

ture of products used for the diagnosis and treatment of diseases affecting the immune system. The technology of peptide synthesis represents a significant part of its activities. Biochem uses this technique for the development of new vaccines, immunomodulators and epitope synthesis. As for immunomodulators, the firm uses a peptide synthesis technique, currently being patented, to create stable analogs that have excellent therapeutic potential.

Biochem has also developed a technique known as epitope synthesis, which makes it possible to accurately define antibody bonding points, or epitopes, in order to synthesize the corresponding peptides and modify them so that they correspond to the three-dimensional structure of the original protein. The company is using the technique to develop a new generation of more sensitive and specific diagnostic kits.

Photoactive therapy in the fight against disease, especially cancer

In addition to surgery, chemotherapy and radiotherapy, there is now a fourth alternative in the treatment of cancer: photoactive therapy. This method is based on a photosensitizing agent that forms part of the porphyrin category. These porphyrin molecules, which are hemoglobin derivatives, are activated by light.

Quadra Logic Technologies of Vancouver is the world leader in photoactive therapy. The Canadian firm will shortly bring onto the market the first photoactive drug: Photofrin. When used for the treatment of cancer, the drug is injected and then activated by a laser beam focused on the cancerous tumour. When exposed to a light source, Photofrin releases a substance that destroys cancerous cells without attacking the healthy surrounding cells. The company is also considering

a technique to put monoclonal antibodies and porphyrins together in order to improve the effectiveness of the treatment.

Aside from cancer treatment, the photoactive drug can be used to purify the blood and eliminate various types of viruses, such as the herpes and AIDS viruses. It has also produced encouraging results in the treatment of arteriosclerosis, psoriasis and various forms of STDs.

Quadra Logic researchers are also working to produce a new generation of more effective porphyrins that do not produce photosensitivity in patients.