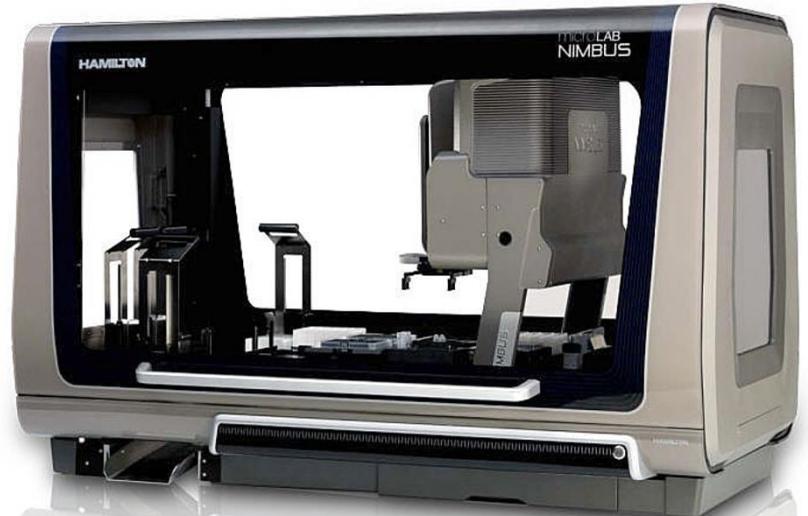


## Revel Early Access Program

High-Throughput Direct Measurement for Fragment-Based Lead Discovery  
Field Effect Biosensing (FEB), an Optics-Free Technique



Nanomed Revel



Hamilton Nimbus HD

Nanomed introduces Revel, a breakthrough high-throughput biophysical platform for fragment-based primary screening. Using an orthogonal electrical sensing mechanism called Field Effect Biosensing (FEB), Revel provides an **11-log dynamic range that goes up to 10 mM** and drastically reduces nonspecific noise, so you can have confidence in your hits.

### Applications

- Binding-level screening.
- Affinity-based rank ordering.
- Rapid assay development.

### Benefits

- Automated run of 576 measurements/day.
- High sensitivity for low affinity interactions.
- Easy, built-in analysis with automatic reference subtraction for reproducible quantitative results.

### How Revel Works

Revel is a 24-channel direct binding system that is fully automated with a 24-hour walkaway run time, designed to be used with a specialized Nimbus HD liquid handler by Hamilton Robotics. Revel enables 24 independent measurements to be taken simultaneously, and easy-to-use, built-in software acquires and analyzes data.

### Revel Features

- 24 independent quantitative measurements for simultaneous analysis of up to 24 targets.
- 576 measurements/day, including analysis.
- Measure up to 10 mM concentrations.
- Analyte size starting at 10 Da.
- Sample volume: 40  $\mu$ L; Target material: 0.5 ng.
- Sample compatibility: Solvents (10% DMSO), detergents.
- Speed of data collection: 2400 data points/minute/channel.
- 8 independent pipetting channels with independent movement in both Y and Z axes (Nimbus HD).
- Footprint: 41" L x 28" W x 48" H (Nimbus HD).
- Temperature range: 15°C – 35°C.

## FBLD and Revel

### Primary Screening Challenges

Fragment-based lead discovery typically involves biophysical screening of proteins against libraries of 3000-5000 low molecular weight compounds. In the early drug discovery phase, false positives can be problematic due to high concentration measurements, high levels of solvents, and nonspecific hydrophobic binding. At the same time, because fragments bind to target proteins with low affinity, it's vital that screening techniques are highly sensitive to detect weak interactions.

### Reduce False Positives and Negatives with Revel

Revel uses an electrical sensing mechanism called Field Effect Biosensing (FEB) that is unaffected by optical impediments like solvents and detergents, enabling dependable results in up to 10% DMSO. The graphene-based biosensor used with Revel is called SCOOH ("Super Amine-immobilization"), which provides a high-density amine-reactive, hydrophilic surface for target immobilization.

### SCOOH Biosensor Advantages

- Flexible immobilization of soluble proteins to the biosensor surface using simple EDC/sNHS chemistry.
- Reduced nonspecific binding with a hydrophilic sensor surface.
- Reduced steric hindrance with polymer linkers that extend binding sites to 10 nm.
- Accurate results for low-affinity interactions with a high density of amine-reactive binding sites for high binding capacity.

## Revel Early Access Program

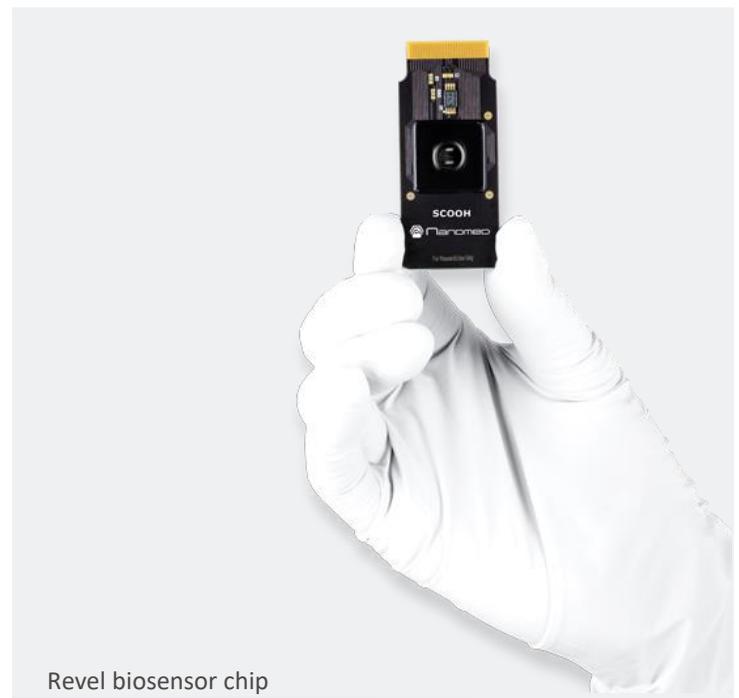
Gain pre-launch access to Revel, a 24-channel automated system that uses patented graphene biosensors to provide orthogonal direct measurements for FBLD. We are looking for experienced researchers with active screening programs for proof-of-product performance studies and valuable early feedback. The limited scale of the Early Access Program will enable the benefits below for select participants.

### Benefits

- Early access to high-quality FBLD data using Revel.
- Training on Revel platform and underlying Field Effect Biosensing (FEB) technology.
- Support from specialized Field Application Scientists to optimize workflow and data analysis for your use case.
- Hardware and software upgrades while in the EAP program.
- Direct feedback channel to Revel product development.

### How to Get Started

Contact Michael Heltzen at [mheltzen@nanomedical.com](mailto:mheltzen@nanomedical.com) to begin an Early Access Partner evaluation.



Revel biosensor chip