Cell Centered Database

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Microscopy Product #:3650 A2hippoHPF

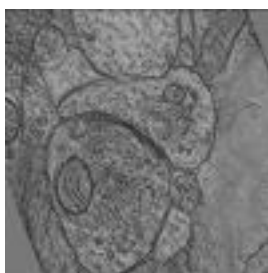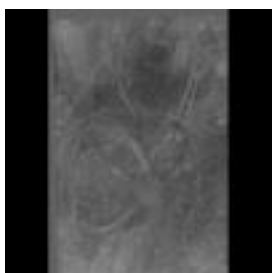For the most updated information, please visit

http://ccdb.ucsd.edu/CCDBWebSite/main?event=displaySum&mpid=3650

Image2D	Reconstruction	Segmentation

Project Information:

PROJECT_ID	P1243
PROJECT_NAME	High Pressure Freezing and Freeze Substitution
PROJECT_DESCRIPTION	This project is designed to achieve ultimate ultrastructure of animal tissues.
LEADER	Mark Ellisman, Gina Sosinsky, Ying Jones
FUNDING_AGENCY	NIH
PROJECT_START_DATE	2004-01-01 00:00:00.0
PROJECT_END_DATE	
COLLABORATORS	
PUBLICATION1	
PUBLICATION2	
PUBLICATION3	

Experiment Information -	
PURPOSE	To achieve better ultrastructure of brain and nerve tissue.
TITLE	HPF/FS on fixed rat brain and nerve tissues of rat
EXPERIMENTER	Ying Jones
EXPERIMENT_NAME	
EXPERIMENT_DATE	2006-08-17 00:00:00.0

Subject Information -

GROUP_BY	Type of fixation
SUBJECT_NAME	CAF-HPF
FIXATION_METHOD_ID	
SCIENTIFIC_NAME	rat
SPECIES	rat sprague dawley
STRAIN	sprague dawley
AGE	23 days
AGECLASS	young adult
ANIMAL_NAME	
LITTER_ID	
SEX	male
VENDOR	
WEIGHT	70 grams

Tissue -

ANATOMIC_LOCATION	hippocampus
MICROTOME	leica vibratome
ORIENTATION	coronal
THICKNESS	.5 um
TISSUE_PROD_STORAGE	
EXTERNAL_FILE_NAME	
TISSUE_GROUP_TYPE	High Pressure Freezing

Microscopy Product Information -

MICROSCOPY_PRODUCT_ID	3650
IMAGE_BASENAME	A2hippoHPF
CREATE_DATE	6-12-16 00:00:00.0
INSTRUMENT	JEOL 4000#1
MICROSCOPE_TYPE	IVEM
PLANE_COUNT	
PRODUCT_TYPE	DOUBLE TILT
PURL	
SESSION_NAME	
TELESCIENCE_SRB	P1243/Experiment_3396/Subject_110/Tissue_162/Microscopy_3650
X_RESOLUTION	nm/pixels
Y_RESOLUTION	nm/pixels
XSIZE	2242
YSIZE	3340

Protocol:

Specimen Preparation Information:

Specimen Description -	
ANATOMICAL_DETAIL	6150
ATLAS_COORD	, ,
ORGAN	brain
REGION	hippocampus
STRUCTURE	synapse
SYSTEM	central nervous

Imaging Parameters:

Image Type -	
DOUBLETILTIMAGESEQ_ID	6071
DOUBLET_DESC	double-tilt tomographic dataset of high pressure frozen hippocampus tissue
RANGE_MAX_X	60 degrees
RANGE_MAX_Y	60 degrees
RANGE_MIN_X	-60 degrees
RANGE_MIN_Y	-60 degrees
DOUBLET_DESC	double-tilt tomographic dataset of high pressure frozen hippocampus tissue
TILT_INCREMENTX	2degrees
TILT_INCREMENTY	2 degrees

Electron Microscopy Product -	
EM_PRODUCT_ID	6146
ACCELERATING_VOLTAGE	400 kV
EMBEDDING_MEDIUM	resin
MAGNIFICATION	30000
RECORDING_MEDIUM	film

