

Advertorial

PROTEIN COMPANIES IN INDIA

YASHRAJ BIOTECHNOLOGY LIMITED (YBL)

20 YEARS OF EXCELLENCE IN TRANSFORMING WASTE TO WELL-BEING

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Introduction

Progress is not about how we grow, it is about how we make a difference in lives of others! This is the guiding principle at Yashraj Biotechnology Limited (YBL), a pioneering biotechnology company located in Navi Mumbai, India. The founder members of the company Mr. Arvind Bhanushali, Mr. Bharat Dagha and Dr. Paresh Bhanushali started the company in 1999 and this year the company is celebrating its 20 years of existence.

The company was established with a vision to be the best in the diagnostic field and make diagnostics affordable and easily available to the common man. Today, YBL is a leading name in the *in vitro* diagnostic market, supplying high purity Antigens, Antibodies, proteins and enzymes to some of the world's top 20 diagnostic companies.



The founders of YBL



Mr. Arvind K. Bhanushali is the Founder Director and the Chairman of the company. He is an experienced financial adviser to many reputed business groups in India and Abroad for more than 30 years.



Mr. Bharat T. Dagher is the Founder Director of the Company and is responsible for the Business Development & Marketing. Under his aegis the company has grown exponentially and successfully establish international branches in Germany, USA and South Korea.



Dr. Paresh B. Bhanushali is the Founder and Technical Director (Research & Development). He oversees activities in both R&D and Production departments. He holds a PhD Degree in Medical Biotechnology and has an extensive knowledge and experience in protein chemistry.

From Bio-Medical Waste to Diagnostic Application Products: An Innovative Approach

YBL capitalizes on usefulness of the human biomedical waste generated by the hospitals for diagnostic purposes by manufacturing Native Antigens (Table 1) which are purified from the effusions of patients suffering from cancer, renal, and cardiac failures. In addition to diagnostic use, the manufacturing processes at YBL indirectly helps in reducing the environmental pollution due to disposal of human biomedical waste which is a major concern to the hospitals, the regulatory authorities and the citizens.

The Biomedical waste management teams at YBL have created a Pan India network to access Bio-medical fluids for extraction and purification of high quality Native and Recombinant Antigens in a time-effective manner.

State-of-the-Art Research & Development

YBL has a well-equipped Research & Development (R&D) unit in which a wide range of high-quality Antigens (Native and Recombinant), Proteins, Enzymes are manufactured using advanced chromatography systems like AKTA prime plus and AKTA Pure for protein purification.

The Recombinant R&D facility manufactures highly purified proteins and enzymes both with and without tags and by using different expression systems like Bacterial (*E. coli*), Mammalian (CHO, HeLa, HEK293, MCF7), Baculovirus (*Spodoptera frugiperda*) Sf9/Sf21 insect cells and Yeast (*Saccharomyces cerevisiae*).

Highly specific and high affinity monoclonal and polyclonal Antibodies are developed and characterized by Surface Plasma Resonance (SPR) using Biacore T200 system. These Antibodies are validated by external agencies and certified for use in development of immunoassays like Enzyme-linked Immuno Sorbent Assay (ELISA), Flow Cytometry, Chemiluminescence Assays (CLIA) and Immunohistochemistry (IHC).

YBL products basket contains more than 25 Native and 22 Recombinant Antigens with a purity percentage ranging from 90-99% (To download YBL products booklet please write to marketing@yashrajbio.com).



Photo: Siemens Advia Centaur XP Analyzer

Efficient Production and Rigorous Quality Checks

A seamless transition occurs between the R&D and the production unit for scaling up and mass production of protein. Standard operating procedures are followed to maintain batch to batch consistencies irrespective of capacity (from small to bulk production). The emphasis lies on the maintenance of long-term stability, specificity and purity of the products which is ensured by Quality Control. Rigorous testings are performed on multiple platforms like Roche Cobas e411 & c311 and Siemens Advia Centaur CP & XP analyzers.

Protein quantification and validation is done using ELISA, ECLIA, Immunonephelometry, Immunoturbidimetry and Latex Agglutination, SDS-PAGE, Western Blotting, HPLC, Crossed immunoelectrophoresis (CIE) and Mass-Spectrometry. Real and accelerated stability tests are performed for batch consistency and viral contamination is identified by performing PCR and USFDA approved CLIA techniques. Once the protein quality is confirmed and certified, they are properly labeled and packaged for a timely delivery to the customers worldwide.