

Production of recombinant proteins

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The Research and Development Department is part of the Biotechnology Direction of the Mexican Company Probiomed S.A. de C.V. The department has several functions, such as: product and process development, process optimization, process scaling up and technology transfer. The department is divided in five different laboratories: Molecular Biology, Experimental Cell Culture, Experimental Fermentation, Experimental Purification and Analytical Methods Development. This functional branching allows developing products from the gene to the active pharmaceutical ingredient.

The laboratory, which I am in charge of, has the infrastructure and capabilities to develop and characterize recombinant proteins. People with different backgrounds, are working together in inter-disciplinary projects related to biotechnology. This group has developed analytical methods in order to estimate the content of recombinant proteins in inclusion bodies by Ultra Performance Liquid Chromatography and Capillar Electrophoresis. In addition, the group has developed a recombinant leucine aminopeptidase (rLAP) from a synthetic gene, which encodes a mature and active 32 kDa LAP in order to avoid the post-translational processing of the 54 kDa pro-protein from *Aeromonas proteolytica*. The active rLAP, with a purity of 95 % is able to remove the N-terminal methionine from recombinant human methionine-Interferon alpha-2b (met-rhIFN α -2b).