

## Pharmacology

# Model-Informed Precision Dosing Platform

## Brief Description of Technology

Cloud-based, HIPAA-compliant clinical decision-support platform that brings pharmacometrics and model-informed precision dosing directly to the bedside.

### TECHNOLOGY ID

2016-0317

### BUSINESS OPPORTUNITY

Startup

### TECHNOLOGY TYPE

Digital Health

### PATENT INFORMATION

Provisional Filed

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## Technology Overview

Not all people respond to medications in the same way. Traditional dosing solutions use population-based pharmacokinetic models. Our precision dosing solution uses real-time feedback to create a patient-specific model that informs future dosing. It automatically pulls patient-specific data from the electronic healthcare record and generates model-informed recommendations via an intuitive graphical interface, providing all the actionable information directly to the physician and clinical teams in a comprehensible format from connected devices. Clinicians can track the amount of drug and biomarkers in the body as a dynamic “molecular state,” in vivo, and in real time.

## Applications

Recommends dosing for a variety of conditions that require tightly controlled treatment regimens. Tested in opioids for pain, and dosing for sickle cell disease, inflammatory bowel disease, and allogeneic hematopoietic cell transplantation for non-malignant disorders.

## Advantages

- Designed by clinicians for clinicians (potential for faster adoption and higher utilization).
- Assists clinical workflow by reducing time spent interpreting lab results and ordering.

## Market Overview

Inadequate pain relief and serious side effects from perioperative opioids occur frequently in up to 50% of patients. ~70K-100K Americans have sickle cell disease. ~3 million U.S. adults have received a diagnosis of inflammatory bowel disease.

## Investigator Overview

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