Raw 2D Image

Raw Low Resolution 2D Image -
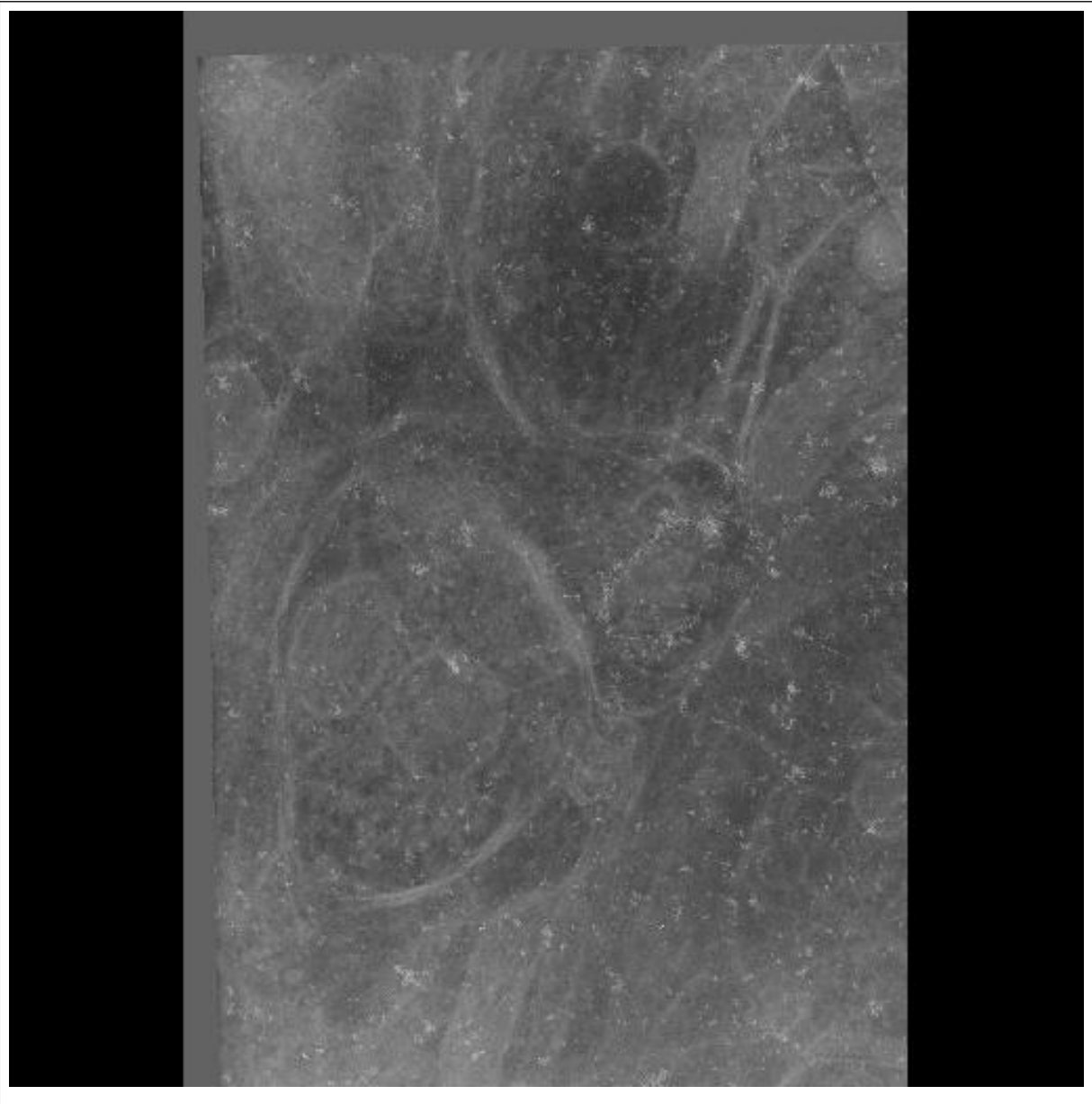
Raw 2D Image -	
IMAGE2D_ID	6126
BIT_DEPTH	16 bit
DIGITIZED_BY	Masako Terada
DIGITIZING_PLATFORM	Nikon SuperCool Scan 9000ED
IMAGE_DATE	2006-12-08 00:00:00.0
IMAGE_DESC	Tar file containing original digitized TIFF images, IMOD files (*com, *log, st, preali, fid, rawtlt,...), and TxBR files (*mat, *txt, preali, rawtlt, fid, ...) of high pressure frozen Hippocampus tissue, showing PSD and vesicles.
IMAGE_FILE_FORMAT	MRC
IMAGE_FILE_NAME	/usr/local/tomcat/webapps/FileUploadTool/temp_file_upload/A2hippo HPFa_img.jpg
MAGNIFICATION	30000 X
RAW_ANIMATION_DESC	Aligned tilt series of a synaptic contact in hippocampal area CA1 neuropil imaged using intermediate voltage electron microscopy, from tissue that was prepared by a chemical fixation followed by high pressure freezing.
RAW_ANIMATION_FILE	/telescience/home/CCDB_DATA_USER.portal/P1243/Experiment_3 396/Subject_110/Tissue_162/Microscopy_3650/A2hippoHPFa_img. mpg
RAW_DATA_FILE	/telescience/home/CCDB_DATA_USER.portal/P1243/Experiment_3 396/Subject_110/Tissue_162/Microscopy_3650/A2hippoHPF_img.ta r
THUMBNAIL_DESC	Zero degree tilt electron micrograph from a tilt series of a synaptic contact in hippocampal area CA1 neuropil imaged using intermediate voltage electron microscopy, from tissue that was prepared by a chemical fixation followed by high pressure freezing.
THUMBNAIL_FILE	/usr/local/tomcat/webapps/FileUploadTool/temp_file_upload/A2hippo HPFa_img_thmb.jpg
X_RESOLUTION	.0008 um/pixel
Y_RESOLUTION	.0008 um/pixel
X_SIZE	2242 pixels
Y_SIZE	3340 pixels

