FACT SHEET

Ophthalmic Services

Aliri Bioanalysis (made up of three renowned laboratories, originally known as Tandem Labs, Pyxant Labs, and ImaBiotech) leads the industry in assessing complex analytes from within biological matrices, including ophthalmic fluid and tissue. Our team has over 30 years of experience enabling drug development programs from discovery through late stage clinical trials, with advanced bioanalytical and spatial imaging services.

OPHTHALMIC SUPPORT

- Method demonstration, development, optimization, fit-for-purpose & GLP validation, and regulatory sample analysis of ocular tissue and supporting matrices.
- Experience with challenging large and small molecule ophthalmic drugs, including, prostaglandin analogs, peptides, hormones, polysaccharides, allergen biomarkers, siRNA, oligonucleotidesWhole-eye spatial imaging using Quantitative Mass Spectrometry Imaging (QMSI) to visually understand how your molecule performs in the microenvironment.

EXPERT CONSULTATION

- Method development to ensure highest level of sensitivity while minimizing sample volume
- Preparation of method and sample analysis protocols for regulatory submission
- Surrogate matrix selection for support in the absence of critical matrix samples
- Preparation of method and sample analysis protocols for regulatory submission

BIOANALYTICAL CAPABILITIES

MATRIX	TYPICAL RANGE
Coreal Tissue	0.100 ng/g to 50.0 ng/g
Receptor Fluid	0.100 ng/mL to 50.0 ng/mL
Vitreous humor/aqueous humor	0.05 ng/mL to 50.0 ng/mL
Retina/choroid Tissue	0.100 ng/g to 50.0 ng/g

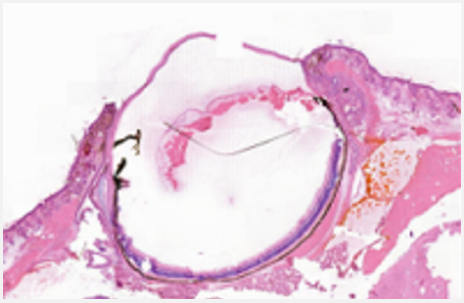
Aliri Bioanalysis leverages state-of-the-art mass spectrometry to enable highly sensitive quantitation of both small molecules and proteins in ocular tissues. Our methods are designed to achieve the lowest possible levels of detection across a wide range of eye matrices and fluids, including aqueous humor, vitreous humor, retina, and sclera.

All eye tissues are handled with cryogenic preservation techniques to maintain sample integrity, and our high-throughput analytical platforms ensure efficient processing to meet the demands of both discovery and regulated studies.

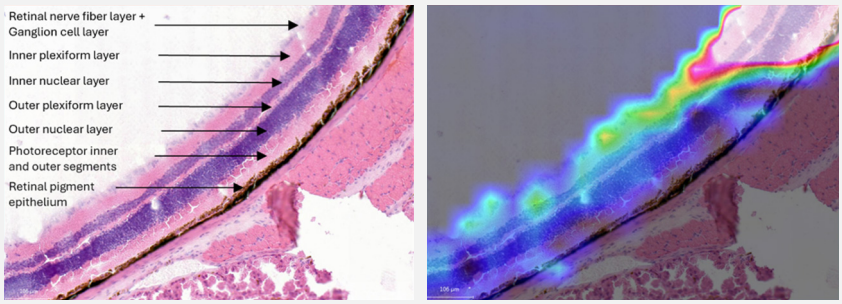
SPATIAL IMAGING CAPABILITIES

Drugs for ocular treatment can be easily and quickly assessed for efficacy, safety, and toxicity using QMSI. In a single analysis, this platform can evaluate the biodistribution of your candidate and associated metabolites, as well as the potential modulation of efficacy or toxicity biomarkers (peptides, lipids, metabolites).

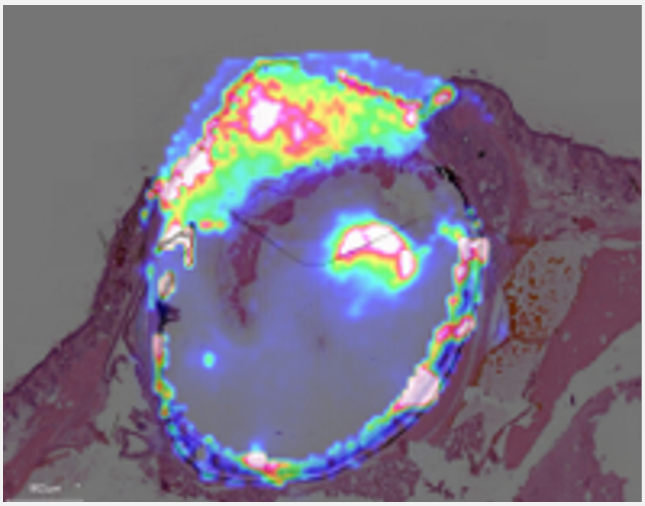
QMSI also boasts high spatial resolution, providing accurate localization of compounds in the anterior and posterior segments of the eye which are composed of several histological structures of just a few micrometers. Thus, QMSI appears as a tool of choice for evaluating novel target or understanding mechanism of drug action on ocular diseases such as age-related macular degeneration (AMD), diabetic retinopathy, glaucoma, diabetic macular edema (DME), etc.



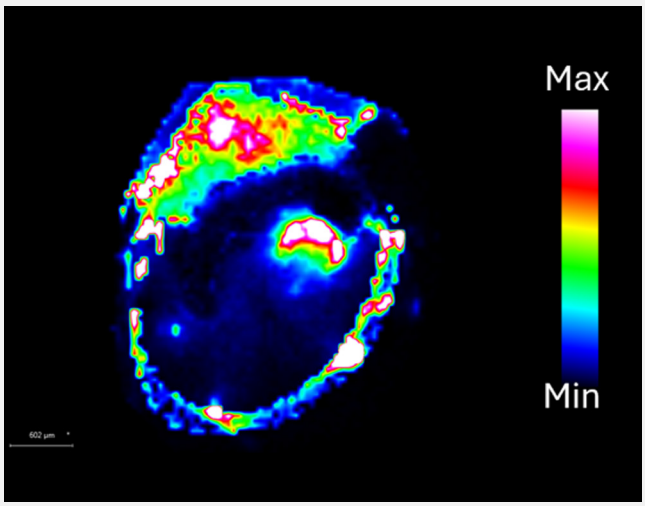
1 - H&E Staining



2 - Close up of H&E Staining



3 - Overlay of Drug distribution with H&E staining



4 - Drug Distribution

IHC aimed at correlating the distribution of the drug with specific histological regions including cannabinoid and PPAR receptors known as inflammation regulators.

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data for life >

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