

Contact: Andrea Anania

EQUIPMENT PURCHASE – UNIVERSITY OF IOWA

Action Requested: Consider approval for the University of Iowa to purchase a General Electric MR950 7T (Tesla) Whole Body Magnetic Resonance Imaging (MRI) Scanner for a total cost of \$6,970,000.

Executive Summary: Equipment purchases at the Regent institutions costing more than \$1 million are required by Board policy to be approved by the Board of Regents.

Description of the Equipment

The General Electric MR950 7T Whole Body Magnetic Resonance Imaging Scanner (Scanner):

- ◆ Will provide ultra-high field whole body scanning capabilities for MRI research;
- ◆ Is state of the art and includes coils for multi-nuclear imaging, a gradient and multiple radio frequency coils for small animal imaging, and is equipped with parallel imaging for both transmit and receive; and
- ◆ Will be housed in the new Pappajohn Biomedical Discovery Building currently under construction. The Scanner will be integrated into the Iowa Institute for Biomedical Imaging, the University of Iowa's Clinical and Translation Science Award, and the National Cancer Institute funded cancer center.

Justification of the Need for the Equipment

The University reports that the Scanner:

- ◆ Is being acquired to support the research efforts of 33 funded National Institutes of Health (NIH) investigators from five colleges (Medicine, Engineering, Public Health, Liberal Arts and Sciences, and Business) with over 40 NIH grants. This group of researchers has a wide range of interests including: functional brain mapping, high-resolution anatomical imaging of the brain, spectroscopy of the brain, pH dynamics, orthopedic imaging, evaluation of tumor response to treatment, and cardiovascular imaging;
- ◆ Will significantly advance research efforts at SUI by allowing higher spatial resolution images to be acquired, increased signal to noise ratio, faster scan times, increased spectral resolution for spectroscopic studies, and sodium images to be acquired;
- ◆ Will be the first ultra-high field whole body scanner in the state and one of the first actively shielded 7T scanners to be installed in the United States;
- ◆ Will position SUI to meet the continuing growth in MRI research studies for the next decade; and
- ◆ Will enhance several of SUI's clusters including aging, obesity, and genetics.

Any Known Alternatives to the Equipment Proposed

The University reports that: (1) three major medical vendors participated in a competitive process; (2) proposals for the system, warranty, and research support were submitted to an evaluation committee for review and scoring; and (3) based on cost, functionality, and overall value, General Electric Company Medical Systems was the selected vendor.

Estimated Cost and Source of Funding

The cost of the General Electric 950 7T MRI scanner is \$6,970,000. The source of funding is an NIH High-End Instrumentation Grant awarded to Dr. Vincent Magnotta in the Department of Radiology at the University of Iowa Hospitals and Clinics.

Board Policy: Chapter 7.06B(12) of the Regents Policy Manual requires that:

- ◆ Equipment costing more than \$1,000,000 must be submitted to the Board for approval; and
- ◆ Requests submitted to the Board Office for approval must include the following information:
 - ◆ Description of the equipment;
 - ◆ Justification of the need for the equipment;
 - ◆ Any known alternatives to the equipment proposed; and
 - ◆ Estimated cost and source of funding.