

**BARD Approved Projects  
Award Year 2023**

21/06/2023

<b>IS-5563-23R</b> 5.460	<b>Watching Weeds from Space: Very High-Resolution Satellite Imagery and Artificial Intelligence for Large Scale Mapping of Arable Weeds</b>			Agricultural Innovation & Engi
		Blank, L. Mesgaran, M.B.	ARO, Min. Ag. UC, Davis	CA
		Total	310,000	3 years
<b>IS-5565-23</b>	<b>Smart monitoring and acoustic spray system for precision crop stress management in controlled environment</b>			Agricultural Innovation & Engi
		Horesh, A.H. Sankaran, S. Vitoshkin, H. Sacks, M. McGee, R.J.	ARO, Min. Ag. U WA State ARO, Min. Ag. Min. Agr. USDA, ARS	WA  WA
		Total	310,000	3 years
<b>IS-5567-23R</b> 5.468	<b>Blocking viral ion channels to curb animal coronavirus morbidity</b>			Animal Health
		Arkin, I. Whittaker, G. Diel, D.G.	U Hebrew U Cornell U Cornell	NY NY
		Total	310,000	3 years
<b>IS-5568-23</b>	<b>In vitro assessment of random peptide mixtures-loaded nanocarriers for animal intestinal infection prevention</b>			Animal Health
		Hayouka, Z. Rodrigues, D.	U Hebrew U Houston	TX
		Total	309,000	3 years
<b>IS-5571-23</b>	<b>Design and implementation of microbiomes for high feed efficiency low methane emitting ruminants</b>			Animal Production
		Mizrahi, I. Cordero, O.	U Ben Gurion MIT	MA
		Total	310,000	3 years
<b>IS-5573-23</b>	<b>Improving avocado pollination by wild pollinators</b>			Animal Production
		Mandelik, Y. Williams, N.M. Dag, A. Frankie, G.W.	U Hebrew UC, Davis ARO, Min. Ag. UC, Berkeley	CA CA
		Total	305,000	3 years
<b>IS-5577-23</b>	<b>Developing vaccine platforms for eliciting systemic and mucosal immunity against an emerging viral disease in rainbow trout</b>			Aquaculture
		Bacharach, E. Salinas, I. Karniely, S. Eldar, A.	U Tel Aviv U New Mexico Isr. Vet. Inst. Isr. Vet. Inst.	NM
		Total	600,000	3 years

**BARD Approved Projects**  
**Award Year 2023**

21/06/2023

<b>IS-5580-23</b>	<b>Developing a plasmid-based hormonal treatment to accelerate puberty without compromising fecundity in salmonids</b>			Aquaculture
				Total 310,000 3 years
	Levavi-Sivan, B.	U Hebrew		
	Wong, T.T.	UMBC	MD	
	Zmora, N.	UMBC	MD	
	Zohar, Y.	UMBC	MD	
<b>IS-5583-23</b>	<b>Individual coating of entomopathogenic nematodes based on Pickering emulsions: A novel formulation for biopesticides</b>			Crop Health
				Total 309,000 3 years
	Mechrez, G.	ARO, Min. Ag.		
	Shapiro-Ilan, D.	USDA, ARS	GA	
	Ment, D.	ARO, Min. Ag.		
<b>IS-5587-23R</b> 5.521	<b>Identifying <i>Xylella fastidiosa</i>-resistant almond genotypes and unraveling its genetic basis</b>			Crop Health
				Total 310,000 3 years
	Bahar, O.	ARO, Min. Ag.		
	Almeida, R.P.P.	UC, Berkeley	CA	
	De La Fuente, L.	U Auburn	AL	
	Holland, D.	ARO, Min. Ag.		
<b>US-5589-23</b>	<b>Manipulating sugar sensing in sternorrhynchan insects to block transmission of phloem-limited pathogens</b>			Crop Health
				Total 310,000 3 years
	Mauck, K.E.M.	UC, Riverside	CA	
	Bohbot, J.	U Hebrew		
<b>IS-5590-23</b>	<b>Enabling sustainable control of fruit-fly agricultural pests using CRISPR-editing of selectable phenotypes</b>			Crop Health
				Total 310,000 3 years
	Papathanos, P.	U Hebrew		
	Handler, A.M.	USDA, ARS	FL	
	Pines, G.	ARO, Min. Ag.		
<b>IS-5594-23R</b> 5.484	<b>Isolation and functional characterization of novel disease resistance genes from <i>Aegilops longissima</i></b>			Crop Health
				Total 300,000 3 years
	Minz-Dub, A.	U Tel Aviv		
	Wegulo, S.	U Nebraska	NE	
	Sharon, A.	U Tel Aviv		
	Mayrose, I.	U Tel Aviv		
<b>IS-5595-23R</b> 5.493	<b>Copper Oxide Nanoparticle Embedded Super Absorbing Biopolymers to Enhance Nutrient Supply and Growth of Infected Lettuce and Tomato</b>			Crop Health
				Total 310,000 3 years
	Zucker, I.	U Tel Aviv		
	Xing, B.	U Mass	MA	
	Richter, S.	U Tel Aviv		

