## 2013 State R&D Plan

Research areas and cross-cutting disciplines of strategic importance to Arkansas in 2013 include:

**Advanced Materials, Technology, Defense and Manufacturing Systems** with emphases on:

- Electronics, Nanotechnology, Photonics, and other Advanced Technologies.
- Smart sensor technology.
- Aeronautics and Aerospace Applications and Manufacturing.
- Advanced manufacturing.

**Energy and Environmental Sciences** with emphases on:

- Advanced Thermal Technologies and geotechnologies.
- Sustainable and Renewable Resources.
- Ecotoxicology and Environmental impact.

**Biotechnology, Bioengineering, Agriculture and Life Sciences** with emphases on:

- Basic Biomedical and Clinical Research (Particularly in the areas of Oncology, Psychiatric and Neurological Disorders, Geriatrics, Obesity and Metabolic Diseases, Infectious Diseases, Radiation Protection, Gynecology and Obstetrics, Ophthalmology, and Cardiovascular Diseases).
- Public Health.
- Genomics-based Personalized Medicine.
- Evidence Based Medicine and Patient-centered Outcomes Research.
- Proteomics and Structural and Chemical Biology.
- Development of Bioactive Compounds (Drug Development).
- Plant Biotechnologies.
- Sustainable Agriculture and Crop Protection.
- Toxicology and Regulatory Sciences.
- Food Safety and Food Protection.
- Telemedicine and Bioinformatics.

**Information Technology** with emphases on developments in:

- Data, Information Quality and Information Systems.
- Cyber Security.
- Informatics and Applications.
- High-Performance Computing.
- Communications Infrastructure.