

Resource Summary Report

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[mtocDB](#)

RRID:SCR_008933

Type: Tool

Proper Citation

mtocDB (RRID:SCR_008933)

Resource Information

URL: <https://www.mtocdb.org/?next=/browse/results/>

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Description: A database of over 300 Electron Microscopy (EM) images of centrioles and centriole related structures from almost 60 species, described by a controlled vocabulary allowing detailed description of the observed structures. This knowledge is supplemented by a manually curated list of proteins known to be involved in centriole assembly, their (putative) orthologs, and localization information. mtocDB aims to characterize the naturally occurring morphological variation observed in centrioles and centriole associated structure alongside molecular information on the proteins involved in their assembly. Examining these in an evolutionary context will allow the cell biology community to infer meaningful relationships between cellular assembly mechanisms and the structures they form. This community resource for cell biologists interested in the the evolution of centrioles and centriole related structures aims to bridge the gap between structural morphology and molecular function by examining naturally occurring structural variation in a phylogenomic context. Centrioles are cylindrical microtubule arrays required for stability and duplication of the centrosome in animal cells, and for the assembly of cilia and flagella in many eukaryotes. The presence of centrioles throughout most eukaryotic branches suggests that this structure was present in the last eukaryotic common ancestor. Although centrioles show a typically well conserved structure, they can perform several functions and display a diversity of accessory structures. However, this diversity is not properly classified beyond model organisms, and the information contained in decades of electronic microscopy of other organisms remains untapped.

Abbreviations: mtocDB

Synonyms: Microtubule Organizing Center Database

Resource Type: data or information resource, database, image collection

Keywords: centriole, morphological variation, morphology, cell biology, cellular assembly, mechanism, structure, evolution, proteomics, genome, ortholog, electron microscopy,

protein, centriole assembly, localization, microtubule, image, electron micrograph, micrograph

Availability: Developed as a community resource, But as of 6/1/13, Requires an account pending resolution of copyright issues

Resource Name: mtocDB

Resource ID: SCR_008933

Alternate IDs: nlx_151804

Record Creation Time: 20220129T080250+0000

Record Last Update: 20260919T195147+0000

Ratings and Alerts

No rating or validation information has been found for mtocDB.

No alerts have been found for mtocDB.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.