

Abstract

Cyanophycin is a natural biopolymer consisting of a poly-L-Asp backbone with L-Arg, L-His, L-Ile, L-Val, L-Leu, L-Phe, L-Pro, L-Ser, L-Thr, L-Trp, L-Tyr, L-Cys, L-Met, L-Gly, L-Ala, L-Glu, L-Asn, L-Gln, L-Asp, L-Glutamate side chains by peptide bonds. First discovered in

CURRICULUM VITAE

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ACADEMIC BACKGROUND:

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Thesis title: Structural insights into the biosynthesis
and biodegradation of cyanophycin

B.Sc. Biology and Chemistry, Tel Aviv University
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PUBLICATIONS:

12. Sharon I, Hilvert D, Strauss M, Schmeing TM. Cyanophycin and its biosynthesis. Imminent submission. *Natural Product Reports*
11. Markus LMD*, Sharon I*, Munro K, Grogg M, Hilvert D, Strauss M, Schmeing TM. Structure and function of a hexameric cyanophycin synthetase 2. Imminent submission. *Protein Science*
10. Sharon I*, McKay G*, Nguyen D, Schmeing TM. Specific cyanophycin dipeptide hydrolase enzymes suggest widespread utility of this natural polymer. Minor revision requested. *Proceedings of the National Academy of Sciences USA*
9. Sharon I, Schmeing TM. Bioinformatics of cyanophycin metabolism genes and characterization of promiscuous isoaspartyl dipeptidases that catalyze the final step of cyanophycin degradation. *medRxiv*, PLOS ONE
8. Dattani A, Sharon I, Shtifman Segal E, Robinzon S, Gophna U, Allers T, Altman N. Differences in homologous recombination and maintenance of heteropolyploidy between *Haloferax volcanii* and *Haloferax mediterranei*. In press, *G3 Genes & Genetics*
7. Sharon I, Grogg M, Hilvert D, Schmeing TM. The structure of cyanophycinase in complex with a cyanophycin degradation intermediate. *Biochimica et Biophysica Acta General Subjects* 2022

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