

Shai Shen-Orr

Shai Shen-Orr is Co-founder and Chief Scientist of CytoReason and Professor at the Technion Faculty of Medicine.

Combining a love of basic science and a commitment to bettering healthcare, Shai found synergy in the immune system – the body’s ultimate sentinel, critical in the fight against disease.

The immune system is hugely complex and poorly understood. However, an explosion in computational power and 'omic measurement technologies is changing the landscape. Shai, and his team, have harnessed this tech revolution to integrate data, computational methodologies and machine learning approaches to create new models that are capable of creating previously unattainable levels of understanding of immune system activity. CytoReason was born.

CytoReason’s technology uses machine-learning to reconstruct cellular information from bulk tissue, to train an immune-specific NLP engine, and to integrate multi-omics data. The company’s platform organizes and standardizes collaborators’ data (gene, protein, cell, and microbiome) into a single, machine-readable, cell-level view of the immune-system. The data is then integrated into CytoReason’s existing proprietary model which leverages all the data it has seen to generate novel insights and answer key questions in discovery, pipeline and portfolio development decision making.

Shai holds a B.Sc. in Information Systems from The Technion, an M.Sc. in Bioinformatics from the Weizmann Institute of Science and a Ph.D. in Biochemistry from Harvard University. He completed his postdoctoral studies at Stanford University School of Medicine. Since 2012 he heads the Laboratory of Systems Immunology and Precision Medicine at the Technion.