Cell Centered Database
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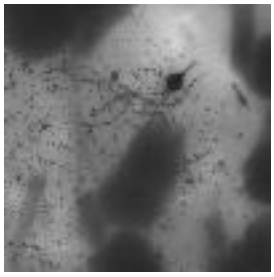
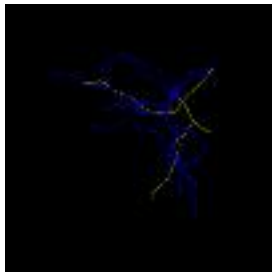
Microscopy Product #:3659 DATKOA

For the most updated information, please visit
http://ccdb.ucsd.edu/CCDBWebSite/main?event=displaySum&mpid=3659

Image2D	Reconstruction	Segmentation
		

Project Information:

PROJECT_ID	P1207
PROJECT_NAME	Correlative microscopic characterization of dendritic spines in a transgenic mouse model of hyperdopaminergia: The dopamine transporter knockout mouse
PROJECT_DESCRIPTION	Multiscale characterization of DAT KO transgenic mouse
LEADER	Diana Price
FUNDING_AGENCY	NIH
PROJECT_START_DATE	2003-01-01 00:00:00.0
PROJECT_END_DATE	
COLLABORATORS	Aki Laakso, Michele Cyr, Maryann Martone, Naoko Yamada, Andrea Thor, Monica Berlanga
PUBLICATION1	
PUBLICATION2	
PUBLICATION3	

Experiment Information -	
PURPOSE	EMT reconstructions of medium spiny neuron dendrites
TITLE	P1207 Experiment 1
EXPERIMENTER	Diana Price, Masako Terada, Andrea Thor
EXPERIMENT_NAME	
EXPERIMENT_DATE	2003-01-09 00:00:00.0

Subject Information -	
GROUP_BY	genetic manipulation
SUBJECT_NAME	Dopamine Transporter (DAT) knockout
FIXATION_METHOD_ID	
SCIENTIFIC_NAME	mus musculus
SPECIES	mouse
STRAIN	C57BL/129SvJ
AGE	6 months
AGECLASS	adult
ANIMAL_NAME	
LITTER_ID	
SEX	male
VENDOR	
WEIGHT	27 grams

Tissue -	
ANATOMIC_LOCATION	neostriatum DATKOA
MICROTOME	Vibratome
ORIENTATION	coronal
THICKNESS	100 um
TISSUE_PROD_STORAGE	DAT#1
EXTERNAL_FILE_NAME	
TISSUE_GROUP_TYPE	

Microscopy Product Information -	
MICROSCOPY_PRODUCT_ID	3659
IMAGE_BASENAME	DATKOA
CREATE_DATE	2003-03-13 00:00:00.0
INSTRUMENT	Biorad 1024 MRC confocal
MICROSCOPE_TYPE	LASER SCANNING CONFOCAL
PLANE_COUNT	163
PRODUCT_TYPE	THROUGH FOCUS SERIES
PURL	
SESSION_NAME	
TELESCIENCE_SRB	P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659
X_RESOLUTION	.158 um/pixels
Y_RESOLUTION	.158 um/pixels
XSIZE	1024
YSIZE	1024

Protocol:

