## Protein Expression & Vaccine Production in bioreactors

## Workshop

This is a comprehensive workshop that will provide insights into the intricacies involved in the scale up and production of recombinant enzymes and bacterial vaccines. Witness and experience real live culture grown in bioreactors and let us address all that you have ever wanted to discover in this field. Let us walk you through the steps, the pitfalls and the secrets involved in fermentation. Covering wide aspects of cultivation from recombinant cell lines (*Escherichia Coli*) to bacterial vaccine strains (*Pasteurella multocida & Rimerella anatipestifier*)



*500Litre Bioreactor used in production of R.anatipestifier & P. multocida at the Veterinary Research Institute Malaysia.* 

- How to scale up from shake flask to bioreactors effectively
  Facilitators from Switzerland, Germany & Malaysia
  Comprehensive live fermentation and results
- from in-house database
- Experience fed-batch strategies for high density culture through eve® software
- Covering all aspects involving E. coli and P. multocida

- Obtaining desired performance in bioreactors
- Sustainable and effective protein expression
- Obtain stable and reproducible results
- Concise yet detailed outlines of the process
- Downstream processing and purification
- Up to 30litre & 500Litre production illustrated
- cGMP & Validation (IQ,OQ) documentation
- SCADA and Software automation for complex processes



High density culture of E. coli under fed-batch conditions







