

**WAGNER-PEYSER (7b)****BIOTECHNOLOGY AND LIFE SCIENCES RESEARCH WORKFORCE INITIATIVE****Activities and Performance Measure Report****Report for the month ending November 20, 2006.****Narrative Summary of Performance:**

The memorandum of understanding (MOU's) have been distributed (by mail and e-mail) across the state of Texas to known industry cluster employers, EDP's, NPO's, and education institutions inviting these entities to join the consortium. This project is on track; the web-portal is active, see Attachment B for additional information. The Research about the industry cluster is progressing; see Attachment C for update. In addition, development is being made toward the establishment of meeting short term and long term training and education at the Baccalaureate level; see Attachment D for further information.

**SECTION 4 - Award Specific Requirements**

- 4.1 The Grantee shall be responsible for all performance under this award.
- 4.2 The Grantee shall establish a Memorandum of Understanding (MOU) between consortium partners including, but not limited to biotech/life science employers, Workforce Development Boards, education and training institutions, and local and State agencies with an interest in the biotech/life sciences field.
- 4.3 The Grantee shall complete a needs assessment of biotech/life science industries to:
  - Explore the issues and alternative ways of identifying skills, education and training needs in dynamic spot markets as part of Alliance activities;
  - Develop and test new models and/or proxy methods of assessing skills requirements in highly dynamic labor markets with an piloting initial focus only on the Houston Region;
  - Research and document implications of rapidly changing labor markets for other workforce development processes including career exploration, career planning, educational planning, workforce development, job matching, career management, and continuing education.

**SECTION 5 – Activities and Performance Measures**

| Deliverables Description   | Deliverable Target | Year to Date Performance   | Deliverable Due | Date Deliverable Completed |
|--|--------------------|--|-----------------|----------------------------|
| 5.1 Establish a training and resource consortium composed of life science employers, universities, community colleges, the Texas Workforce Commission and other organizations  | 1                  | Continued networking with employers, economic development and education institutions. Initial distribution of invitations sent by 02/28/06. (see Attachment A) | 2/28/06         | 02/28/06                   |
| 5.2 Establish an internet web portal as an information resource and clearinghouse in support of the Project  | 1                  | Initial web portal published on March 1, 2006. Platform and Port # being upgraded on 03/15/06. (see Attachment B)  | 2/28/06         | 02/28/06                   |
| 5.3 Submit to the Agency contract manager and consortium partners a report detailing: <ul style="list-style-type: none"> <li>❖ Results of the assessment of biotech/life science industries identifying;</li> <li>❖ Possible approaches to industry skills assessments in highly dynamic labor markets such as biotech;</li> <li>❖ Design and pilot testing of new approaches to identifying industry skills requirements in rapidly changing industries;</li> <li>❖ Results of pilot test in Houston region;</li> <li>❖ Discussion of implications for educational curriculum, workforce and economic development practices;</li> <li>❖ Suggestions for further research;</li> <li>❖ Best practices, and</li> <li>❖ Available educational programs</li> </ul> | 1                  | (See Attachments C & D)  | 8/31/06         | 10/30/06                   |

Name of Person Completing Report: Christopher L. Baca

XC: Fauzia Aziz

## Attachment A

This project consists of four interwoven components:

- The establishment of an industry cluster web portal for the purpose of disseminating information regarding career and internship opportunities, industry trends, a forum for dialogue regarding the operational aspects of industry cluster workforce issues, including grant strategies, education program issues such as curriculum, lab manual, and assessment materials, and work toward developing a continuum of education and training programs for new and the incumbent workforce in support of the biotechnology and life sciences research industry cluster.

- **CLiST Consortium**

- Recruitment of members from 4 primary areas: industry cluster employers, EDO & NPO's, service and support providers, education institutions including independent school districts, college and universities to address industry cluster workforce supply and demand issues.
- Currently there are **67** organizational members in the CLiST C. See web-portal for consortium members: <http://www.texasbiotech.org/web/guest/consortium> . During the past 30 days, we welcomed four new members to the Consortium including: The Houston Advanced Research Center (HARC), Nanotox, Inc., The Texas Business and Education Coalition (TBEC), and the HCCS West Houston Center for Science and Technology.

| <b>Category</b>    | <b>Number of Member Organizations</b> |
|--------------------|---------------------------------------|
| Accelerator        | 3                                     |
| Biotech            | 13                                    |
| College            | 12                                    |
| ISD                | 1                                     |
| University         | 9                                     |
| Research Institute | 4                                     |
| EDO/ EDP           | 11                                    |
| Service            | 4                                     |
| Support            | 9                                     |
| Pre-Venture        | 1                                     |

Project impact of success of milestone deliverables for the remaining period of the grant:

- Broader collaboration throughout the state to address the development of a continuum of education and training programs for new and incumbent workforce on behalf of the biotechnology and academic life sciences research industry cluster.