N/A

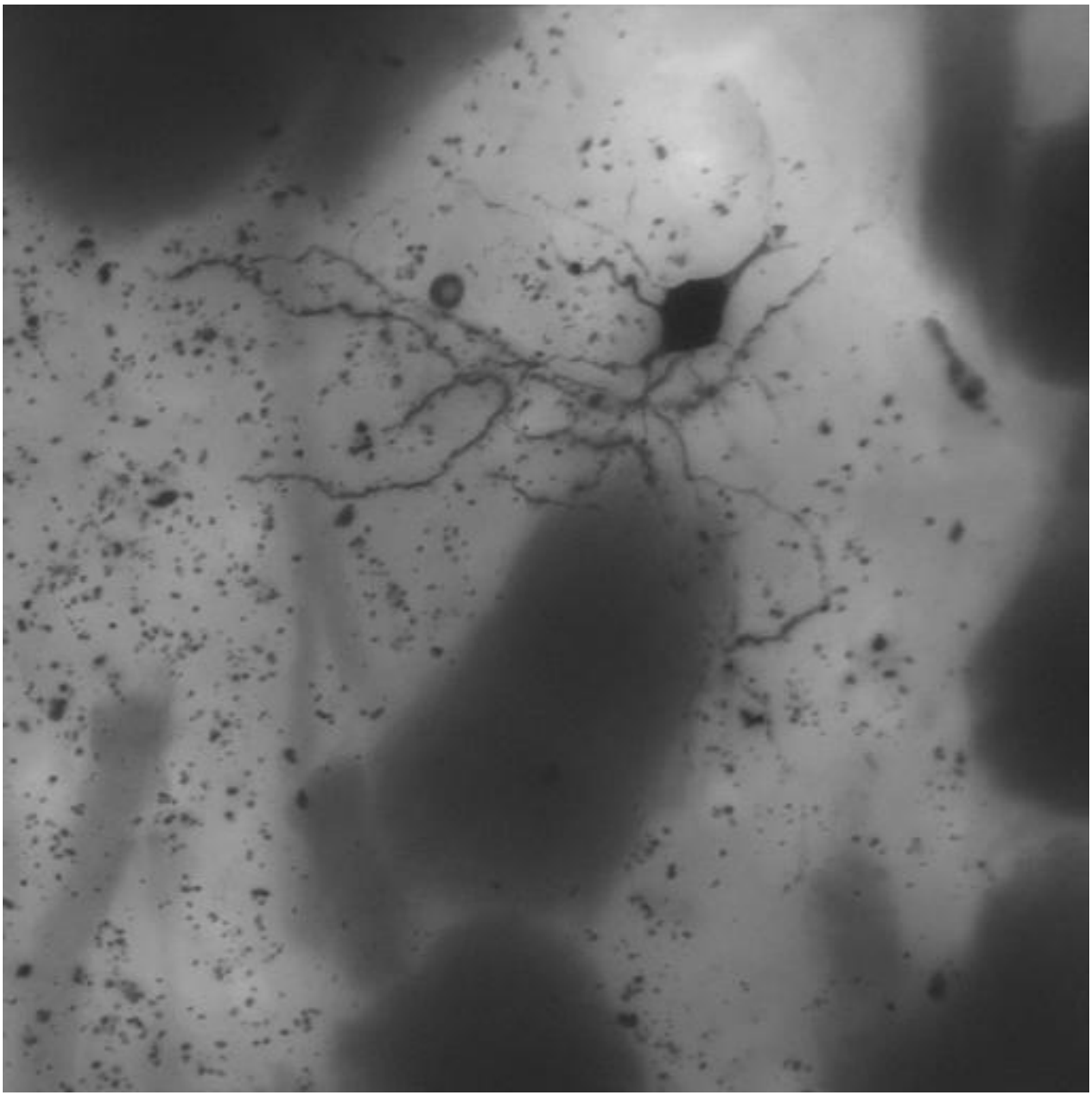
Image Type -	
THROUGH_FOCUS_SERIES_ID	6063
ZSTEP	.54um

Specimen Description -	
ANATOMICAL_DETAIL	6145
ATLAS	Paxinos and Frankliln, 2000
ATLAS_COORD	1.375, -3.375, .5
CELL_ID	DATKOA
CELL_TYPE	medium spiny neuron
MAP_LOCATION	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_25/Microscopy_3339/DATKOQ_atlasplate26.jpg
ORGAN	brain
REGION	neostriatum
SYSTEM	central nervous
ANATOMICAL_NOTES	Did not specify right or left hemisphere

Light Microscopy Product -	
LMPRODUCT_ID	6087
COVER_SLIP_THICKNESS	.14 um
IMMERSION_MEDIUM	oil
LENS	Zeiss Plan APOCHROMAT
LENS_MAGNIFICATION	63 X
MOUNTING_MEDIUM	resin
NUMERICAL_APERTURE	1.4
LM_NOTES	mmartone

Raw 2D Image

Raw Low Resolution 2D Image -



Raw 2D Image -	
IMAGE2D_ID	6123
BIT_DEPTH	8 Bit
DIGITIZING_PLATFORM	Biorad MRC 1024
IMAGE_DATE	2003-03-13 00:00:00.0
IMAGE_DESC	Zip file containing through focus series in BioRad PIC and multimage TIFF formats
IMAGE_FILE_FORMAT	BioRad PIC
IMAGE_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKOA_img.jpg
RAW_ANIMATION_DESC	Animation stepping through the slices of the through-focus series of a medium spiny neuron from the neostriatum of a dopamine-transporter knock out mouse, filled with Lucifer Yellow and then photooxidized. The neuron is not completely contained within the section so part of it is missing. This movie was downsampled from the original file for display purposes.
RAW_ANIMATION_FILE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKOA_img.avi
RAW_DATA_FILE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKO_img.zip
THUMBNAIL_DESC	Summed Z projection through a through-focus series of a medium spiny neuron from the neostriatum of a dopamine-transporter knock out mouse, filled with Lucifer Yellow and then photooxidized. The neuron is not completely contained within the section so part of it is missing.
THUMBNAIL_FILE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKOA_img_thmb.jpg
X_RESOLUTION	.158 um/pixel
Y_RESOLUTION	.158 um/pixel
X_SIZE	1024 pixels
Y_SIZE	1024 pixels

