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Zebrafish - SCORE Imaging: Specimen in a Corrected Optical Rotational Enclosure

RRID:SCR_001300 Type: Tool

Proper Citation

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Resource Information

URL: http://www.zfishbook.org/NGP/journalcontent/SCORE/SCORE.html

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Description: Narrative resource describing a visual data analysis and collection approach that takes advantage of the cylindrical nature of the zebrafish allowing for an efficient and effective method for image capture called, Specimen in a Corrected Optical Rotational Enclosure (SCORE) Imaging. To achieve a non-distorted image, zebrafish were placed in a fluorinated ethylene propylene (FEP) tube with a surrounding, optically corrected imaging solution: water. By similarly matching the refractive index of the housing (FEP tubing) to that of the inner liquid and outer liquid (water), distortion was markedly reduced, producing a crisp imagable specimen that is able to be fully rotated 360 degrees. A similar procedure was established for fixed zebrafish embryos using convenient, readily available borosilicate capillaries surrounded by 75% glycerol. The method described could be applied to chemical genetic screening and other, related high-throughput methods within the fish community and among other scientific fields.

Abbreviations: SCORE imaging

Synonyms: Specimen in a Corrected Optical Rotational Enclosure imaging

Resource Type: data or information resource, narrative resource

Defining Citation: PMID:20528262

Keywords: format, authoring tool, embryo, microscopy, publishing format, image

Funding: NIGMS GM63904; NIDA DA14546

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Alternate IDs: nif-0000-07749

Record Creation Time: 20220129T080206+0000

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Ratings and Alerts

No rating or validation information has been found for Zebrafish - SCORE Imaging: Specimen in a Corrected Optical Rotational Enclosure.

No alerts have been found for Zebrafish - SCORE Imaging: Specimen in a Corrected Optical Rotational Enclosure.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 7 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>NIF</u>.

Mabry SJ, et al. (2025) Fusobacterium nucleatum determines the expression of amphetamine-induced behavioral responses through an epigenetic phenomenon. bioRxiv : the preprint server for biology.

Feinstein P, et al. (2024) Rapid Degradation of the Human ACE2 Receptor Upon Binding and Internalization of SARS-Cov-2-Spike-RBD Protein. bioRxiv : the preprint server for biology.

McLarnon SR, et al. (2024) Altered renal vascular patterning reduces ischemic kidney injury and limits vascular loss associated with aging. bioRxiv : the preprint server for biology.

Velasquez F, et al. (2023) Optogenetic modulation of hippocampal oscillations ameliorates

spatial cognition and hippocampal dysrhythmia following early-life seizures. Neurobiology of disease, 178, 106021.

Fleury S, et al. (2023) Role of Dopamine Neurons in Familiarity. bioRxiv : the preprint server for biology.

Cook AG, et al. (2023) Cell division angle regulates the tissue mechanics and tunes the amount of cerebellar folding. bioRxiv : the preprint server for biology.

Gao Z, et al. (2022) Vitrification and Rewarming of Magnetic Nanoparticle-Loaded Rat Hearts. Advanced materials technologies, 7(3).