

Israel

Assaf Mosquna
 Faculty of Agriculture, The Hebrew University of Jerusalem
Assaf.mosquna@mail.huji.ac.il



Please describe any new experimental resources and/or software tools available to Arabidopsis researchers that have been initiated or funded in your country in 2020 or early 2021

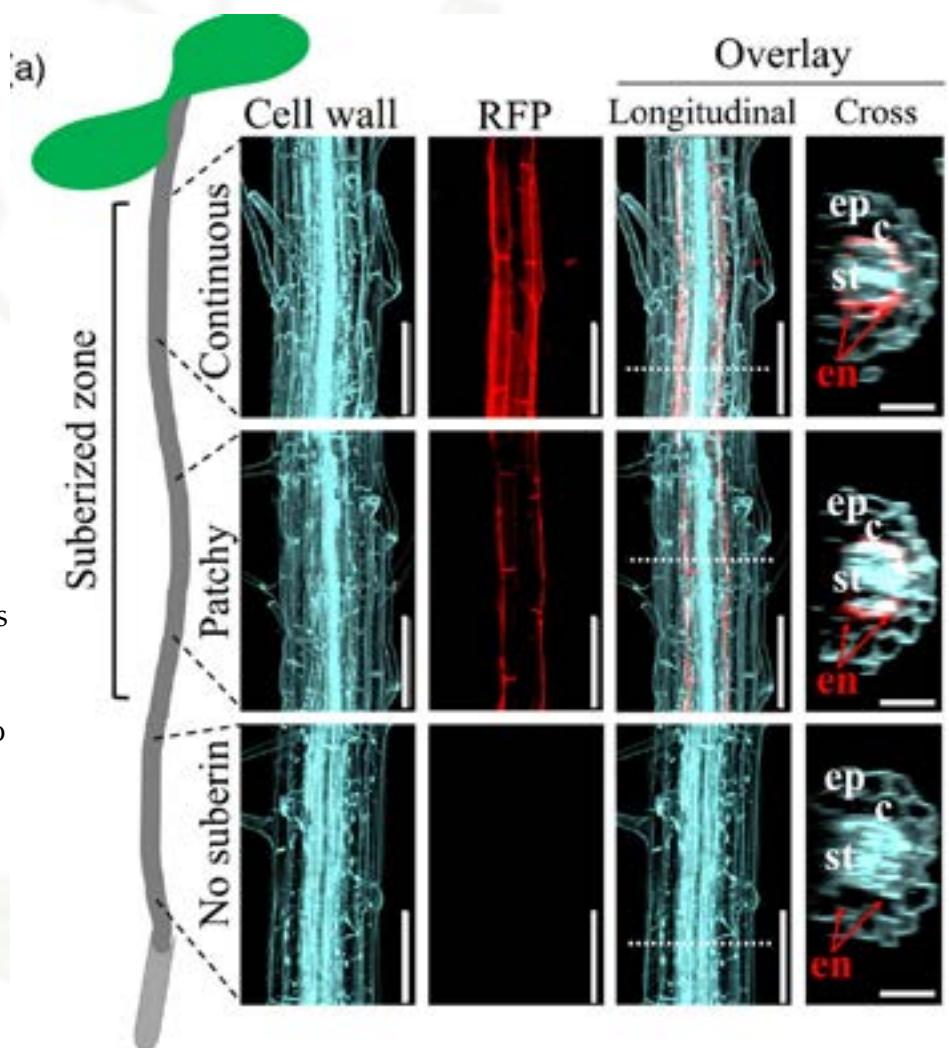
The Position and Complex Genomic Architecture of Plant T-DNA Insertions Revealed by 4SEE Krispil R (2020), DOI: 10.3390/ijms21072373 Present a genomic method for detection of the entire scope of T-DNA locations. 4SEE is a high resolution method based on chromosome conformation capture technology to map the position of any point of interest in plant genomes. Application of 4SEE in several characterized transgenic Arabidopsis lines mapped unannotated T-DNA insertions and their associated chromosomal rearrangements including inversions and translocations.

Please provide a paragraph describing the general impact of the COVID19 pandemic on the scientific community in your country

Universities like the rest of the public sector suffered from pandemic. Because public schools were mainly online during 2020, the ability of working parents, even from home was seriously compromised. Other than that, the Universities maintained a skeleton crew of 30% to maintain and 100% of teaching was online.

Planned events for 2021 and 2022

- International Conference on Plant Biology, Physiology, Ecology, Physiology and Plant Science ICPBPEPPS on November 29-30, 2022 in Jerusalem, Israel
<https://waset.org/plant-biology-physiology-ecology-physiology-and-plant-science-conference-in-november-2022-in-jerusalem>.



SUB is expressed in endodermal cells displaying patchy or continuous suberization.

(a) Confocal laser scanning microscopy (CLSM) images showing endodermis-specific expression of red fluorescent protein (RFP) driven by the native 50 upstream region of the SUB gene (pAtSUB::RFP) in the Arabidopsis root. Root cell layers are highlighted using Calcofluor white (cyan). Note the RFP signals (647 nm) detected in patchy and continuous suberized root zones but not in the non-suberized zone. Overlay longitudinal Z projection images represent merged cell wall and RFP signals, where dashed lines in these images represent root areas presented in overlay cross-section views (right panels). Bars represent 50 μ m.

Selected Publications

“One step closer to understand the formation of the root endodermal barrier”: Cohen, H., Fedjuk, V., Wang, C.H., Wu, S. and Aharoni, A. (2020) SUBERMAN regulates developmental suberization of the Arabidopsis root endodermis. *Plant J*, 102, 431-447.

“Corelation between high free methionine and the accumulation of stress-associated metabolites.” Girija, A., Shotan, D., Hacham, Y. and Amir, R. (2020) The Level of Methionine Residues in Storage Proteins Is the Main Limiting Factor of Protein-Bound-Methionine Accumulation in Arabidopsis Seeds. *Front Plant Sci*, 11.

Major Funding Sources

- ISF: <https://www.isf.org.il>
- BSF and NSF-BSF: <https://www.bsf.org.il/>
- ERC: <https://erc.europa.eu/>
- GIF: <http://www.gif.org.il/Pages/default.aspx>