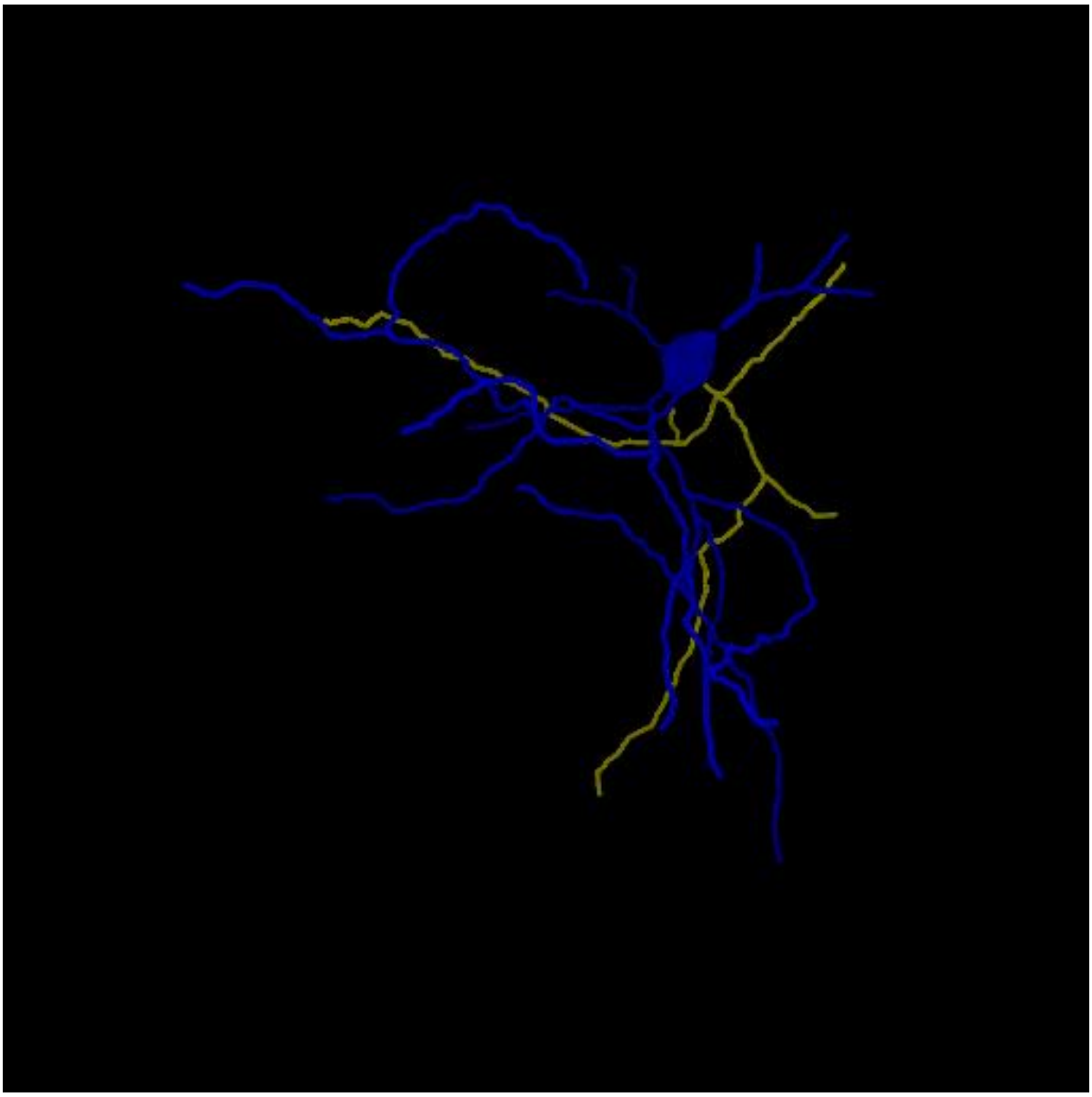
Reconstruction

Reconstruction Image -

Reconstruction -	
RECONSTRUCTION3D_ID	6107
CROPPING_COORDINATE1	,
CROPPING_COORDINATE2	,
VOLUME_DIMENSION	, ,
VOXEL_SCALE	, ,
RECONSTRUCTION_IMAGES_ID	6107

