

# Cell Centered Database

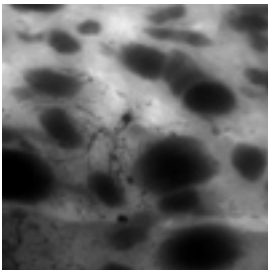
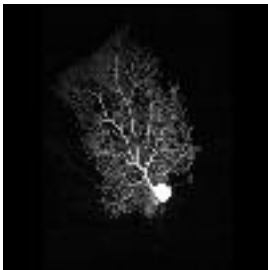
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Microscopy Product #:3687 pur2

For the most updated information, please visit

<http://ccdb.ucsd.edu/CCDBWebSite/main?event=displaySum&mpid=3687>

Image2D	Reconstruction	Segmentation
		

## Project Information:

PROJECT_ID	P1170
PROJECT_NAME	Mouse BIRN test data
PROJECT_DESCRIPTION	Neurolucida tracing of filled Purkinje neurons
LEADER	<a href="#">Maryann Martone</a>
FUNDING_AGENCY	NIH
PROJECT_START_DATE	2002-03-01 00:00:00.0
PROJECT_END_DATE	
COLLABORATORS	<a href="#">Diana Price</a> , <a href="#">Andrea Thor</a> , Masako Terada, Hiro Hakozaki
PUBLICATION1	
PUBLICATION2	
PUBLICATION3	

Experiment Information -	
PURPOSE	To obtain a high resolution mosaic of a filled Purkinje neuron and test deconvolution software
TITLE	High resolution mosaic of Purkinje neuron
EXPERIMENTER	Diana Price, Masako Terada, Hiro Hakozaki
EXPERIMENT_NAME	
EXPERIMENT_DATE	

Subject Information -	
GROUP_BY	NA
SUBJECT_NAME	
FIXATION_METHOD_ID	
SCIENTIFIC_NAME	mus musculus
SPECIES	mouse
STRAIN	C57BL/6J
AGE	2 months
AGECLASS	adult
ANIMAL_NAME	
LITTER_ID	
SEX	male
VENDOR	Jackson Laboratories
WEIGHT	27 grams

Tissue -	
ANATOMIC_LOCATION	hippocampus
MICROTOME	Vibratome
ORIENTATION	coronal
THICKNESS	70 um
TISSUE_PROD_STORAGE	
EXTERNAL_FILE_NAME	
TISSUE_GROUP_TYPE	

Microscopy Product Information -	
MICROSCOPY_PRODUCT_ID	3687
IMAGE_BASENAME	pur2
CREATE_DATE	
INSTRUMENT	Biorad RTS Multiphoton
MICROSCOPE_TYPE	MULTIPHOTON
PLANE_COUNT	109
PRODUCT_TYPE	MOSAIC
PURL	
SESSION_NAME	
TELESCIENCE_SRB	P1170/Experiment_3433/Subject_167/Tissue_195/Microscopy_3687
X_RESOLUTION	.118 um/pixel
Y_RESOLUTION	.118 um/pixel
XSIZE	512
YSIZE	480

## Protocol:

1. Sample was prepared by Diana Price from an animal perfused with 4% paraformaldehyde. Very few additional details are available regarding sample preparation.
2. Masako Terada injected Lucifer Yellow into Purkinje cell.
3. Hiroyuki Hakozaiki took image on RTS2000 with mosaic acquisition.
4. Devolution has been performed by AutoDeblur version 9.3 from AutoQuant by using gold method.

## Specimen Preparation Information:

Specimen Description -	
ANATOMICAL_DETAIL	6191
ATLAS_COORD	, ,
CELL_TYPE	Purkinje neuron
ORGAN	brain
REGION	cerebellum
SYSTEM	central nervous system

