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Columbia University - Morningside Heights

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Function of the cytoskeleton during the cell cycle and differentiation

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Developmental genetics of identified nerve cells in *C. elegans*

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Vulva development in *C. elegans*

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Genetic programs that control neural development in *C. elegans*

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Hedgehog signaling in *Drosophila* development

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mRNA transcription, splicing, and processing

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Growth factor regulation of gene expression

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Cell motility, motor molecules, & integrin-cytoskeleton interactions

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Diagramming disease networks with chemical and biological tools

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Protein structure of enzymes involved in fatty acid metabolism

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Mitochondrial biogenesis

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Structure, function and regulation of ion channels

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Function of the cortical microcircuit

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NMR studies of enzyme mechanism and membrane protein structure

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Imaging of lipid storage and metabolism in *C. elegans*

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Computational methods in human genetics

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Dynamics of cell reprogramming induced pluripotent stem cells

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Neural basis and behavior of social communication

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Genetic programs of axial tissue development

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How honey bees fight off microbes?

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Short RNAs regulation of chromatin and gene expression in *C. elegans*

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Homeotic gene function and their downstream targets in *Drosophila*

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The effect of "DNA methylation in sex cells"

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Mouse pancreatic islet differentiation and development

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Mechanisms in neurodegeneration

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Calcium signal in response to NMDA receptor activation in a dopamine neuron axonal growth cone.

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Head & neck carcinoma and pancreatic ductal adenocarcinoma

Pathology & Cell Biology

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Neurodegeneration and the life cycle of dopamine neurons

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Role of the actin cytoskeleton

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Role of cytoskeleton, cell cycle machinery, and proteases in neuronal degeneration

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Ion channel structure and function

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The regulation of the immune system in treating or curing Parkinson's disease

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Computational modeling of neural systems and visual psychophysics

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Neural basis of selective attention and visually guided behavior

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Molecular events underlying Na⁺-coupled transport

New York State Psychiatric Institute

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Neuro-circuitry of psychiatric disease

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Genetic dissection of complex signaling pathways in schizophrenia

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Learned fear and the neuropathology of schizophrenia