Segmentation

Segmentation Image -



Segmentation -	
SEGMENTED_OBJECT_ID	6316
DISPLAY_IMAGE_DESC	Rendering of a segmented spiny neuron dendritic tree of a medium spiny neuron from the neostriatum of a dopamine-transporter knock out mouse. Tree structure was segmented through manual tracing using Neurolucida. Cell body = blue; dendrites = different colors. Dendritic spines were segmented but are not pictured in this rendering.
DOWNLOADABLE_FILE_DESC	Zip file containing Neurolucida trace file in ascii format (*_finaltrace.ASC), along with the output in VRML format. Summary files of measurements generated by Neuroexplorer for each of the parts traced are also included.
IS_MANUAL	Y
LABELING_RANK	none
NUMBER_OF_OBJECT	1
OBJECT_DESC	Contour around the cell body; probably not a complete reconstruction
OBJECT_NAME	cell body
OBJECT_TYPE	contour
SEGMENTED_OBJ_2D_IMAGE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa__seg.jpg
SEGMENT_PERSON_NAME	Andrea Thor
SEG_DESC	Manual tracing of dendrites using Neurolucida. Spines were traced but these were difficult to see, so the number may not be accurate.
SEG_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKO_seg.zip
THUMBNAIL	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa__seg_thmb.jpg

Segmentation -	
SEGMENTED_OBJECT_ID	6317
DISPLAY_IMAGE_DESC	Rendering of a segmented spiny neuron dendritic tree of a medium spiny neuron from the neostriatum of a dopamine-transporter knock out mouse. Tree structure was segmented through manual tracing using Neurolucida. Cell body = blue; dendrites = different colors. Dendritic spines were segmented but are not pictured in this rendering.
DOWNLOADABLE_FILE_DESC	Zip file containing Neurolucida trace file in ascii format (*_finaltrace.ASC), along with the output in VRML format. Summary files of measurements generated by Neuroexplorer for each of the parts traced are also included.
IS_MANUAL	Y
LABELING_RANK	none
NUMBER_OF_OBJECT	6
OBJECT_DESC	Tree structure of individual dendrites
OBJECT_NAME	dendrite
OBJECT_TYPE	tree
SEGMENTED_OBJ_2D_IMAGE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa__seg.jpg
SEGMENT_PERSON_NAME	Andrea Thor
SEG_DESC	Manual tracing of dendrites using Neurolucida. Spines were traced but these were difficult to see, so the number may not be accurate.
SEG_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKO_seg.zip
THUMBNAIL	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa__seg_thmb.jpg

Segmentation -	
SEGMENTED_OBJECT_ID	6318
CELL_BODY_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa_cellbody.txt
DENDRITE_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa_dendrites.txt
DISPLAY_IMAGE_DESC	Rendering of a segmented spiny neuron dendritic tree of a medium spiny neuron from the neostriatum of a dopamine-transporter knock out mouse. Tree structure was segmented through manual tracing using Neurolucida. Cell body = blue; dendrites = different colors. Dendritic spines were segmented but are not pictured in this rendering.
DOWNLOADABLE_FILE_DESC	Zip file containing Neurolucida trace file in ascii format (*_finaltrace.ASC), along with the output in VRML format. Summary files of measurements generated by Neuroexplorer for each of the parts traced are also included.
IS_MANUAL	Y
LABELING_RANK	none
NEURON_SUMMARY_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa_neuronsummary.txt
NUMBER_OF_OBJECT	21
OBJECT_DESC	Location of dendritic spines on dendrites
OBJECT_NAME	spine
OBJECT_TYPE	tree
SEGMENTED_OBJ_2D_IMAGE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa__seg.jpg
SEGMENT_PERSON_NAME	Andrea Thor
SEG_DESC	Manual tracing of dendrites using Neurolucida. Spines were traced but these were difficult to see, so the number may not be accurate.
SEG_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/DATKO_seg.zip
SPINE_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa_spines.txt
THUMBNAIL	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_20/Subject_20/Tissue_174/Microscopy_3659/datkoa__seg_thmb.jpg

USER AGREEMENT

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USER NOTIFICATION

For large size image data, it will take several minutes to download, please be patient. Thanks!

ACKNOWLEDGEMENT

Data used from the CCDB should be appropriately referenced, including both the author of the data and the CCDB. If the data were from a published study, the reference is included in the database record. The following reference should be cited for the CCDB:

Martone, M. E., Gupta, A., Wong, M., Qian, X., Sosinsky, G., Ludaescher, B., and Ellisman, M. H. A cell centered database for electron tomographic data. J. Struct. Biology 138: 145-155, 2002.

In addition, the support for the Cell Centered Database should be included in the acknolwedgement section of any publication:

The Cell Centered Database is supported by NIH grants from NCRR RR04050, RR RR08605 and the Human Brain Project DA016602 from the National Institute on Drug Abuse, the National Institute of Biomedical Imaging and Bioengineering and the National Institute of Mental Health, and NSF grants supporting the National Partnership for Advanced Computational Infrastructure NSF-ASC 97-5249 and MCB-9728338.

Maryann Martone