BOARD OF REGENTS **AGENDA ITEM 3b**
STATE OF IOWA **MARCH 24, 2010**

Contact: Andrea Anania

EQUIPMENT PURCHASES

Action Requested: Consider:

- Approval for SUI to purchase an AXIOM Artis Zee Single Plane Angiography x-ray system for a total of $1,134,649;
- Ratification of the Executive Director's February 22, 2010, emergency approval for ISU to purchase a Biochemistry/Biophysics and Molecular Biology – 7 Tesla Fourier transform ion cyclotron resonance mass spectrometer for a total of $1,100,085.

Executive Summary: Equipment purchases at the Regents institutions costing more than $1 million are required by Board policy to be approved by the Board of Regents. The Executive Director may approve emergency purchases exceeding $1,000,000 to be followed by Board ratification.

UNIVERSITY OF IOWA

AXIOM ARTIS ZEE SINGLE PLANE ANGIOGRAPHY X-RAY SYSTEM

Description of the Equipment
The University reports that the proposed equipment:

- Incorporates new radiation reduction technology, which embodies the "As Low As Reasonably Achievable" principle. For example, a tremendous advantage of the new Siemens system is the ability to digitally store the last fluoroscopic sequence rather than acquire a cine image which requires a larger radiation dose;
- Features: (1) Combine Applications to Reduce Exposure package (CARE package), which further reduces radiation exposure; and (2) an improved digital imaging system that utilizes flat panel detectors; and
- Provides sharper and higher resolution images.

The Siemens AXIOM Artis Zee Single Plane Angiography x-ray system will be installed in the Interventional Radiology Lab located on the third level of the John Colloton Pavilion and will replace a Siemens Angiography unit that was purchased in 1999.

Justification of the Need for the Equipment
The University reports that the existing system is:

- Exhibiting signs of significant mechanical wear and, more importantly, a significant reduction in image quality; and
- Utilizing analog technology in the acquisition of fluoroscopic and radiographic images; these components are in need of replacement. Replacement would represent a significant investment into a system that: (1) has been out of production for quite some time; and (2) is becoming more difficult to procure replacement parts.

The University reports that the new system will:

- Overcome problems with the present system and enhance patient and staff safety; and
- Significantly reduce radiation exposure, which is quickly becoming a high profile issue within the medical community.

Any Known Alternatives to the Equipment Proposed
The equipment pricing is based on the Strategic Alliance Purchasing Agreement between Siemens Medical Solutions USA, Inc. and The University of Iowa. The University of Iowa Hospitals and Clinics has standardized on Siemens equipment due to the advantages gained in equipment pricing, maintenance, and training.

Estimated Cost and Source of Funding
The cost to purchase the AXIOM AZSPA x-ray system is $1,134,649. The source of funding is the University of Iowa Hospitals and Clinics capital equipment funds.

IOWA STATE UNIVERSITY

Biochemistry/Biophysics and Molecular Biology – 7 Tesla Fourier Transform Ion Cyclotron Resonance Mass Spectrometer (FTICRMS)

Description of the Equipment
The University reports that the FTICRMS is:

- Comprised of a mass spectrometer coupled with a high-intensity (7 Tesla) magnetic cyclonic trap, analytical software, and a computer control system; and
- Is used: (1) to determine accurate mass to charge ratios in ions; and (2) in the study of macro molecules like proteins which contain multiple charges.

Justification of the Need for the Equipment
The University reports that:

- The equipment is needed to meet the research requirements of a grant from the National Science Foundation; and
- An instrument configured for this specialized application is currently not available at ISU.

Any Known Alternatives to the Equipment Proposed
Fourier transform ion cyclotron resonance mass spectrometers are the only instruments capable of determining mass to charge ratios with great precision, a requirement of this research project.

After a competitive bid, the offer from Bruker Daltronic's was determined to be the most compliant bid to meet the needs of the Center for Biorenewable Chemicals.

Estimated Cost and Source of Funding
The cost of the FTICRMS is $1,100,085 and is entirely funded through a grant from the National Science Foundation.

Board Policy: Chapter 7.06B(12) of the Regent 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.