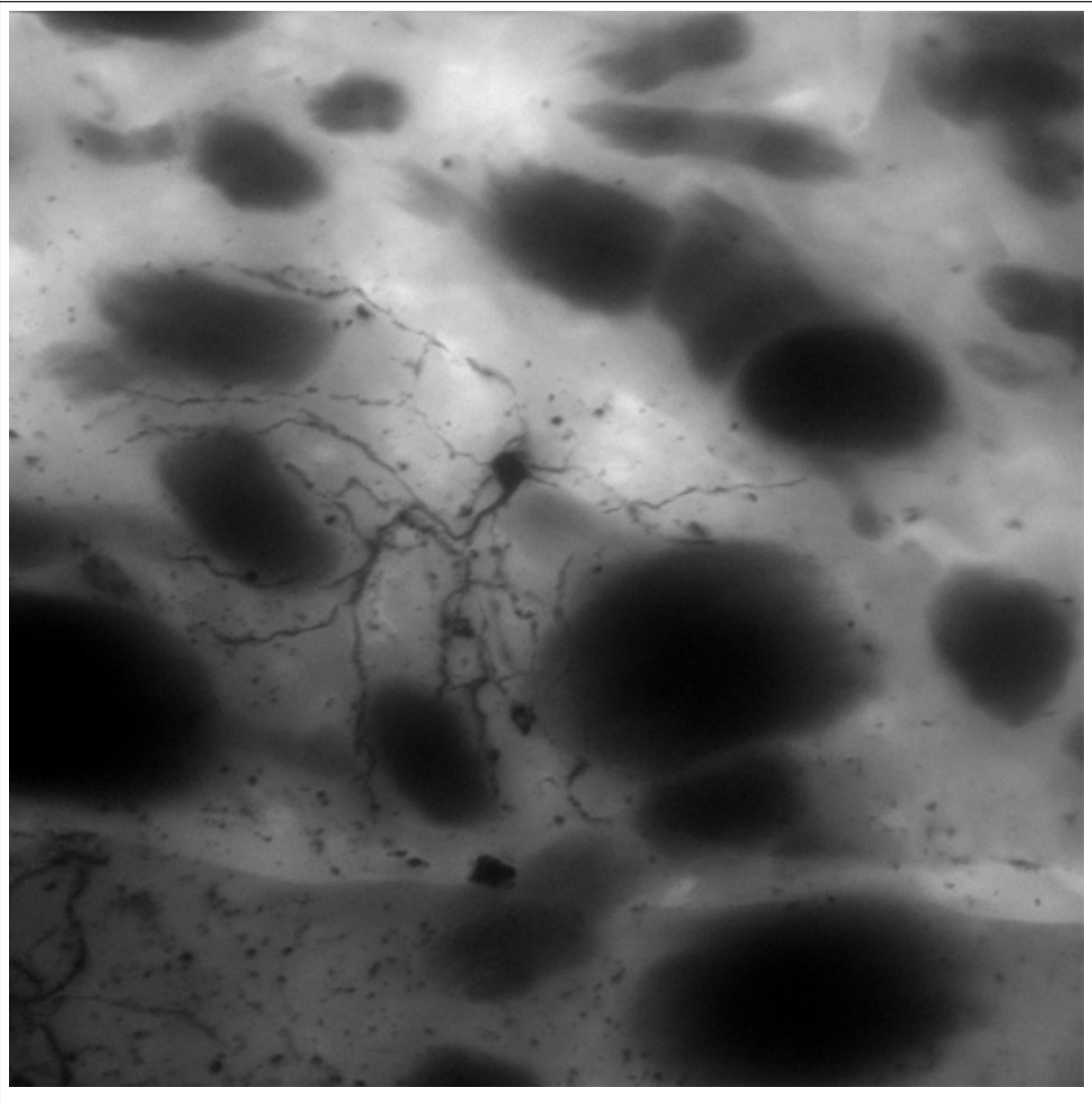
## Imaging Parameters:

Image Type -	
MOSAIC_ID	6087
X_POSITION	4 tiles
Y_POSITION	6 tiles
MOSAIC_DESC	10% overlap between tiles
OPTICAL_SECTION_SERIES	6061
CUTTING_PLANE	transverse
OPTICAL_PSFFILE	psf560z4-psf.zip
OPTICAL_Z_RESOLUTION	.5 um

Light Microscopy Product -	
LMPRODUCT_ID	6110
IMMERSION_MEDIUM	oil
LENS	Nikon Plan Apo
LENS_MAGNIFICATION	60 X
MOUNTING_MEDIUM	gelvatol
NUMERICAL_APERTURE	1.45

