Profile

Associate Professor Dr Munish Puri

Dr Puri has rich experience in protein biotechnology which includes protein chemistry, enzyme technology and bio-processing. He is working in the area of Industrial Biotechnology for two decades and has produced microbial enzymes/proteins possessing applications in Pharmaceutical and Food Industry. He has been working on the crystallization of proteins for Inferring functions to un-annotated protein sequences /structures.

Awards conferred

- Australia-Asia UNSW IP, University of New South Wales, Australia (2004).
- Commonwealth Fellow University of Oxford, British Council, UK (2002).
- BOYSCAST Fellow MIT USA, Department of Science and Technology (DST), India (2001).
- Indian Academy of Sciences Teacher Fellow, India (2000).
- Biotechnology National Associate Award, DBT-Government of India (1997).

Research Interests Protein Biotechnology

The major goals of my laboratory are to produce and purify novel therapeutic proteins/ enzymes from various sources (microbes, animal and plant cell) and to improve their functional efficiency, specific activity for carrying out transformations of flavonoids/ animal cell product with health benefits. We follow molecular biology, bio-processing and protein engineering approaches for enhancing efficiency of various **enzymes** (naringinase, rhamnosidases, aspartase, inulinase, proteases etc)/ **proteins** (ribosome inactivating proteins, macrophage proteins etc) with therapeutic benefits. The focus of the lab is to do following projects:

Selected publications

1. **Puri M**, Kaur I, Kanwar RK, Gupta, RC, Chauhan AK, Kanwar JR. Ribosome inactivating proteins for antiviral therapy. **Current Molecular Medicine 2009** (In press) [IF 4.626]

2. **Puri M**, Gupta S, Kaur A, Pahuja P, Kanwar JR, Kennedy JF. Cell disruption and covalent immobilization of β-galactosidase from *Kluyveromyces marxianus* YW-1 for Lactose Hydrolysis. **Applied Biochemistry Biotechnology 2009** Feb 7 [Epub ahead print] [IF 1.64]

3. Meng W, Forwood JK, Guncar G, Robin G, Cowieson, N, Listwan P, Ross IL, Robinson J, **Puri M**, Huber T, Hume DA, Kobe B, Martin JL, Kobe B. Overview of the pipeline for structural and functional characterization of macrophage proteins at the University of Queensland. **Methods Molecular Biology 2008**, 426:577-87.

4. Singh RS, Sooch B, **Puri M**. Optimization of medium and process parameters for the production of inulinase from a newly isolated *Kluyveromyces marxianus* YS-1. **Bioresource Technology 2007**, 98 (13): 2518-2525. [IF 3.103]

5. **Puri M**, Robin G, Cowieson N, Forwood JK, Listwan P, Guncar G, Huber T, Kellie S, Hume DA, Kobe B, Martin JL. Focusing in on structural genomics; The University of Queensland structural biology pipeline. **Biomolecular Engineering 2006**, 23:281-9 [IF 4.24]

6. Welford RD, Kirkpatrick, JM, **Puri M**, Schofield CJ. Incorporation of oxygen into the succinate co-product of iron (II) and 2-oxoglutarate dependent oxygenases from bacteria, plants and humans. **FEBS Letters 2005**, 579:5170-5174. [IF 3.26]

7. **Puri M**, Banerjee A, Banerjee UC. Studies on the optimization of process parameters for the production of naringinase by *Aspergillus niger* MTCC 1344. **Process Biochemistry 2005**, 40(1), 195-201.[IF 2.336]

8. **Puri M**, Banerjee UC. Production, purification and characterization of the debittering enzyme naringinase. **Biotechnology Advances** 2000, 18, 207- 217. [IF 5.2]

Patents

9. **Munish Puri**, Sanjeev Chugh, R S Singh. A novel strain of *Aspergillus* for production of gluconic acid and the process therefore. (#1449/DEL/2007).

10. Sooch BS, Singh RS, **Munish Puri**. A process for the production of inulinase (#962/DEL/2005).