During the last 19 years, the Monoclonal Antibodies Unit has generated a large number of mAbs, directed against more than 150 different antigens, mostly targeting molecules for which mAbs are not commercially available. Many of those mAbs have been licensed to external companies, generating royalties that represent an important source of revenue for the CNIO.

Each year, we prepare and update a detailed CNIO mAbs catalogue, which contains the datasheets of more than 100 thoroughly validated high-quality mAbs (accessible at http://www.cnio.es/ing/servicios/anticuerpos/default.aspx). This catalogue is offered to specialised companies that are looking for licensing opportunities.

**Research activities**

In collaboration with P. Engel from the Universidad de Barcelona, we have produced and characterised several new mAbs against the leukocyte immunoglobulin-like receptor family (LILR, LIR, ILT, CD85). LILRs are widely expressed in haematopoietic-lineage cells and mediate activation or inhibition of the functions of various immune cells, primarily myeloid cells. It is becoming clear that LILRs, with their capacity to regulate immune responses and mediate protumour functions, represent a new class of receptors that can be targeted for the treatment of a variety of immunodisologic disorders and cancer.

Targeting one member of the LILR family with mAbs, however, is extremely complex due to the high homology shown among family members. The use of nonspecific antibodies might trigger the function of other members, which may complicate the interpretation of the biologic effects. The study of the functional role of LILRs in cancer is challenged by the lack of suitable mAbs able to specifically recognise each family member. For this reason, we developed and extensively validated novel mAbs specific for CD85A and CD85G that will help to study how LILRs regulate myeloid function and tumour progression, as well as to test the therapeutic efficacy of targeting LILRs for the treatment of malignant, autoimmune, and inflammatory diseases.

**EuroMAbNet,** a European consortium of experts in monoclonal antibody technology

In 2008, in collaboration with Oxford University, we founded EuroMAbNet (www.euromabnet.com), a non-profit organisation that currently spans 11 European countries.

Members include internationally distinguished academic laboratories that generate and validate mAbs. EuroMAbNet is strongly committed to improving the education and training of junior scientists in the field of antibody validation. We achieve this aim by organising annual Antibody Validation Workshops in different venues across Europe.

The final goal of EuroMAbNet is to strengthen European leadership in mAb technology, improve education in the field on an international level, and actively engage with industrial partners to ensure the optimum benefits from using mAb technology to improve human health.

**PUBLICATIONS**