PERALTA COMMUNITY COLLEGE DISTRICT ITEM #

Board of Trustees Agenda Report
For the Trustee Meeting Date of September 16, 2008

ITEM TITLE: Consider Approval to Award Purchase Orders to Leica Microsystems and JH Technologies, for the Purchase of Confocal Microscope Systems (Microscopes) for Merritt College.

SPECIFIC BOARD ACTION REQUESTED: Approval to issue two purchase orders for the purchase of two Microscopes, one Laser Scanning Confocal Spectral Imaging Systems from Leica Microsystems in the amount of $244,208.40, and one Spinning Disc Confocal System from JH Technologies in the amount of $204,660.03; for a total purchase of $448,868.43.

ITEM SUMMARY: (PLEASE *DISCUSS THIS ITEM)*
A formal bid (Bid 08-09/02) was conducted for Confocal Microscope Systems for Merritt College, in which bidders were asked to quote on any of three styles of Microscopes (Items No. 1, No. 2 and No. 3 below). Because of the highly technical nature of the microscopes, and because Merritt College is training students for Genome Centers, the bid specified that Merritt College will be the sole determinant if the product meets its specifications (and the college's needs) and which combination of Microscopes it would purchase.

Bidder	Item No. 1 Total Price	Item No. 2 Total Price	Item No. 3 Total Price
Leica Microsystems	No Bid	**$244,208.40**	No Bid
JH Technologies	$229,289.73	No Bid	**$204,660.03**
Nikon Inc.	$272,215.74	$195,940.17	$329,423.49

After review by the college, Item No. 2 from Leica Microsystems, and Item No. 3 from JH Technologies, best met the college's needs and specifications.

BACKGROUND/ANALYSIS:
The following are the reasons Merritt College has provided as to why the selected Microscopes meet the specifications, and why the Leicia Microsystems and JH Technologies offers are superior to the other bids received by the District:

The Merritt Microscopy program was established in response to industry needs in order to train students for employment in life sciences growth fields. The advisory board has determined that a key to the marketability of our students is their breath of knowledge and their ability to adapt to a variety of brands and techniques.

The bid responses were carefully studied by Merritt biology faculty and non-partisan members of the advisory board. It was determined that the following combination of choices is optimal for training our students.

Item No. 2 Leica Microsystems, SP5 Confocal,	**$244,208.40**
Item No. 3 JH Technologies, Spinning disc system	**$204,660.03**
Total:	**$448,868.43**

As stated in the bid, Merritt is choosing to purchase only two systems, in order to stay within the budget that was approved by the Board on February 26, 2008.

Justification for Item No. 2 Leica Microsystems, SP5 Confocal: This is a powerful, versatile imaging system that is fully responsive to the bid specifications. Although it is not the lowest quoted system for the item, it is the most thoroughly responsive to the specifications, and it provides a far greater density of value than the other respondent. This is a system that is deeply discounted by the corporation in an effort to ensure that our students receive training on a Leica system. At the moment, Merritt has systems from the other major manufacturers, but no Leica systems. Purchase of this system would allow students to master all of the major brands of microscopes during their training. The SP5 is a top-of-the-line microscope that will attract research collaborators and paying users, thus greatly facilitating student training, internships, and contract education, and increasing our grant possibilities.

Comparison of Item No. 2 Leica Microsystems Sp5 Confocal vs. Nikon, Inc. C1 Confocal: The Leica SP5 has 6 lasers while Nikon system only has 5 lasers. The lasers determine the fluorophores that can be visualized on a system, so they are one of the key components of an imaging system. A six laser system is substantially more powerful and versatile in terms of the specimen options and spectral range. Leica SP5 uses a prism-based system for spectral imaging. Leica is the only manufacturer that uses a prism-based system, since it holds the patent. Prism-based spectral imaging is widely acknowledged to provide far more accurate spectral imaging for multiplexing. Accuracy is a key function of spectral separation, so many researchers argue that prism-based spectral imaging constitutes the "real" spectral system. The Nikon uses an older solution, diffraction grating based spectral imaging.

