HISTOPATHOLOGY CORE UNIT

Vacant

Core Unit Head

Eduardo José Caldeiras (since March)

Technical Assistance

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RESEARCH HIGHLIGHTS

In line with the activity carried out during the last years, the Unit has maintained the portfolio of services demanded by its users in accordance with the needs of their projects. Thus, about 34,000 paraffin blocks of tissue samples were generated, and ca. 35,000 techniques performed, including histological and IHC techniques, in situ chromogenic hybridisation, tissue microarrays, slide scanning, etc. Also, during this time we introduced new IHC markers useful for the study of tumour development, as well as new chromogenic substrates for the visualisation of those markers.

Our main goals are to guarantee the standardisation and quality of the techniques offered by the Unit, and to focus on the implementation of innovative methodologies. The implementation of new equipment for the routine techniques has been key for the standardisation of the protocols. This has made it possible to introduce new approaches, such as multiplexed IHC staining, which enables the simultaneous visualisation of several markers (up to 4) on the same tissue section. With this new methodology, combined with the slide scanner AxxioScan and the ZEN image analysis software available at the Unit, it is now possible to study the distribution and expression levels of different proteins of interest in a single experiment in order to better understand complex pathological processes.

The high quality of the techniques run by the Unit continues being endorsed by External Quality Assessment Schemes. In this respect, it is worth mentioning that our haematoyxlin-eosin staining technique was commended in the framework of the evaluation, carried out by UK NEQAS for our histotechnical techniques. On the other hand, NordiQC has evaluated a subset of our IHC techniques under different modules, including general markers, breast cancer markers and PD-L1; these all obtained very high scores.

Training and outreach activities are also a critical component of the activity of the Unit. This includes our participation in modules of Formación Profesional for pathology technicians, mentoring of high school students in short-term stays at the Unit, guided visits to the laboratories for students and other audiences, as well as offering practice sessions on the different technologies mastered by the Unit in Masters and other courses, among other activities.