Biomed 2026 Abstract – CytoReason

Company name: CytoReason

Website: www.cytoreason.com

CEO name: David Harel, Chief Scientist name: Shai Shen-Orr

Category: Biotech/Pharma

Session: When Biology Becomes a Language: BioData Teaching Computers to Understand Life

Executive Summary / Investment Rationale

Drug development still operates largely as trial-and-error, with ~70% of programs failing in Phase II due to lack of efficacy. The core challenge is not lack of data, but the absence of a system that connects biology to decisions. CytoReason enables data-driven, mechanistic evaluation of targets, indications, and patient populations.

Core Technology

CytoReason builds computational disease models that integrate multi-omic and clinical data to represent human biology at the cell and tissue level. Using a model zoo of diverse AI Solutions, the platform links molecular mechanisms to clinical outcomes, enabling systematic evaluation of how targets and therapies impact disease across subpopulations.

Product Profile / Pipeline

The platform combines disease models with decision workflows across pharma R&D, supporting target prioritization, indication selection, and patient stratification. CytoReason's models are used by leading pharma companies and are applied in real development programs to inform preclinical and clinical decisions.

Business Strategy

CytoReason operates as an independent technology platform without an internal drug pipeline, ensuring full alignment with pharma partners. It integrates into R&D workflows, combining a scalable product offering with scientific collaboration to enable adoption across programs and therapeutic areas.

What's Next?

CytoReason is advancing towards a unified representation of biology as a computable language, where molecular and clinical data are structured into models that can be

systematically perform multi-modal inference and reasoning. Towards this CytoReason is co-leading the IIA's Israeli Biotoken Factory Initiative aimed at designing novel architectural solutions for AI in biology.