**Assylay Kurmanbayeva**
Acting Associate Professor
**Contact information:**
e-mail: kurmanbayeva.assylay@gmail.com

**Professional experience:**
2018-present – acting Associate Professor, Department of Microbiology and Biotechnology.
2009-2012 - Researcher, NCB

**Awards:**
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**Scientific degree, title, scientific school:**
PhD in Biotechnology, Ben-Gurion University, Israel. Bachelor's degree in "Biotechnology", ENU. L. N. Gumilyeva

**Scientific interests:**
Molecular biology, biochemistry, physiology of plants, abiotic stress of plants

**Research Grants**:
2018-2020: "Investigation of the influence of temperature stress on the level of oxidative stress in barley under drought conditions"

**Delivered courses:** Molecular biology
Adaptation mechanisms of plant stress tolerance
Modern methods in biotechnology

**Publications (selected):**

1. **Kurmanbayeva, A.,** Bekturova, A., Soltabayeva, A., Oshanova, D., Nurbekova, Z., Srivastava, S., Tiwari, P., Dubey, A.K. and Sagi, M., 2022. Active OASTLs confer improved Se resistance and degrade L-Cys and SeCys in Arabidopsis. *Journal of Experimental Botany* , 73(8), pp.2525-2539.
2. Zhanassova, K., **Kurmanbayeva, A***., Gadilgereyeva, B. et al. ROS status and antioxidant enzyme activities in response to combined temperature and drought stresses in barley. Acta Physiol Plant 43, 114 (2021). https://doi.org/10.1007/s11738-021-03281-7
3. Oshanova, D., **Kurmanbayeva, A.,** Bekturova, A., et.al. (2021). Level of Sulfite Oxidase Activity Affects Sulfur and Carbon Metabolism in Arabidopsis. Frontiers in plant science, 12, 690830. https://doi.org/10.3389/fpls.2021.690830 Impact factor: 4.4; Q1
4. Bekturova, A., Oshanova, D., Tiwari, P., Nurbekova, Z., **Kurmanbayeva, A.,** Soltabayeva, A., ... & Sagi, M. (2021). Adenosine 5′ phosphosulfate reductase and sulfite oxidase regulate sulfite-induced water loss in Arabidopsis. Journal of Experimental Botany, 72(18), 6447-6466. https://doi.org/10.1093/jxb/erab249 Impact factor: 5.9; Q1
5. Nurbekova, Z., Srivastava, S., Standing, D., **Kurmanbayeva, A**., Bekturova, A., Soltabayeva, A., ... & Sagi, M. (2021). Arabidopsis aldehyde oxidase 3, known to oxidize abscisic aldehyde to abscisic acid,

protects leaves from aldehyde toxicity. The Plant Journal 108, no. 5 (2021): 1439-1455. DOI10.1111/tpj.15521 Impact factor: 6.4; Q1

6. Soltabayeva, A., Bekturova, A., **Kurmanbayeva, A.,** Oshanova, D., Nurbekova, Z., Srivastava, S., ... & Sagi, M (2021). Ureides are similarly accumulated in response to UV-C irradiation and wound but differently remobilized during recovery in Arabidopsis leaves. Journal of Experimental Botany, 73(3), 1016-1032., DOI: 10.1093/jxb/erab441. Impact factor: 5.9; Q1
7. Toubiana, D., Puzis, R., Wen, L, **Kurmanbayeva, A.** et al. Combined network analysis and machine learning allows the prediction of metabolic pathways from tomato metabolomics data. Commun Biol 2, 214 (2019). https://doi.org/10.1038/s42003-019-0440-4 Impact factor: 6,2; Q1

8. Soltabayeva, A., Srivastava, S., **Kurmanbayeva, A.,** Bekturova, A., Fluhr, R., & Sagi, M. (2018). Early senescence in older leaves of low nitrate-grown Atxdh1 uncovers a role for purine catabolism in N supply. Plant Physiology, 178(3), 1027-1044. doi: 10.1104/pp.18.00795 Impact factor: 6.8; Q1

9. Balážová, Ľ., Babula, P., Baláž, M., Bačkorová, M., Bujňáková, Z., Briančin, J., **Kurmanbayeva, A**. and Sagi, M., 2018. Zinc oxide nanoparticles phytotoxicity on halophyte from genus Salicornia. Plant Physiology and Biochemistry, 130, pp.30-42. doi: 10.1016/j.plaphy.2018.06.013 Impact factor: 2,7; Q1

10. **Kurmanbayeva, A.,** Bekturova, A., Srivastava, S., Soltabayeva, A., Asatryan, A., Ventura, Y., ... & Sagi, M. (2017). Higher novel L-Cys degradation activity results in lower organic-S and biomass in Sarcocornia than the related saltwort, Salicornia. Plant physiology, 175(1), 272-289. doi.org/10.1104/pp.17.00780. Impact factor: 6.8; Q1

11. Yarmolinsky, D., Brychkova, G., Kurmanbayeva, A., Bekturova, A., Ventura, Y., Khozin-Goldberg, I., ... & Sagi, M. (2014). Impairment in sulfite reductase leads to early leaf senescence in tomato plants. Plant physiology, 165(4), 1505-1520. DOI: 10.1104/pp.114.241356 Impact factor: 6.8; Q1