Leica SP5 allows for significantly finer spectral analysis with step separation of only 3 nm, vs. the 10 nm step separation for the Nikon C1. This is critical in imaging multiply stained specimens, as is most common in industry and research. Furthermore, the SP5 has the typical Leica lambda scan ability. Leica SP5 also has a 8 channel AOTF, allowing for greater laser versatility. Leica SP5 has one more detector channel than the Nikon C1, allowing for simultaneous transmitted light detection with 3 fluorescence channels.

Also, in the Nikon C1 it is not possible to adjust the gain and offset individually for separate lasers, thus inhibiting optimal sequential acquisition. At the training level, it is very important to have the students compare sequential acquisition to simultaneous acquisition, but that would be difficult to do on this imaging system.

The Nikon C1 allows for only 4 pinhole diameters: for training purposes, the Leica adjustable pinhole system is preferable since many airy disc/wavelength optimization exercises require matching the pinhole to the wavelength and to specimen parameters.

Justification for Item No. 3: JH Technologies, Spinning Disc System: This bid represents the lowest bid received by the District. A spinning disc confocal is optimal for live-cell imaging. The acquisition protocols are very different from those of a fixed specimen. The resurgence of microscopy jobs is driven in large part by use of transfected fluorescent proteins, such as GFP, in living organisms, so it is imperative that our students be trained on a system optimized for live-cell imaging.

Furthermore, many of the components are interchangeable with the SP5 system, so we have a backup if one of the systems is in need of repair. Although we do not anticipate issues with the reliability of the systems, since we have a limited amount of time with our students, it is imperative to ensure that we always have at least one operational system and the interchangeability of components will facilitate this.

ALTERNATIVES/OPTIONS:
None

EVALUATION AND RECOMMENDED ACTION:
Recommend awarding a two Purchase Orders, one to Leica Microsystems in the amount of $244,208.40, for the Laser Scanning Confocal Spectral Imaging Systems, and one to JH Technologies the amount of $204,660.03; for the Spinning Disc Confocal System, for a total purchase of $448,868.43.

SOURCE OF FUNDS (AND FISCAL/BUDGETARY IMPACT):
Measure A, as approved by the voters in Peralta's constituency and authorized under Resolution 05/06-45, Exhibit A-1, Merritt College "Equipment, technology upgrades, and facility and classroom improvements for the college's following programs: Science, Child Development, Communications, English as a Second Language at the Fruitvale Education Center, Art, Ceramics, Landscape Horticulture/Design, Learning Center, Liberal Arts, Music, Physical Education/Athletics, and Radiologic Science."

OTHER DEPARTMENTS IMPACTED BY THIS ACTION (E.G. INFORMATION TECHNOLOGY):
YES _____ **NO** X

COMMENTS:
No additional comments.

WHO WILL BE PRESENTING THIS ITEM AT THE BOARD MEETING?
Vice Chancellor Ikharo

DID A BOARD STANDING COMMITTEE RECOMMEND THE ITEM? YES _____ **NO** X
IF "YES", PLEASE INCLUDE THAT INFORMATION IN YOUR SUMMARY.

PLEASE ACQUIRE SIGNATURES IN THIS ORDER:

DOCUMENT PREPARED BY:

Prepared by: Sadiq B. Ikharo **Date:** September 16, 2008
Dr. Sadiq B. Ikharo
Vice Chancellor of General Services

DOCUMENT PRESENTED BY:

Sadiq B. Ikharo **Date:** September 16, 2008
Dr. Sadiq B. Ikharo
Vice Chancellor of General Services

FINANCE DEPARTMENT REVIEW

__X__ Finance review required _____ Finance review *not* required

If Finance review is required, determination is: ✓ Approved ____ Not Approved

If not approved, please give reason: _____

Signature: Thomas Smith **Date:** 9.9.08
Thomas Smith
Vice Chancellor for Finance and Administration

GENERAL COUNSEL (Legality and Format/adherence to Education Codes):

__X__ Legal review required _____ Legal review *not* required

If Legal review is required, determination is: X Approved ____ Not Approved

Signature: **Date:** 9/9/08
Thuy T. Nguyen, General Counsel

CHANCELLOR'S OFFICE APPROVAL

__X__ Approved, and Place on Agenda ____ Not Approved, but Place on Agenda

Signature: **Date:** 9/8/08
Elihu Harris, Chancellor