

List of publications

* Corresponding author, # (co-)first author

1. Wexler Y., Kiere Y., Sobol G., Nuriel R., Azoulay-Portal S., Cohen A., Toporik H., Pasmanik-Chor M., Finkler A. and **Shkolnik D***. (2025). Modulation of root hydrotropism and recovery from drought by *MIZ1-like* genes in tomato. Plant, Cell & Environment **48**:2739-2754.
2. Wexler Y., Schroeder JI., **Shkolnik D***. (2024). Hydrotropism mechanisms and their interplay with gravitropism. The Plant Journal **118**:1732-1746.
3. Chandran AEJ, Finkler A, Hait TA, Kiere Y, David S, Pasmanik-Chor M, **Shkolnik D***. (2024). Calcium regulation of the Arabidopsis Na⁺/K⁺ transporter HKT1;1 improves seed germination under salt stress. Plant Physiology **194**:1834-1852
4. Mishra R, Shteinberg M., **Shkolnik D.**, Anfoka G., Czosnek H, Gorovits R. (2022) Interplay between abiotic (drought) and biotic (virus) stresses in tomato plants, Molecular Plant Pathology **23**:475-488.
5. Perna DI, Govindaraju K, Tamilselvan S, Kannan M, Vasantharaja R, Chaturvedi S, **Shkolnik D.** (2021). Plant Physiology and Biochemistry Influence of nanoscale micro-nutrient α -Fe₂O₃ on seed germination, seedling growth, translocation, physiological effects and yield of rice (*Oryza sativa*) and maize (*Zea mays*). Plant Physiology and Biochemistry **162**: 564–580.
6. Kasivelu G., Selvaraj T., Malaichamy K., Kathickeyan D., **Shkolnik D.** and Chatuvedi S. (2020) Nano-micronutrients [γ -Fe₂O₃ (iron) and ZnO (zinc)]: green preparation, characterization, agro-morphological characteristics and crop productivity studies in two crops (rice and maize), New Journal of Chemistry, **44**: 11373-11383.
7. Blumrosen G., Wexler Y., **Shkolnik D.** and Golberg A. (2020) Efficient Modeling of Plant Short- and Long-Term Behavioral Responses to a Stimuli, IEEE 20th International Conference on Bio-Informatics and Bio-Engineering (BIBE) (pp. 342-348, doi: 10.1109/BIBE50027.2020.00062).
8. **Shkolnik D***, Finkler A., Pasmanik-Chor M. and Fromm H. (2019) CALMODULIN-BINDING TRANSCRIPTION ACTIVATOR 6: A Key Regulator of Na⁺ Homeostasis during Germination, Plant Physiology, **180**:1101-1118.
9. **Shkolnik D.**, Nuriel R., Bonza M.C., Costa A. and Fromm H. (2018) MIZ1 regulates ECA1 to generate a slow, long-distance phloem-transmitted Ca²⁺ signal essential for root water tracking in Arabidopsis, Proceedings of the National Academy of Sciences of the United States of America **115**:8031-8036.
10. **Shkolnik D.** and Fromm H. (2016) The Cholodny-Went theory does not explain hydrotropism, Plant Science, **252**:400-403 (invited review).
11. Krieger G.#, **Shkolnik D.#**, Miller G. and Fromm H. (2016) Reactive oxygen species tune root tropic responses, Plant Physiology, **172**:1209-1220.
12. Shkolnik D., Krieger G., Nuriel R. and Hillel F. (2016) Hydrotropism: Root Bending Does Not Require Auxin Redistribution, Molecular Plant, **9**:575-577.
13. Golan I., Dominguez PG., Konrad Z., **Shkolnik I.D.**, Carrari F. and Bar-Zvi D. (2014) Tomato ABSCISIC ACID STRESS RIPENING (ASR) Gene Family Revisited. PLoS One **9**:e107117.
14. **Shkolnik I.D.**, Adler G. and Bar-Zvi D. (2013) ABI4 downregulates expression of the sodium transporter *HKT1;1* in Arabidopsis roots and affects salt tolerance. Plant Journal: for cell and molecular biology **73**:993-1005.
15. **Shkolnik I.D.** and Bar-Zvi D. (2012) A simple physiologically relevant double-agar-layer method for post-germination treatment of seedlings. Plant Growth Regulation **67**:305-310.

16. **Shkolnik I.D.** and Bar-Zvi D. (2011) Expression of the *ABSCISIC ACID INSENSITIVE 4 (ABI4)* in developing Arabidopsis seedlings. Plant Signaling & Behavior **6**:5, 1-3.
17. **Shkolnik I.D.** and Bar-Zvi D. (2010) *ABI4* mediates abscisic acid and cytokinin inhibition of lateral root formation by reducing polar auxin transport in Arabidopsis. The Plant Cell **22**:3560-3573.
18. **Shkolnik D.** and Bar-Zvi D. (2008) Tomato ASR1 abrogates the response to abscisic acid and glucose in *Arabidopsis* by competing with ABI4 for DNA binding. Plant Biotechnology Journal **6**:368-378.
19. Goldgur, Y., Rom, S., Ghirlando, R., Shandrin, N., **Shkolnik, D.**, Konrad, Z. and Bar-Zvi, D. (2007) Desiccation and Zinc-binding induces transition of the water-stress and salt-stress regulated plant specific ASR1 protein from natively unfolded state. Plant Physiology **143**:617–628.

