

Pathological and anatomical evaluations

Offspring offers histopathology-based analyses of distribution and regulation of various biomarkers within normal and disease-affected human and animal tissues. We may also characterize the binding properties of low molecular drugs and biopharmaceutical drugs within such tissues, e.g. as support for demonstration of target engagement and off-target interactions and for development of ligands for PET imaging. To deliver informative value to such project it is paramount that data is generated in tissues that are well defined and pre-characterized for anatomical regions, tissue structures and location of specific cell types as well as distribution, state and type of ongoing disease processes. It is, moreover, essential to have a good understanding of the tissue quality (e.g. preservation of the tissue antigens) as failure to do so may severely impede correct interpretation of results in the above-mentioned studies.

Our services. The Offspring team has extensive experience and skills to provide detailed characterizations of the tissues employed in projects. We can assist with:

- **Procurement of tissues.** We are not certified to act as a biobank but have long experience to procure and evaluate tissues on behalf of our clients. We have a longstanding collaboration with the Netherlands Brain Bank which provides brain tissues of very high quality. We have also very good experience from work on tissues provided by Asterand Bioscience, UK.
- **Evaluation of tissues**
 - **Assessment of quality.** For this we have established IHC-based methods where new tissues are analyzed for detection of carefully selected biomarkers present in all tissues in a cell-specific manner.
 - **Characterization of anatomical regions and organ structures** are typically performed in tissue sections counterstained by hematoxylin-eosin.
 - **Characterization of disease process.** Depending on the specific requirements we can characterize the disease process with pathological analyses on hematoxylin/eosin-counterstained tissue sections as well as with specific staining procedures for presence and distribution of cell and pathology-specific biomarkers. This includes among others IHC staining for markers of various immune cells, tissue destruction and local deposition of pathological byproducts (e.g. fibrillar amyloid beta, Tau, alpha-synuclein and huntingtin).

We collaborate when required with board-certified pathologists to perform these evaluations.