- **CLiST Branding** with the Minor Design Group continues. This new look will be applied into the web-portal and used for brochures and presentations, and other consortium materials.
- **The Center and College of Technology** have been participating regularly in the weekly Rice Alliance Life Science Entrepreneurship and Mentoring Series, as well as other monthly networking meetings.
- The Center has extended its community service outreach by meeting with the HISD, Pearland ISD, Alvin ISD and Bay City ISD. Regular planning meetings are ongoing with the CATE programs of each ISD to prepare for the launch of CATE instructor training to begin in January.
- **The Center for Life Sciences Technology is working through the College of Technology in order to fill vacancies on the Board of Advisors of the Center.** To date two prominent visionaries have agreed to participate on the Center Advisory Board: Mr. Tom Kowalski of the Texas Healthcare and Biotechnology Institute, and Dr. Martin Lindenberg of AlphaDev.
- Consortium recruiting efforts continue each week with mailings, email, and phone follow-up activity. The **new membership certificate** is now developed and the 67 consortium members will soon receive theirs.
- The Center continues to be active in Texas Workforce Commission activities, especially the Biotechnology and Life Science Research Cluster Committee. The Center is partnering with the Texas Business and education Coalition to affect the integration of discussion and planning which will affect the State's ISD programs as they implement the Achieve Texas program in the areas of Biotechnology and Advanced Technology and Manufacturing.
- The Center took part in the Texas Association for Community Service and Continuing Education program entitled: Closing the Gaps...Through Collaboration. While involved in this program, the Center participated in several discussions about the Texas Two Step program and its application to the College of Technology at the University of Houston, and the new baccalaureate program in biotechnology being developed.
- The Center is also working with the UH and CoT leadership to expand the applied biotechnology research as a central hub to the new cluster research of the university.

#### **Planned for next month:**

- Continue to network and build the Consortium.
- Expand ideas for phase three of the Web-portal programming, and submit to the Wagner Peyser Office.
- Recruit additional CLiST Advisory Board Members.
- Expand our outreach with innovative new programs. The THBI has agreed to partner in a fundraising effort to build a mobile biotechnology laboratory for ISD outreach. Discussions with the Texas Education Agency and others have begun. The idea is to develop a bigger and better mobile biotechnology laboratory, for Texas students, than exists currently based on best practices and a collaborative design.

## Attachment B

### Web-Portal

( [www.Texasbiotech.org](http://www.Texasbiotech.org) )

#### Portal Status

1. **Web portal content updated**

The portal web content continues to be updated, mostly in the areas of Resources. We have added a section for Career Decision Making that includes a link to Oscar, the Occupation and Skill Computer Assisted Researcher from the TWC among others.

2. **Development of portlets**

Cathy Burkholder's team has finished some of the branding and the portlets for the new look and feel and capabilities of the portal. They have committed to November 30 as a deadline to have their branding and initial portlet work completed.

3. **Page Scraping**

We have found an experienced outside consultant to help us with the page scraping tasks. Based upon his suggestions, we have switched our approach to using a product call Screen-Scraper and have written scripts for scraping a biotech site, with more to come. We are doing this also in conjunction with the use of the HR-XML standard ([www.hr-xml.org](http://www.hr-xml.org)) that is widely used for HR related tasks, including job postings and resume matching. This has made our approach more standardized and provides a more stable platform with which to develop future capabilities.

4. **Equipment and Newsletter**

We are in dialog with the UH webmaster about development of the CLiST newsletter and with VWR about the proper approach for acting as an affiliate for VWR equipment sales. Neither of these have been finalized, however.

#### To Do Items

1. Continue updating web content
2. Install new branding when Cathy's group finishes the template
3. Install job portlets and collect job data
4. Complete agreement with VWR and UH webmaster concerning equipment and newsletter tasks, respectively.
5. Finalize page scraping approach and write scripts for automated job data collection for the major biotech employers in Texas

## **Attachment C**

### **Research Project**

#### **Current activities**

- ✓ Report is complete and submitted to Minor Design for final layout.
- ✓ Upon receipt of the formatted report, I will do a final proof check, and submit to you via e-mail.

## **Attachment D**

### **Curriculum Development – Workforce Training**

#### **Training Programs:**

- Meetings with Dr. Keral Petrak, V. P of Manufacturing, Agennix to discuss Good Laboratory Practice. Discussed Course description, Course objectives and Course outline. Dr. Petrak helped in the development of all three.
- Preliminary outline for Good Clinical Practices developed.
- Continue developing graphics for Biotechnology Techniques course. Some graphics were more time consuming than others.
- Developed assessment for Biotechnology Techniques.
- Developed new chapters for Good Manufacturing Practices.
- Continued discussions with Cathy Hanchet, Introgen Therapeutics and collecting material for GCP course
- Meeting with Dr. Gunasekara UHV to discuss biotechnology programs

#### **B.S. Biotechnology Program**

- Attended workshop conducted by Dr. Peggy Maki on Assessment in higher education. Developed preliminary strategy for assessing objectives of the Biotechnology Program
- Lengthy discussions with Dr. Larry Williams on the undergrad program approval process
- Meeting with Dr. Wales to discuss outline of lab modules, rough drafts of two labs developed
- Attended UH faculty showcase, presentations by faculty on innovative methods of teaching.

#### **Sustainability**

- Lengthy discussions with the National Science Foundation on the CCLI phase I grant.
- Submitted grant for IRB approval.
- Received IRB approval for NSF grant
- Submitted revised budget to NSF
- Awarded NSF grant, CCLI phase I, this was a highly competitive solicitation only 100 of the 907 proposals were awarded. This award was for developing student learning and assessment into the existing and two new biotech courses. PI: Rupa Iyer, Ph. D.

#### **Other**

- Processing consulting contract for the TWC grant.

## **Activities for Next Period**

- Prepare Biotechnology Techniques for on line delivery
- Prepare Biotechnology Techniques for review by Industry Advisory Committee.
- Discussions with Industry to develop GCP and GLP course
- Continue developing course content for GMP
- Work on the rough drafts of laboratory modules.