



Turning Science Into Solutions

Advancing Biodosimetry Technologies

Sept 2021

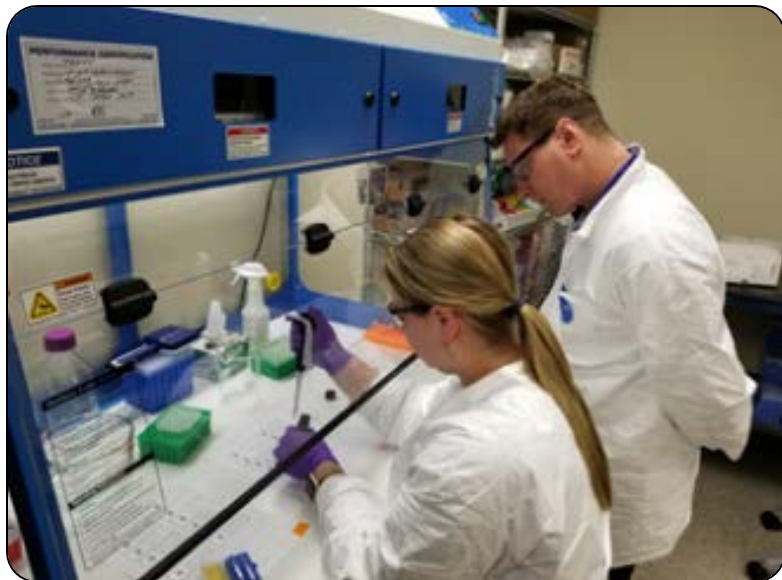
About Us

Mission → Turning Science Into Solutions



What we do: Technology development to strengthen national security and emergency preparedness

- Partnership-based model to apply emerging technologies to government priorities
- Primary focus is development of biodosimetry and R/N response technologies



Corporate Highlights

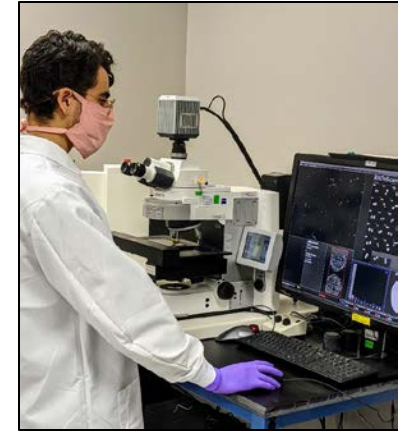
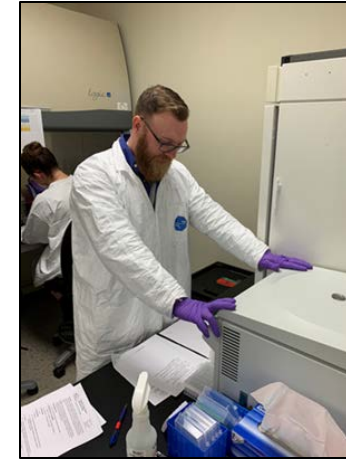
- Founded to perform advanced development of radiation diagnostics
- Team experienced in assay & instrument development, verification, validation, clinical and non-clinical research & deployment
- Extensive network of biodosimetry development partners
- Small business with established program management, contracts, and subcontracts management systems needed for USG contractor
- FDA-compliant Quality Management System
- Federal Acquisition Regulation compliant accounting system

Our People

ASELL's team brings a diverse skillset with deep biodosimetry experience



- Experienced team with wide breadth and depth of experience in technology development
- > 75% with advanced degrees
 - Molecular biology, biochemistry, chemical engineering, mathematics, biomedical engineering, systems engineering, electrical engineering
- Expertise:
 - Protein, molecular, and cell-based assay development, verification and validation
 - Algorithm development/machine learning
 - Test and evaluation
 - Ionizing radiation
 - Large and small animal models
 - Systems engineering & automation
 - Clinical research
 - Program management
 - Federal contracting
 - Regulatory affairs
 - Quality assurance



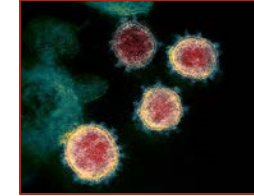
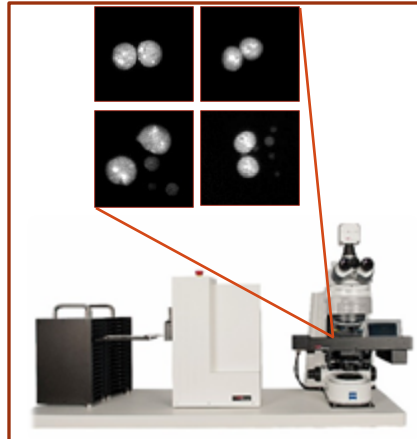
Example Dosimetry Initiatives

Meeting National Security Objectives



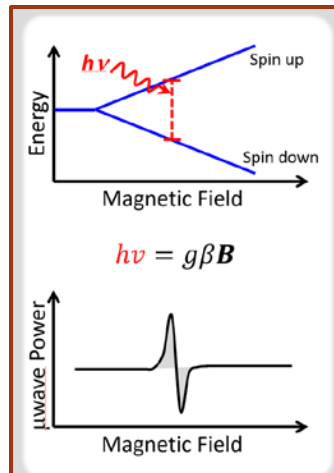
Quantitative Biodosimetry

- Quantitative, high-throughput diagnostic test (400,000 tests in 7 days) using cytokinesis-block micronucleus assay without lab-specific calibration curves
- Innovations in chemistries, cell culture formulations, image analysis and data processing algorithms
- Technology development, clinical and non-clinical studies/validation, regulatory submissions



Triage Biodosimetry

- Evaluating soluble, cell surface, and intracellular protein and hematologic biomarkers in NHP and human models
- Deployable instrument with unique imaging technology and neural network-based image processing requiring only single fingerstick sample
- Integration of instrument and biomarkers with novel biodosimetry algorithm will enable rapid, qualitative field screening for radiological exposure



Novel Electron Spin Resonance Dosimetry

- Supporting innovative spectrometer and associated technology development
- Overcoming challenges of background signatures, differentiating mix-field radiation, and rapid measurement of low dose radiation
- Leading to field-portable ESR technology for triage applications

Our Approach to TEI-REX



- Current assessment suggests the solution will likely require integration of multiple biomarkers and technologies
- Actively engaging our network of biodosimetry collaborators and evaluating emerging biomarkers and detection technologies
- Seeking interested technology partners with emerging biodosimetry solutions with promising approaches to meet specific TEI-REX objectives
- If you wish to discuss how we might collaborate, please contact Michael Ehret at mehret@asell.com

ASELL

The logo consists of the word "ASELL" in a bold, black, sans-serif font. The letter 'S' is replaced by a stylized DNA double helix. The two strands of the helix are black and red, with the black strand being thicker than the red one. The helix is positioned vertically, with the top of the 'S' at the top of the helix and the bottom of the 'S' at the bottom of the helix.

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