

CURRICULUM VITAE - Nurit Katzir

Agricultural research organization
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EDUCATION HISTORY

1968 – 1971 B. Sc. Biology, The Hebrew University of Jerusalem, Israel
1972 – 1977 Ph.D. The Hebrew University of Jerusalem.

PROFESSIONAL EXPERIENCE

1980 Postdoctoral position (EMBO Fellowship) at the MRC Laboratories, Cambridge (UK), at the laboratory of Prof. S. Brenner
1981 – 1984 Lecturer at the Medical School, Beer Sheva, Israel, Sub Dept. of Immunology and Microbiology
1983 – 1984 Visiting scientist at the Dept. of Chemical Immunology, The Weizmann Institute of Science, Rehovot, Israel
1984 – 1986 Research Scientist at the Dept. of Chemical Immunology, The Weizmann Institute of Science, Rehovot, Israel.
1986 – 1989 Research Scientist at the Israel Institute of Biological Research, Ness Ziona, Israel
1992 – Research Scientist at Newe Ya'ar Research Center, Agricultural Research Organization. Level "A+"(full professor) since 2008.
2005 – 2012 Head, Newe Ya'ar Research Center, Agricultural Research Organization

RESEARCH ACTIVITIES

The research of my group at Newe Ya'ar focuses on the genetics and genomics of melon (*Cucumis melo* L.) and other Cucurbitaceae crops. Major topics are fruit quality, genetic mapping and the assessment of genetic variability of these crops. We conduct transcriptomic and metabolomic studies directed at elucidating genes that control fruit quality traits, including sugar, organic acid, pigments and aromatic volatiles..

RECENT PUBLICATIONS

Portnoy, V., Benyamini, Y., Bar, E., Harel-Beja, R., Gepstein, S., Giovannoni, J.J., Schaffer, A.A., Burger, J., Tadmor, Y., Lewinsohn, E., **Katzir, N.** (2008). The molecular and biochemical basis for varietal variation in sesquiterpene content in melon (*Cucumis melo* L.) rinds. *Plant Mol. Biol.* 66:647-661

Tadmor, Y., **Katzir, N.**, Meir, A., Yaniv-Yaakov, A., Sa'ar, U., Baumkoler, F., Lavee, T., Lewinsohn, E., Schaffer, A. and Burger, J. (2008). Induced mutagenesis to augment the natural genetic variability of melon (*Cucumis melo* L.). *Israel Jour. of Plant Sci.* 55: 150-159

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Burger, Y., Paris, H. S., Cohen, R., **Katzir, N.**, Tadmor, Y., Lewinsohn, E. and Schaffer, A.A. (2009). Genetic diversity of *Cucumis melo*. *Hort. Rev.* 36: 165-198

Gonda, I., Bar, E., Portnoy, V., Lev, S., Burger, J., Schaffer, A.A., Tadmor, Y., Gepstein, S., Giovannoni, J.J., **Katzir, N.** and Lewinsohn, E. (2010). Branched-chain and aromatic amino acid catabolism into aroma volatiles in *Cucumis melo* L. fruit. *Journal of Experimental Botany* 61: 1111-1123

Harel-Beja, R., Tzuri, G., Portnoy, V., Lotan-Pompan, M., Lev, S., Cohen, S., Dai, N., Yeselson, L., Meir, A., Libhaber, S., Avisar, E., Melame, T., Van Koert, P., Verbakel, H., Hofstede, R., Volpin, H., Oliver, M., Fougere, A., Stalh, C., Fauve, J., Copes, B., Fei, Z., Giovannoni, J., Ori, N., Lewinsohn, E., Sherman, A., Burger, J., Tadmor, Y., Schaffer, A. and **Katzir, N.** (2010). A genetic map of melon highly enriched with fruit quality QTLs and EST markers, including sugar and carotenoid metabolism genes. *Theor. Appl. Genet.* 121: 511-533

Ophir, R., Eshed, R., Harel-Beja, R., Tzuri, G., Portnoy, V., Burger, Y., Uliel, S., **Katzir, N.** and Sherman A. (2010). High-throughput marker discovery in melon using a self-designed oligo microarray. *BMC Genomics* 11:269

Tadmor, Y., Burger, Y., Yaakov, I., Feder, A., Libhaber, S.E., Portnoy, V., Meir, A., Tzuri, G., Sa'ar, U., Rogachev, I., Aharoni, A., Abeliovich, H., Schaffer, A.A., Lewinsohn, E., and **Katzir, N.** (2010). Genetics of flavonoid, carotenoid, and chlorophyll pigments in melon fruit rinds. *Journal of Agricultural and Food Chemistry* 58:10722-8

Portnoy, V., Diber, A., Pollock, S., Karchi, H., Lev, S., Tzuri, G., Harel-Beja, R., Forer, R., Portnoy, V.H., Lewinsohn, E., Tadmor, Y., Burger, J., Schaffer, A., and **Katzir, N.** (2011). Use of Non-Normalized, Non-Amplified cDNA for 454-Based RNA-Seq of Fleshy Melon Fruit. *The Plant Genome* 4: 36-46

Dai, N., Cohen, S., Portnoy, V., Tzuri, G., Harel-Baja, R., Pompan-Lotan, M., Carmi, N., Zhang G., Hovav, R., Diber, A., Pollock, S., Karchi, H., Yeselson, L., Petreikov, M., Shen, S., Sa'ar, U., Lewinsohn, E., Tadmor, Y., Granot, D., Ophir, R., Sherman, A., Fei, Z., Giovannoni, J., Burger, Y., **Katzir, N.**, Schaffer, A.A. (2011). Metabolism of soluble sugars in developing melon fruit: A global transcriptional view of the metabolic transition to sucrose accumulation. *Plant Molecular Biology* 76: 1-18