# Raw 2D Image

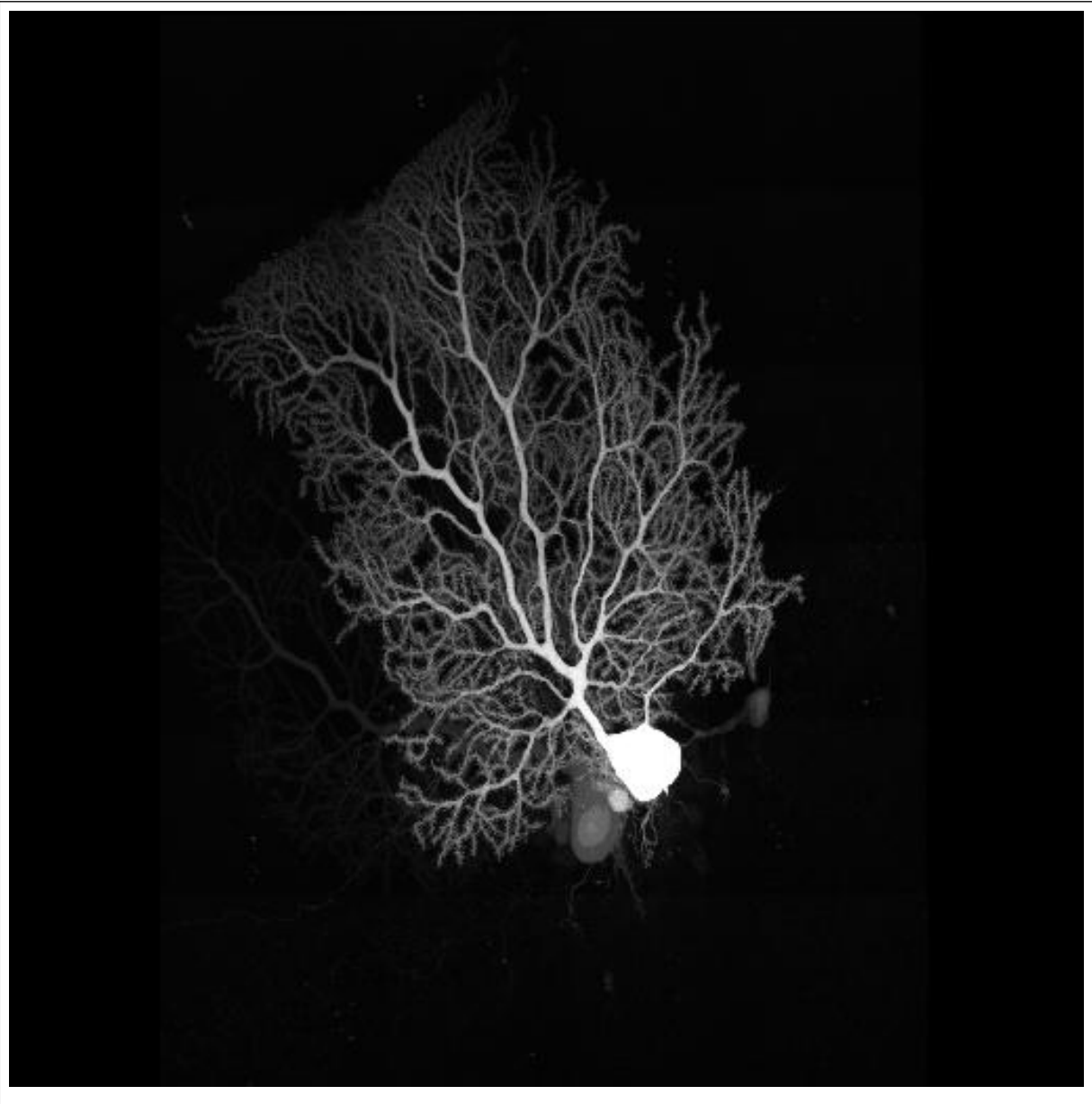
Raw Low Resolution 2D Image -



Raw 2D Image -	
IMAGE2D_ID	6164
DIGITIZED_BY	Hiro Hakozaki
DIGITIZING_PLATFORM	Biorad RCM8000 multiphoton microscope
IMAGE_DESC	Entire unprocessed multiphoton mosaic and z stack in a single file (pur_img.img) in RTS2000 custom .img image format. Please contact us if there is trouble reading this file and we will convert it into a different format.
IMAGE_FILE_FORMAT	RTS2000 custom
IMAGE_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1170/Experiment_3433/Subject_167/Tissue_195/Microscopy_3687/pur2_img.jpg
RAW_DATA_FILE	/telescience/home/CCDB_DATA_USER.portal/P1170/Experiment_3433/Subject_167/Tissue_195/Microscopy_3687/pur2_img.img
THUMBNAIL_DESC	Portion of a filled Purkinje cell injected with Lucifer Yellow and imaged using multiphoton microscopy as a high resolution mosaic. The entire cell is viewable in the reconstruction section. The original unprocessed mosaic and z stack is available for download.
THUMBNAIL_FILE	P1170/pur2_img_thmb.jpg
X_RESOLUTION	.118 um/pixel
Y_RESOLUTION	.118 um/pixel
X_SIZE	512 pixel
Y_SIZE	480 pixel

# Reconstruction

Reconstruction Image -



Reconstruction -	
RECONSTRUCTION3D_ID	6154
CROPPING_COORDINATE1	,
CROPPING_COORDINATE2	,
DECONVO_PROGRAM	AutoDeblur version 9.3 (Autoquant)
RECON_DESC	Zip archive containing: 1) reconstructed mosaic optical sections in Tiff format (Mosaic Tiff Series folder) without deconvolution; 2) Deconvolved images along with the PSF used to perform the deconvolution (Deconvolution folder); Rotation loops of original and deconvolved data (Movie file). The movies are both full resolution (Full.avi) and downsampled (Fit.avi) for both original and deconvolved data. Total file size is 431 Mb.
RECON_TYPE	optical section series/mosaic
VOLUME_DIMENSION	1919, 2675, 109
VOLUME_NAME	/telescience/home/CCDB_DATA_USER.portal/P1170/Experiment_3433/Subject_167/Tissue_195/Microscopy_3687/pur2_vol.zip
VOXEL_SCALE	.118, .118, .5
RECONSTRUCTION_IMAGES_ID	6154
NEUROINFORMATICA_URL	<a href="http://ccdb-aims.ucsd.edu:8880/showMe.jsp?instGUID=07E611BC-635F-1FA4-EF16-394013DA2CF8">http://ccdb-aims.ucsd.edu:8880/showMe.jsp?instGUID=07E611BC-635F-1FA4-EF16-394013DA2CF8</a>
