Yoav Voichek

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Education

2010-2016 **PhD, Mathematics & Computer Science** (Bioinformatics track)
The Weizmann Institute of Science, Israel
Advisor: Naama Barkai
Dissertation: Chromatin and Expression Dynamics during DNA Replication

2001-2008 **BSc, Mathematics**, *Magna Cum Laude*
The Open University, Israel
(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

2004-2008 Mathematical researcher, IDF

Fellowships & Awards

2021 Marie Curie Individual Fellowship (101028014)

2020 VIP^2 three-year postdoctoral fellowship

2019 Marie Curie Individual Fellowship (844055), graciously declined

2014 Carl Singer Foundation Scholar for best lecture
FASEB conference, Colorado, USA

2014 Student Innovative use of high-throughput sequencing award
The Weizmann Institute of Science, Israel

Presentations

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 Epigenentics, 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, Colorado, USA
2014 Cell Circuits and Epigenomcis Seminar, Broad institute, Boston, USA
2014 Genomics & Epigenomics Club, The Weizmann Institute of Science, Israel

Academic services

2020-2021 Postdoc representative, GMI, Austria
2017 Chair of selected session
Data Analysis in Biology: From Techniques to Storytelling, 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 activities
Program for elementary school children, Israel

Publications

2023 Widespread transcriptional regulation from within transcribed regions in plants
Voichek Y#, Hristova G, Mollá-Morales A, Weigel D, Nordborg M#
BioRxiv. https://doi.org/10.1101/2023.09.15.557872

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#
BioRxiv. https://doi.org/10.1101/2023.02.22.529524 - **Plant Physiology (accepted)**

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".

** Equal contribution / # Corresponding author*