Clepet, C., Joobeur, T., Zheng, Y., Jublot, D., Huang, M., Truniger, V., Boualem, A., Hernandez-Gonzalez, M.E., Dolcet-Sanjuan, R., Portnoy, V., Creus, A.M., Caño-Delgado, A., **Katzir, N.**, Giovannoni, J.J., Bendahmane, A., Aranda, M.A., Garcia-Mas, J., and Fei, Z. (2011). Analysis of expressed sequence tags generated from full-length enriched cDNA libraries of melon. *BMC Genomics* 20: 12:252

Diaz A, Fergany M, Formisano G, Ziarsolo P, Blanca J, Fei Z, Staub JE, Zalapa JE, Cuevas HE, Dace G, Oliver M, Boissot N, Dogimont C, Pitrat M, Hofstede R, van Koert P, Harel-Beja R, Tzuri G, Portnoy V, Cohen S, Schaffer A, **Katzir, N.**, Xu Y, Zhang H, Fukino N, Matsumoto S, Garcia-Mas J, Monforte AJ. (2011).

A consensus linkage map for molecular markers and Quantitative Trait Loci associated with economically important traits in melon (*Cucumis melo* L.). *BMC Plant Biol* 11:111

Caspi-Fluger A, Mozes-Daube N, Inbar M, **Katzir N**, Portnoy V, Belausov E, Hunter M S. and Zchori-Fein E. (2012). Horizontal transmission of the insect symbiont *Rickettsia* is plant-mediated. *Proc. R. Soc. B*, 279:1791-6

Cohen S, Tzuri G, Harel-Beja R, Itkin M, Portnoy V, Sa'ar U, Lev S, Yeselson L, Petrikov M, Rogachev I, Aharoni A, Ophir R, Tadmor Y, Lewinsohn E, Burger Y, **Katzir N**, Schaffer AA. (2012). Co-mapping studies of QTLs for fruit acidity and candidate genes of organic acid metabolism and proton transport in sweet melon (*Cucumis melo* L.). *Theor. Appl. Genet.* 125:343-353

Sherman A, Eshed R, Harel-Beja R, Tzuri G, Portnoy V, Cohen S, Rubinstein M, Schaffer A, Burger J, **Katzir N**, Ophir R. (2013). Combining bulk segregation analysis and microarrays for mapping of the pH trait in melon. *Theor. Appl. Genet.* 126:349-358

Brotman Y, Normantovich M, Goldenberg Z, Zvirin Z, Kovalski I, Stovbun N, Doniger T, Bolger AM, Troadec C, Bendahmane A, Cohen R, **Katzir N**, Pitrat M, Dogimont C and Perl-Treves R. (2013). Dual Resistance of Melon to *Fusarium oxysporum* Races 0 and 2 and to *Papaya ring-spot virus* is Controlled by a Pair of Head-to-Head-Oriented NB-LRR Genes of Unusual Architecture. *Molecular Plant* 6:235-238

Gonda, I., Lev, S., Bar, E., Sikron, N., Portnoy, V., Davidovich-Rikanati, R., Burger, J., Schaffer, A., Tadmor, Y., Giovannoni, J.J., Huang, M., Fei, Z., **Katzir, N.**, Fait, A. and Lewinsohn, E. (2013). Catabolism of L-methionine in the formation of sulfur and other volatiles in melon (*Cucumis melo* L.) fruit. *The Plant Journal* 74:458-472

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Cultivated Cucumber (*Cucumis sativus* L.) Using a Single-Nucleotide Polymorphism Genotyping Array. *PLoS One*. Apr 13;10(4); doi: 10.1371

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Tzuri, G., Zhou, X., Chayut, N., Yuan, H., Portnoy, V., Meir, A., Sa'ar, U., Baumkoler, F., Mazourek, M., Lewinsohn, E., Fei, Z., Schaffer, A.A., Li, L., Burger, J., **Katzir, N.** and Tadmor, Y. (2015). A "golden" SNP in *CmOr* governs fruit flesh color of melo. (*Cucumis melo*). *The Plant Journal*: 82:267-279.

Glassner, H., Zchori-Fein, E., Compant, S., Sessitsch, A., **Katzir, N.**, Portnoy, V. and Yaron, S. (2015). Characterization of endophytic bacteria from cucurbit fruits with potential benefits to agriculture in melons (*Cucumis melo* L.). *FEMS Microbiology Ecology* (Accepted, 09-Jun-2015).

Yuan, H., Owsiany, K., Sheeja, T. E., Rodriguez, C., Li, Y., Chayut, N., Yang, R., Welsch, T., Thannhauser, M., Parthasarathy, Q. Xu, X. Deng, Z. Fei, A. A. Schaffer, **N. Katzir**, J. Burger, Y. Tadmor and Li, L. (2015). A Single Amino Acid Substitution in an ORANGE Protein Promotes Carotenoid Overaccumulation in *Arabidopsis*. *Plant physiology*, pp-00971 <http://www.plantphysiol.org/content/early/2015/07/29/pp.15.00971.full.pdf+html>

Feder, A., Burger, J., Gao, S., Lewinsohn, E., **Katzir, N.**, Schaffer, A. A., Meir, A., Davidovich-Rikanati, R., Portnoy, V., Gal-On, A., Fei, Z., Kashi, Y., and Tadmor, Y. (2015) A Kelch domain-containing F-box coding gene negatively regulates flavonoid accumulation in *Cucumis melo* L. *Plant physiology*, *Plant physiology*, pp-01008. <http://www.plantphysiol.org/content/early/2015/09/10/pp.15.01008.full.pdf+html>.

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