RECON_IMAGE_DESC	Maximum intensity projection through an optical section series/mosaic of a Purkinje neuron from the mouse cerebellar cortex injected with Lucifer Yellow and imaged with multiphoton microscopy. Both the original data and a deconvolved version are available for download. The deconvolved data can be viewed through the animation link for this data set.
RECON_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1170/Experiment_3433/Subject_167/Tissue_195/Microscopy_3687/pur2_vol.jpg
VOLUME_THUMBNAIL	P1170/pur2_vol_thmb.jpg
ANIMATION_FILE	/telescience/home/CCDB_DATA_USER.portal/P1170/Experiment_3433/Subject_167/Tissue_195/Microscopy_3687/pur2DC_vol.avi
ANIMATION_FILE_FORMAT	AVI
ANIMATION_DESC	Rotation loop of a maximum intensity projection through a projection of an optical section series/mosaic of a Purkinje neuron filled with Lucifer Yellow and imaged with multiphoton microscopy. The image stack was deconvolved. The non-processed data can be viewed in the display image.

## **USER AGREEMENT**

Data Sharing and Citation Policy: The mission of the CCDB is to promote data sharing among scientists interested in cellular and subcellular anatomy and in developing computer algorithms for 3D reconstruction and modeling of such data. Data sets may be viewed or shared at the discretion of the author of the data. In some cases, the data may be freely viewed and downloaded without contacting the original author while in other cases, permission of the author may have to be obtained prior to downloading the data. In either case, failure to cite or give proper credit to the original authors who collected these data in subsequent published articles or presentations is a material breach of this User Agreement. CCDB requires all researchers re-analyzing these published data via the CCDB access to reference the original published article and the CCDB. An example of an appropriate acknowledgement is provided on the CCDB web site. CCDB is not in a position to police every intended use of these data. The scientific community will self-police the compliance of this contractual obligation.

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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.

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Maryann Martone