Reconstruction

Reconstruction Image -
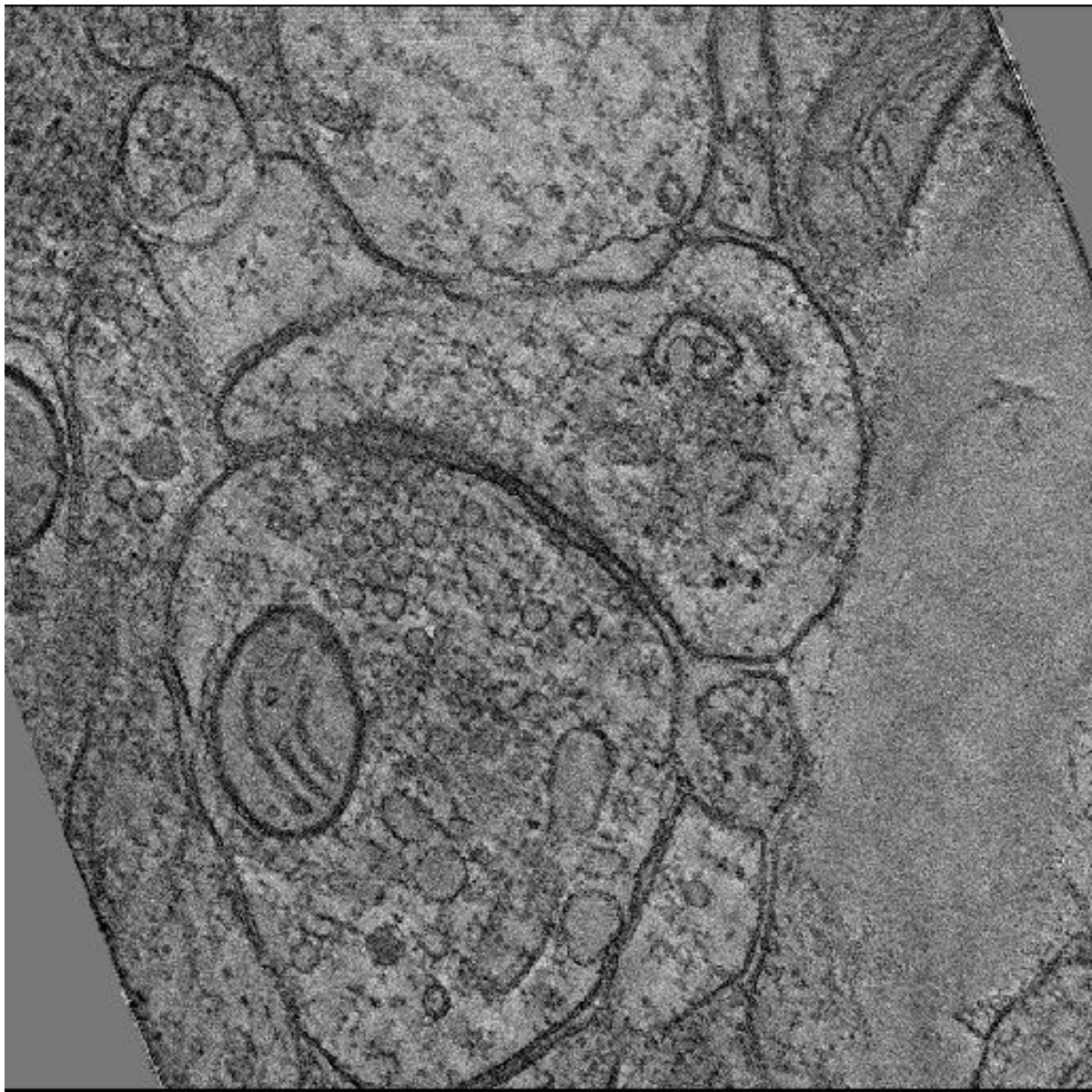
Reconstruction -	
RECONSTRUCTION3D_ID	6109
ALIGNMENT_METHOD	IMOD and TxBR
ALIGNMENT_PROGRAM	IMOD and TxBR
CORRELATED_VOLUME_NAME	A2hippoHPF_thick_proj.rec_rot_trim2
CROPPING_COORDINATE1	,
CROPPING_COORDINATE2	,
RECON_ALGORITHM	TxBR with projective
RECON_DATE	2006-12-20 00:00:00.0
RECON_DESC	Tar file containing TxBR (projective) combined tomographic volume of high pressure frozen hippocampus tissue, showing a synaptic contact.
RECON_PROGRAM	IMOD and TxBr
RECON_TYPE	double tilt electron tomography
VOLUME_DIMENSION	2242, 3340, 350
VOLUME_NAME	/telescience/home/CCDB_DATA_USER.portal/P1243/Experiment_3396/Subject_110/Tissue_162/Microscopy_3650/A2hippoHPF_vol.tar
VOXEL_SCALE	.0008, .0008, .0008
RECONSTRUCTION_IMAGES_ID	6109
RECON_IMAGE_DESC	Single computed slice through a tomographic reconstruction of a synaptic contact in hippocampal area CA1 neuropil, from tissue that was prepared by a chemical fixation followed by high pressure freezing.
RECON_FILE_NAME	/usr/local/tomcat/webapps/FileUploadTool/temp_file_upload/A2hippoHPF_vol.jpg
VOLUME_THUMBNAIL	/usr/local/tomcat/webapps/FileUploadTool/temp_file_upload/A2hippoHPF_vol_thmb.jpg
ANIMATION_FILE	/telescience/home/CCDB_DATA_USER.portal/P1243/Experiment_3396/Subject_110/Tissue_162/Microscopy_3650/A2hippoHPF_vol.mpg
ANIMATION_FILE_FORMAT	mpg
ANIMATION_DESC	Animation of a tomographic reconstruction of a synaptic contact in hippocampal area CA 1 neuropil, from tissue that was prepared by a chemical fixation followed by high pressure freezing.

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