK
- 2015 Genetics, Genomics & Evolution, Israel
- 2014 Yeast Chromosome Structure, Replication and Segregation, FASEB, USA

- 2014 Cell Circuits and Epigenomics Seminar, Broad institute, USA
 2014 Genomics & Epigenomics Club, The Weizmann Institute of Science, Israel

Professional Development and Academic Service

- 2024 EMBO Laboratory Leadership for Postdocs Course, Germany
 2020-2021 Postdoc representative, GMI, Austria
 2017 Chair of selected session, Data Analysis in Biology, FISEB, Israel
 2015 Head organizer, Two2Many, International conference in systems biology, Israel

Educational activities

- 2017-2020 iScientist program
 Program for peripheral populations living far away from academic centers, Israel
 2014-2016 Lecturer in Computer Science, Academy, and Industry series
 Program for outstanding high-school students, Israel
 2014-2015 Volunteering for mathematics curricular support, High school in Lod, Israel
 2011-2014 Tutor of mathematical thinking, Program for elementary school children, Israel

Publications

* *Equal contribution* / # *Corresponding author*

- 2024 Widespread position-dependent transcriptional regulatory sequences in plants
Voichek Y[#], Hristova G, Mollá-Morales A, Weigel D, Nordborg M[#]
Nature Genetics. 10.1038/s41588-024-01907-3
- 2024 Metabolic enzymes moonlight as selective autophagy receptors to protect plants against viral-induced cellular damage
 Clavel M., Bianchi A., Kobylinska R., Groh R., Ma J., Papareddy R.K., Grujic N., Picchianti L., Stewart E., Schutzbier M., Stejskal K., de la Concepcion J.C., Sanchez de Medina Hernandez V., **Voichek Y.**, Clauw P., Gunis J., Durnberger G., Muelders J.C., Grimm A., Sedivy A., Erhardt M., Vyboishchikov V., Gao P., Lechner E., Vantard E., Jez J., Roitinger E., Genschik P., Kang B.-H., Dagdas Y.
BioRxiv. <https://www.biorxiv.org/content/10.1101/2024.05.06.590709v1>
- 2023 Cell-cycle status of male and female gametes during Arabidopsis reproduction
Voichek Y[#], Hurieva B, Michaud C, Schmücker A, Vergara Z, Desvoyes B, Gutierrez C, Nizhynska V, Jaegle B, Borg M, Berger F, Nordborg M, Ingouff M[#]
Plant Physiology. Sep 27;kiad512. doi: 10.1093/plphys/kiad512
- 2023 Standing genetic variation fuels rapid evolution of herbicide resistance in blackgrass
 Kersten S, Chang J, Huber CD, **Voichek Y**, Lanz C, Hagmaier T, Lang P, Lutz U, Hirschberg I, Lerchl J, Porri A, Van de Peer Y, Schmid K, Weigel D, Rabanal FA
PNAS. Apr; 120 (16) e2206808120
- 2020 Identifying genetic variants underlying phenotypic variation in plants without complete genomes
Voichek Y & Weigel D
Nature Genetics. May;52(5):534-540
- 2019 Evolution of intron splicing towards optimized gene expression is based on various Cis- and Trans-molecular mechanisms
 Frumkin I, Yofe I, Bar-Ziv R, Gurvich Y, Lu YY, **Voichek Y**, Towers R, Schirman D, Krebber H, Pilpel Y
PLoS Biology. Aug 23;17(8):e3000423

- 2018 Epigenetic control of expression homeostasis during replication is stabilized by the replication checkpoint
Voichek Y*, Mittelman K*, Gordon Y, Bar-Ziv R, Lifshitz Smit D, Shenhav R, Barkai N
Molecular Cell. Jun 21;70(6):1121-1133
 - Reviewed in Molecular Cell “Re-SET for Transcription”
- 2016 Expression homeostasis during DNA replication
Voichek Y*, Bar-Ziv R*, Barkai N
Science. Mar 4;351(6277):1087-90
 - Highlighted by F1000
 - Research Highlight in Nature Reviews Molecular Cell Biology
- 2016 Chromatin dynamics during DNA replication
 Bar-Ziv R*, **Voichek Y***, Barkai N
Genome Research. Sep;26(9):1245-56
 - Highlighted by F1000
- 2016 Combining deep-sequencing, proteomics, phosphoproteomics and functional screens to discover novel regulators of sphingolipid homeostasis
 Lebesgue N, Megyeri M, Cristobal A, Scholten A, Chuartzman S, **Voichek Y**, Scheltema R, Mohammed S, Futerman A, Schuldiner M, Heck A, Lemeer S
Journal of Proteome Research. Nov; 10.1021
- 2016 (review) Dealing with gene-dosage imbalance during S phase
 Bar-Ziv R*, **Voichek Y***, Barkai N
Trends in Genetics. Nov;32(11):717-723
- 2016 (review) A role for Rtt109 in buffering gene-dosage imbalance during DNA replication
Voichek Y*, Bar-Ziv R*, Barkai N
Nucleus. Jul 3;7(4):375-81
- 2015 Simultaneous measurement of genome-wide transcription elongation speeds and rates of RNA polymerase II transition into active elongation with 4sUDRB-seq
 Fuchs G, **Voichek Y**, Rabani M, Benjamin S, Gilad S, Amit I, Oren M
Nature Protocols. Apr;10(4):605-18
- 2014 Cotranscriptional histone H2B monoubiquitylation is tightly coupled with RNA polymerase II elongation rate
 Fuchs G, Hollander D, **Voichek Y**, Ast G, Oren M
Genome Research. Oct;24(10):1572-83
- 2014 4sUDRB-seq: measuring genomewide transcriptional elongation rates and initiation frequencies within cells
 Fuchs G*, **Voichek Y***, Benjamin S, Gilad S, Amit I, Oren M
Genome Biology. May 9;15(5):R69
- 2014 Divergence and selectivity of expression-coupled histone modifications in budding yeasts
 Mosesson Y, **Voichek Y**, Barkai N
PLoS One. Jul 9;9(7):e101538
- 2014 Coordination of gene expression and growth-rate in natural populations of budding yeast
 Tamari Z*, Rosin D*, **Voichek Y***, Barkai N
PLoS One. Feb 12;9(2):e88801

2012

Expression noise and acetylation profiles distinguish HDAC functions

Weinberger L*, **Voichek Y***, Tirosh I, Hornung G, Amit I, Barkai N

Molecular Cell. Jul 27;47(2):193-202

- Reviewed in Molecular Cell "Making a Noisy Gene: HDACs Turn Up the Static".