

High Sensitivity Point-of-Care System

Xen Biofluidx developed the next generation of high sensitivity, high precision Point-of-Care (POC) platform. This new POC system will be a strong contender in the existing \$18B market. The system will enable immediate decision-making in several disease states currently unmet by the existing POC systems. The system will be used in multiple POC situations such as: Ambulance (cTnl, heart attack), Surgery (intraoperative Parathyroid hormone (PTH)), Doctor's office (high precision Hemoglobin A1c) and other POC needs.

The system provides high sensitivity results, is easy to use, is robust and reliable and delivers equivalent or better results than the hospital laboratory analyzers with low cost of goods.

Synergy of the integrated technologies vastly exceeds the sum of its parts:

- Time-Resolved-Flourescent Signal (TRF) with unique detection technology that enables high signal to noise ratio.
- Proprietary microfluidic disposable cartridge with precise volumes, efficient mixing, and unique fluidic controls.
- Proprietary surface passivation of the detector beads to prevent non-specific binding.
- Proprietary temporal photomultiplier detector (τ PMT) for ultra-high sensitivity measurements.
- Low COGS

Xen Biofluidx

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The image shows a black, rectangular device with a blue cartridge inserted into the front. The device is labeled "Xen Biofluidx system" and "TRF". Various components are labeled with blue lines pointing to them: "post-anodization machining legs and outline", "Anodized black", "stainless steel", "Anodized black", "Anodized blue add-on cap", "post-anodization machining chamber", and "Blue LED (to be tuned based on anodized blue)".

Next Generation Point-of-Care systems

Xen Biofluidx is a San Diego Biotechnology company founded in 2006, specializing in the development of integrated point-of-care systems.

It's team of PhD scientists and experienced engineers apply cutting edge integrated approaches based on assay development, lyophilization and drying, surface chemistry, molecular biology, antibody development, optoelectronic engineering and microfluidic systems.

Xen Biofluidx has an extensive IP portfolio in the Point-Of-Care sector and is currently self-funded.

Xen Biofluidx
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Biofluidx

Portable POC system with performance equivalent to or better than conventional laboratory analyzers

HIGH SENSITIVITY DETECTION SYSTEM

Xen Biofluidx developed a unique reader technology using advanced circuit design to achieve very low noise with low cost electronics.

This system is able to detect TRF signal at its maximum, while completely eliminating background fluorescence.

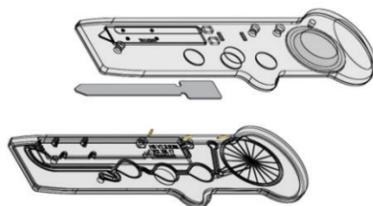
IMPROVED TIME-RESOLVE DETECTION

Xen Biofluidx's new instrument has the capacity to amplify the signal with no change in the background noise. This results in a very high signal to noise detection system.

SIMPLE IN CONCEPT, YET FLUIDICALLY SOPHISTICATED DISPOSABLE CARTRIDGE

Xen Biofluidx cartridge provides:

- Efficient plasma separation
- Efficient sample pre-treatment
- Flexible fluidic control
- Precise reaction volumes
- Efficient active mixing
- High capture capacity solid phase
- Precise temperature and incubation times



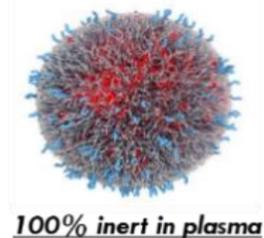
WELL COATED PARTICLES LOW NONSPECIFIC

Xen Biofluidx beads are super-hydrophilic to improve: brownian motion, reaction kinetics, and assay performance.

The Xen Biofluidx beads are coated with multiple polymer layers resulting in the absence of hydrophobic patches and non-specific binding.

The beads' surface has a high density of functional groups with high antibody loading capacity. It provides only covalent attachment therefore presenting a clear advantage over passive adsorption.

Finally, the core of the beads is extremely bright to provide very high assay sensitivity.



100% inert in plasma

STATE OF THE ART INSTRUMENT

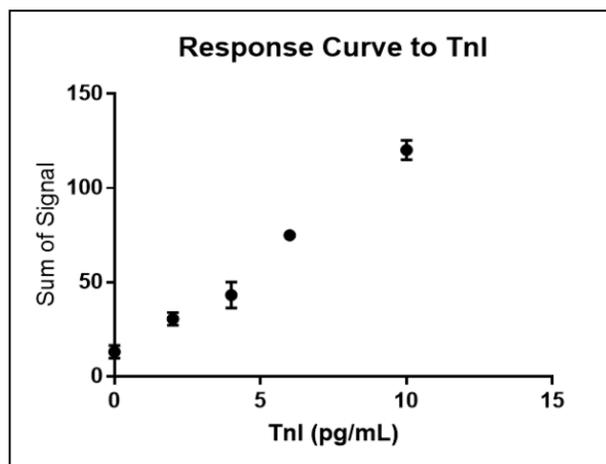
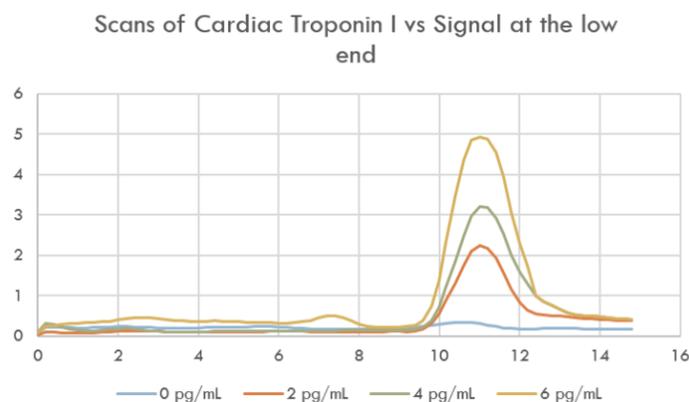
State-of-the-art instrument that integrates the inexpensive cartridge with the desired assay into a smart measuring device with fluidic motion sensors, exact reaction volumes, vigorous mixing and high efficiency analyte capture, resulting in a POC system performance that is comparable or better than any conventional laboratory analyzer.

The tests are performed with a small and portable size instrument that enables immediate decision-making for use in ambulance, surgery room, doctor's office and the field.



Time to results	> 20 minutes	< 5 minutes
Location	Central Lab	Operating Room
Cost per test	\$\$\$	\$

EXAMPLE: MEASURES CARDIAC TROPONIN I (CTNI) AT LESS THAN 2.0 PG/ML



Xen Biofluidx system is effective and easy to use.

It does not require instrument calibration as it will automatically perform optical calibration. There is also no cartridge calibration required.

No need for sample preparation – just apply blood directly onto the cartridge!

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