

State of Israel/Ministry of Agriculture
& Rural Development
Agricultural Research Organization
The Volcani Center
Office of the Director
Associate Director for Academic Affairs
& International Cooperation

מדינת ישראל/משרד החקלאות
ופיתוח הכפר
מינהל המחקר החקלאי
מרכז וולקני
לשכת ראש המינהל
ממונה על ענייני אקדמיה
וקשרים בינלאומיים

Program for Postdoctoral Fellowship Awards in Agriculture

Internal Ref # 18	Title of Research Project: Shared lipid-based signals governing plant defense response to the Root-Knot Nematode <i>Meloidogyne</i> spp.
Project Leader: Sigal Brown Horowitz	Email : sigalhor@volcani.agri.gov.il Phone : 03-9683353
Institute: Plant Protection	
Department: Entomology and the Nematology and Chemistry units	
The research team (other scientists):	
Short Description of Research Project (3-5 lines): Among lipid signals, fatty acid (FA) oxidation products—oxylipins (plants) and eicosanoids (animal)—regulate many defense and developmental pathways and present unique shared signaling elements. Herein we aimed to identify distinct fundamental mechanisms governing the plant's resistance and susceptibility responses by: (1) identify gene networks and lipid signals that underlie the increased (or decreased) resistance of tomato mutants by using state-of-the-art Illumina RNAseq expression profiling technique and oxylipin profiling; (2) assess the function of natural pure oxylipins against RKNs by conducting direct and indirect screening bioassays.	
Required Qualifications of Visiting Scientist: <i>Education:</i> Bachelor, MSc and PhD in one of the following: Agricultural Sciences and/ or Plant protection, Plant health field. <i>Scientific Experience:</i> Molecular biology, computer skills, biochemistry, plant physiology traditional lab techniques and experience. <i>Abilities and Skills:</i> Computer skills, English as second language	

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