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Dr. Cytryn is a Senior Researcher at the Institute of Soil, Water and Environmental Sciences at the Agricultural Research Organization (Volcani Center), and a lecturer at the Hebrew University Faculty of Agriculture and Bar Ilan University. He completed an MSc in Environmental Sciences and a PhD in Animal Sciences at the Hebrew University of Jerusalem and postdoctoral training at the University of Minnesota. He is currently supervising three PhD students, two MSc students and a postdoctoral candidate.

Dr. Cytryn is a microbial ecologist, whose research primarily focuses on plant-microbe interactions and on environmental dimensions of antibiotic resistance (targeting ecosystems impacted by reclaimed wastewater irrigation and animal husbandry). His lab implements both culture based and culture independent methods to delineate microbial communities and antibiotic resistance genes in the environment, with specific emphasis on next-generation sequencing based metagenomic approaches. He is active in several European research networks including COST Action ES1403- "New and emerging challenges and opportunities in wastewater reuse" and the NORMAN network for monitoring environmental contaminants of emerging concern. Furthermore, he is a member of the Israeli inter-ministerial expert committee for assessing the impact of antibiotic resistance in wastewater effluents. Dr. Cytryn has received numerous national and international grants to investigate antibiotic resistance in agroenvironments and he has published over 40 peer-reviewed manuscripts in high-impact periodicals and written six book chapters.

### Selected Publications

1. Negreanu, Y., Pasternak, Z. Jurkevitch, E. and **Cytryn, E.** (2012) Impact of treated wastewater irrigation on antibiotic resistance in agricultural soils. *Environ. Sci. Technol.* 46: 4800–4808.
2. Kaplan, E., Offek, M., Jurkevitch, E. and **Cytryn, E.** (2013) Characterization of fluoroquinolone resistance and qnr diversity in *Enterobacteriaceae* from municipal biosolids. *Front. Microbiol.*
3. Gatica, J. and **Cytryn, E.** (2013) Impact of treated wastewater irrigation on antibiotic resistance in the soil microbiome. *Environ. Sci. Pollut.* 46:4800-48088.
4. **Cytryn, E.** (2013) The soil resistome: The anthropogenic, the native, and the unknown. *Soil Biol. & Biochem.* 63:18–23.
5. Berendonk, T.U. Manaia, C.M., Merlin, C., Fatta-Kassinos, D., **Cytryn, E., et al.** (2015) Tackling antibiotic resistance: the environmental framework. *Nature Rev. Microbiol.* 13, 310–317.
6. Kaplan, E., Sela, N., Doron-Faigenboim, A., Navon-Venezia, S., Jurkevitch, E. and **Cytryn, E.** (2015) Genomic and functional characterization of qnr-encoding plasmids from municipal wastewater biosolid *Klebsiella pneumoniae* isolates. *Frontiers in Microbiology* doi: 0.3389/fmicb.2013.00144.
7. Gatica, J., Yang, K., Pagaling, E., Jurkevitch, E. Yan, T. and **Cytryn, E.** (2016) Resistance of undisturbed soil microbiomes to ceftriaxone indicates extended spectrum  $\beta$ -lactamase activity. *Frontiers in Microbiology.*
8. Kolton, M., Graber, E.R., Tsechansky, L., Elad, Y., and **Cytryn, E.** (2016) Biochar-stimulated plant performance is strongly linked to microbial diversity and metabolic potential in the rhizosphere. *New Phytologist.* 213:1393-1404.
9. Gatica, J., Tripathi, V. <sup>S</sup> Green, S., Manaia, C.M., Berendonk, T., Cacace, D., Merlin, C., Kreuzinger, N., Schwartz, T., Fatta-Kassinos, D., Rizzo, L. Schwermer, C.U., Garelick, H., Jurkevitch, E. and **Cytryn, E.** (2016) High throughput analysis of integron gene cassettes in wastewater environments. *Environ. Sci. Technol.*
10. Patil, H.J, Benet-Pearlberg, A., Naor, A., Smirnov, M., Ofek, T., Nasser, A., Minz, D. and **Cytryn, E.** (2016) Evidence of increased antibiotic resistance in phylogenetically-diverse *Aeromonas* isolates from semi-intensive fish ponds treated with antibiotics. *Frontiers in Microbiology.* 7.
11. Tripathi, V., and **Cytryn, E.,** (2017) Impact of anthropogenic activities on the dissemination of antibiotic resistance across ecological boundaries. *Essays In Biochemistry* 61.1: 11-21.
12. Elkayam, R. Aharoni, A., Waizel-Ohayon, D., Sued, O., Katz, Y. Negev, I., Marano, R.B.M <sup>S</sup>, **Cytryn, E.,** Shtrasler, L. and Lev, O. (2017) Comprehensive survey of viral and microbial pathogens, indicator microorganisms, microbial source tracking indicators and antibiotic resistance genes in a confined managed effluent recharge. *Journal of Environmental Engineering. In press*