Algocell
Bioprocess Intelligence

Subject: **BioMed Abstract: Algocell**

Algocell is an industry pioneer in "Bioprocess 4.0," providing an AI-driven software platform that integrates Hybrid Models and Digital Twin technology to revolutionize bio-manufacturing. Our mission is to eliminate the industry's overreliance on costly, slow, and unpredictable trial-and-error experimentation while enabling complex optimization processes to increase gross margins. To date, Algocell has secured $2.8M in pre-seed funding, led by Good Company VC with support from the Israel Innovation Authority. We are already operating globally, supporting diverse customers across the pharmaceutical (API), food-tech (novel foods), and industrial materials sectors. Our management team combines deep expertise in business leadership, biology, software engineering, and data science, positioning us to lead the transformation of a multi-billion-dollar market.

Core Technology Algocell's core technology is a proprietary AI-powered Digital Twin platform. Unlike traditional black-box AI, we utilize **Hybrid Biological Models** that combine mechanistic engineering principles with advanced machine learning. This unique architecture allows our platform to provide high-fidelity simulations even with small, sparse datasets typical of early-stage R&D. Our value proposition is three-fold:

1. **Accelerated Development:** Dramatically shortening time-to-market by replacing physical trials with *in-silico* simulations.
2. **Predictive Scale-Up:** Minimizing the risks and failures associated with transitioning from lab-scale to industrial manufacturing.
3. **Model-Based Optimization:** Providing predictive guidance during production to maintain optimal cell health and product titer across varied cell types and processes.

Product Profile / Pipeline Our primary product is the Algocell Bioprocess Analytics Platform, a versatile SaaS solution currently being deployed in commercial pilot programs worldwide. The platform has demonstrated its agility by handling a wide range of biological systems, including mammalian, microbial, and yeast-based processes. The pipeline includes specialized modules for:

- **Fast Model Training:** Rapid deployment of predictive models using sparse experimental data.
- **Process Optimization:** Tailored for diverse production modes, including fed-batch and perfusion.
- **Digital Scale-Up Suite:** Focused on technology transfer to CMOs and large-scale facilities.

Business Strategy Algocell employs a multi-tiered revenue model designed for both short-term growth and long-term stability. In the short term, we generate revenue through **commercial pilot programs, professional services,** and initial technology fees focused on high-value bioprocess optimization. In the long term, we transition clients to a **recurring SaaS license model**, providing ongoing access to our Digital Twin platform for continuous production analytics and process

improvement. This "land and expand" strategy allows us to integrate into the client's R&D workflow first, build trust through successful optimizations, and eventually become the standard operating layer for their global manufacturing operations.

What's Next? * R&D: Expanding our library of hybrid models to include complex cell therapies, high-value APIs, and advanced metabolic pathways for industrial materials.

- **Process Development:** Advancing our platform's capabilities to streamline media optimization and feed strategy design, further reducing the time required to lock in robust manufacturing protocols.
- **Organizational Plans:** Doubling our headcount in Rehovot, Israel, focusing on senior AI researchers and bioprocess engineers to support our growing global client base.
- **Financial Plans:** Initiating a funding round in the upcoming year to accelerate global sales expansion and establish a presence in the North American and European biotech hubs.