Participation in Scientific Conferences, Lectures, and Other Activity (selected list):

1. Kiere Y., Chandran E.A., **Shkolnik D.** Regulation of root growth and development under mild salt stress by CAMTA6. Plant Calcium Signaling conference (PCS2024), July 2024, Lisbon, Portugal.
2. **Shkolnik D.**, Chandran E.A. Calcium-mediated mechanisms of plant response to salt stress during germination and seedling establishment, The Hebrew University of Jerusalem Nano center annual conference, February 2023, Hadera, Israel. Invited speaker.
3. **Shkolnik D.** Session title: Calcium Signaling in Plants. 16th international meeting of the European Calcium Society (ECS2022), August 2022, Cork, Ireland. Session chair.
4. **Shkolnik D.** Session title: Calcium Signaling in Plant Metabolism & Nutrition. Plant Calcium Signaling conference (PCS2022), July 2022, Milan, Italy. Session chair.
5. **Shkolnik D.**, Ezhilaracy A. and Isenshtadt I. Calcium -mediated mechanisms of plant response to salt stress during germination. 6th World Plant Genomics and Plant Science Congress. April, 2022, Osaka, Japan. Invited speaker.
6. **Shkolnik D.**, Nuriel R., Bonza C.M., Costa A. and Fromm H. Perception of moisture gradient by roots is transmitted to the elongation zone by an asymmetric calcium signal in the phloem. The International Plant Molecular Biology (IPMB) conference, August 2018, Montpellier, France. Oral presentation.
7. **Shkolnik D.**, Nuriel R., Bonza C.M., Costa A. and Fromm H. Perception of moisture gradient by roots is transmitted to the elongation zone by an asymmetric calcium signal in the phloem. The 10th symposium of the International society of root research, July 2018, Maale-hachamisha, Israel. Oral presentation-invited lecture.
8. **Shkolnik D.**, Nuriel R., Costa A. and Fromm H. Perception of moisture gradient by roots is transmitted to the elongation zone by an asymmetric calcium signal in the phloem. Plant Calcium Signaling Conference, September 2017, John Innes Centre, Norwich, UK. Oral presentation-invited lecture.
9. **Shkolnik D.**, Krieger G., Nuriel R., Miller G., Costa A. and Fromm H. Cellular signals tune root tropic responses. Annual meeting of the Israeli Society for Plant Sciences. September 2016, Tel Aviv University, Israel. Oral presentation-invited lecture.
10. **Shkolnik D.**, Krieger G., Nuriel R., Miller G., Costa A. and Fromm H. Cellular signals tune root tropic responses. Annual meeting of the American Society of Plant Biology, Austin, TX. July 2016. Poster presentation.
11. **Shkolnik D.**, Krieger G., Nuriel R., Miller G., Costa A. and Fromm H. Cellular signals tune root tropic responses. Annual meeting of ICORE, plant adaptation to changing environment. June 2016, The Faculty of Agriculture, The Hebrew University of Jerusalem, Rehovot, Israel. Oral presentation.
12. **Shkolnik D.** and Bar-Zvi D. *ABI4* mediates abscisic acid and cytokinin inhibition of lateral root formation by reducing auxin polar transport. Annual meeting of the American Society of Plant Biology. July 2010, Montreal, Canada. Poster presentation.
13. **Shkolnik D.** and Bar-Zvi D. *ABI4* mediates abscisic acid and cytokinin inhibition of lateral root formation by reducing auxin polar transport. Annual meeting of the Israeli Society for Plant Sciences, January 2010, Sede Boqer desert research institute, Ben-Gurion University, Israel. Oral presentation-invited lecture.
14. **Shkolnik D.** and Bar-Zvi D. ASR1 is involved in sugar/abscisic acid and abiotic-stress signaling pathways. Abiotic and biotic stresses in plants conference. November 2008, Amman, Jordan. Oral presentation.
15. **Shkolnik D.** and Bar-Zvi D. ASR1 is involved in sugar/abscisic acid and abiotic-stress signaling pathways. Annual meeting of the Israeli Society for Plant Sciences. February 2007, The Faculty of Agriculture, The Hebrew University of Jerusalem, Rehovot, Israel. Oral presentation.

16. **Shkolnik D.** and Bar-Zvi. ASR1 is involved in sugar/abscisic acid and abiotic-stress signaling pathways. September 2006, Salt & Water Stress in Plants - Gordon Research Conferences. Oxford University, UK. Poster presentation.

Patents:

Shkolnik D., Peer W.A., Murphy A.S. (2015) "Endomembrane Aspartic Proteases as an Inducible Mechanism to Modulate Activity of Plasma Membrane Proteins and Cleave Prodrugs" University of Maryland Invention Disclosure LS-2015-135.