# RADIATION BIODOSIMETRY UPDATE

Rodney L. Wallace

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*Resilient People. Healthy Communities. A Nation Prepared.*

# Radiation Biodosimetry Program

**Objective: Develop rapid, accurate FDA-cleared biodosimetry diagnostic assays/systems to inform patient management, improve health and psychosocial outcomes, and save lives.**

Two types of biodosimetry test are under development:

- **Point of Care Triage Screening Tests** to discern individuals needing medical evaluations from those who can evacuate
- **High Throughput Laboratory Screening Tests** to report the absorbed dose an individual received and inform further care



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# High Throughput Laboratory AR&D Biodosimetry Projects

- Active Projects:
  - Arizona State University/ ThermoFisher
  - Northrop Grumman/ MetaSystems
  - Duke University / DxTerity/ ThermoFisher

- All Entering Verification / Analytical Testing Phase

# High Throughput Laboratory Project Bio-Shield Contract(s)

- Solicitation Published on June 6, 2016
  - Product Verification / Clinical Testing
  - Acquisition of Initial Stockpile
  - Maintenance of Stockpile through 2026
- Contract Awards Made to 2 Teams on September 30, 2016
  - MRI/ASU/ThermoFisher
  - DxTerity/Duke/ThermoFisher

# Point of Care Biodosimetry AR&D Projects

- Active Projects:
  - SRI International
  - Meso Scale \
- Project Bio-Shield Solicitation Envisioned later in FY2017





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# Continuing Biodosimetry Interests

BAA 16-100-SOL-0001 Area of Interest Six:

- 6.1 **Self Assessment Tool**:

  Development of a dosimetry self-assessment tool to determine if an individual has been exposed to ionizing radiation at a dose equal to or greater than 2 Gy.
- 6.2 **Biodosimetry Systems:**

  BARDA is interested in more advanced development of rapid point- of-care diagnostic assays and/or a centralized high-throughput assay systems
- 6.3. **Dicentric Chromosome Assay**:

  Development of an improvement on the current dicentric chromosome assay (DCA) in terms of ease of use, time for performance, statistical certainty of dose, improved dose range, and biomarker lifespan.