**BARD Approved Projects**  
**Award Year 2023**

21/06/2023

<b>IS-5596-23</b>	<b>Identifying virus interacting proteins in whiteflies and a clay-based RNA interference approach for whitefly and virus management</b>	Ghanim, M. Srinivasan, B. Ghosh, S.	ARO, Min. Ag. U Georgia U Georgia	GA GA	Crop Health		
					Total	310,000	3 years
<b>IS-5598-23</b>	<b>Developing tools for propagating climate-changes-resistant trees by novel ways of promoting adventitious root formation</b>	Sadot, E. Staiger, C.J. Weinstain, R.	ARO, Min. Ag. U Purdue U Tel Aviv	IN	Crop Production		
					Total	310,000	3 years
<b>IS-5601-23</b>	<b>Elucidating the grape malate tonoplast transporter: A targeted approach for controlling fruit and wine acidity, and improving grapevine tolerance to biotic and abiotic stresses</b>	Reshef, N. Pineros, M.	ARO, Min. Ag. USDA, ARS	NY	Crop Production		
					Total	310,000	3 years
<b>IS-5605-23CR</b> 5292 5.517	<b>Uncoupling postharvest browning and aroma chemotype in sweet basil using gene editing</b>	Gonda, I. Di, D. Maoz, I. Lawton, M.A. Simon, J.E.	ARO, Min. Ag. U Rutgers ARO, Min. Ag. U Rutgers U Rutgers	NJ NJ NJ	Crop Production		
					Total	310,000	3 years
<b>IS-5606-23R</b> 5.527	<b>Identifying Genetic and Molecular Mechanisms for Stem-Rot Control in Peanut</b>	Hovav, R. Ozias-Akins, P. Brenneman, T. Chu, Y. Clevenger, P	ARO, Min. Ag. U Georgia U Georgia U Georgia HudsonAlpha Inst. for Biotechnology	GA GA GA AL	Crop Production		
					Total	310,000	3 years
<b>IS-5607-23</b>	<b>Can weed species adapt to climate change and agricultural practice via transgenerational phenotypic plasticity?</b>	Matzrafi, M. Brunharo, C. Patterson, E.L.P.	ARO, Min. Ag. U Penn State U Michigan St.	PA MI	Crop Production		
					Total	310,000	3 years
<b>IS-5608-23</b>	<b>Uncovering the genomic and biomechanical architecture of spring wheat lodging resistance</b>	Ben-David, R. Robertson, D.J.	ARO, Min. Ag. U Idaho	ID	Crop Production		
					Total	310,000	3 years

**BARD Approved Projects  
Award Year 2023**

21/06/2023

<b>IS-5615-23R</b> 5.533	<b>Thiabendazole in soils irrigated with reclaimed wastewater: Effects on the fungal community and associated risk to soil and environmental health</b>	Covo, S. U Hebrew Carbone, I. U NC State Chefetz, B. U Hebrew	NC	Environ/Water/Ren. Res.
				Total 310,000 3 years
<b>IS-5616-23R</b> 5.541	<b>Enhancing nitrogen use efficiency in wheat by coupling pre-season soil macro-variability and in-season crop micro-variability</b>	Herrmann, I. U Hebrew Khosla, R. Kansas State U Ben-David, R. ARO, Min. Ag. Siegfried, J. Kansas State U Mandal, D. Kansas State U	KS KS KS	Environ/Water/Ren. Res.
				Total 310,000 3 years
<b>IS-5619-23</b>	<b>Should farmers manage deficit irrigation in deciduous orchards by the current year's projected yield or for maximum multiannual reproductive potential?</b>	Sperling, O. ARO, Min. Ag. Marino, G. UC, Davis Zwieniecki, M. UC, Davis	CA CA	Environ/Water/Ren. Res.
				Total 310,000 3 years
<b>IS-5625-23R</b> 5.539	<b>Harnessing the root microbiome of wild grass populations from the Israeli aridity gradient for boosting wheat growth and drought-resilience</b>	Korenblum, E. ARO, Min. Ag. Zengler, K. UC, San Diego	CA	Environ/Water/Ren. Res.
				Total 310,000 3 years
<b>IS-5628-23</b>	<b>Risk assessment platform to reduce ESBL-producing <i>Enterobacteriaceae</i> infections associated with consumption of treated wastewater irrigated produce</b>	Cytryn, E. ARO, Min. Ag. Hamilton, K. U Arizona St.	AZ	Food Product
				Total 310,000 3 years
<b>IS-5629-23</b>	<b>Fungal polyketide lactones mediate fungi-bacteria interactions: offering a new mode for post-harvest disease management by enzymatic biotransformation</b>	Jurnou-Afriat, L. MIGAL R&D Keller, N.P. U Wisconsin	WI	Food Product
				Total 310,000 3 years
<b>IS-5632-23</b>	<b>Elucidating the role of branched-chain decarboxylase in the biosynthesis of flavor volatiles and quality in tomato fruits</b>	Maoz, I. ARO, Min. Ag. Giovannoni, J. Boyce Thompson Gonda, I. ARO, Min. Ag.	NY	Food Product
				Total 310,000 3 years