

# Idaho Incubation Fund Program

## Bi-Annual Progress Report Form

Proposal No. \_\_\_\_\_  
Name: Dr. Jon Van Gerpen  
Name of Institution: University of Idaho  
Project Title: Ultrafast Fermentation

**1. Summary of project goals/milestones for the period just completed, accomplishments for the period just completed, and plans and goals for the coming quarter:**

The goal for the first half of the project was to design and build a larger scale fermenter for the use of biocatalyst beads (BioEx beads) for fermentation and to design and build a commercial BioEx beads maker.

The larger fermenter has been built and tested with the use of BioEx beads (Figure 1). A prototype of a commercial BioEx beadmaker has also been made (Figure 2). It was successfully tested in a commercial environment at a brewery at Ketchum, ID.

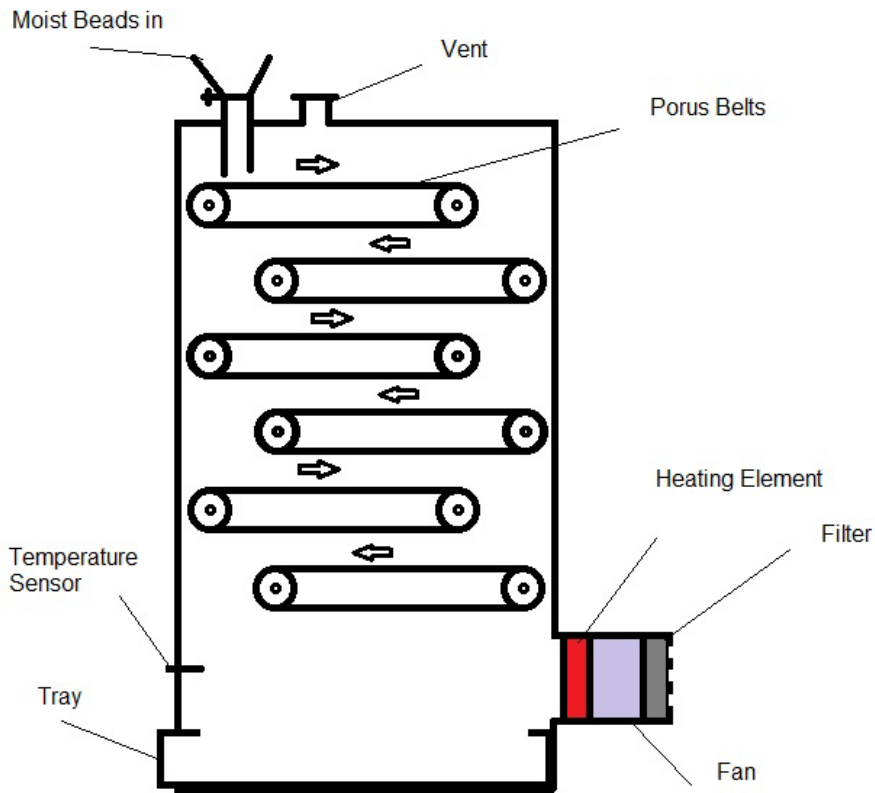
The next step is to develop a conveyor belt drying system for drying beads. This will integrate with the beadmaker and will produce dried beads which will be ready for packaging. The flowsheet of the dryer is shown in Figure 3.



**Figure 1:** Pilot scale sprinkling type fermenter



**Figure 2:** BioEx beadmaker



**Figure 3:** Conveyor belt dryer for BioEx beads drying

**2. Provide a summary of budget expenditures for the period just completed:**

As of the end of November, the latest period for which data are available, \$10,250.25 has been expended for personnel costs and \$915.26 for supplies.

**3. List patents, copyrights, plant variety protection certificates received or pending:**

None

**4. List invention disclosures, patent, copyright and PVP applications filed, technology licenses/options signed, start-up businesses created, and industry involvement:**

Invention disclosure 1 "Concentrated Biocatalyst immobilization for ultrafast fermentation and other uses" was submitted to Office of Technology Transfer, University of Idaho on February 21, 2012.

Invention disclosure 2 "Bioreactor for Encapsulated Bead Fermentation" was submitted to Office of Technology Transfer, University of Idaho on May 1, 2012.

Start-up business "MuPor Technologies" [www.muportech.com](http://www.muportech.com) created. The option agreement was signed with MuPor Technologies in October 2012

**5. Include funding burn rate:**

75% of the funds remain with 58% time remaining. But since the project did not actually start until August, we are on track to finish within budget.

**6. Any other pertinent information:**