

Cell Centered Database

University of California, San Diego

maryann@ncmir.ucsd.edu

Microscopy Product #:39 wt_g8T6

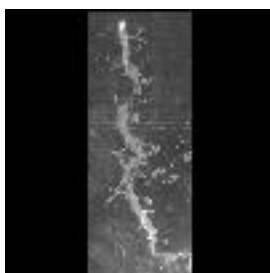
For the most updated information, please visit

<http://ccdb.ucsd.edu/CCDBWebSite/main?event=displaySum&mpid=39>

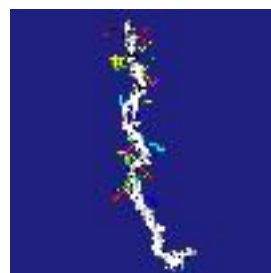
Image2D



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 5
EXPERIMENTER	Diana Price, Masako Terada, Andrea Thor
EXPERIMENT_NAME	
EXPERIMENT_DATE	2003-04-22 00:00:00.0

Subject Information -	
GROUP_BY	genetic manipulation
SUBJECT_NAME	wildtype/control
FIXATION_METHOD_ID	11
SCIENTIFIC_NAME	mus musculus
SPECIES	mouse
STRAIN	C57BL/129SvJ
AGE	7 months
AGECLASS	adult
ANIMAL_NAME	
LITTER_ID	
SEX	male
VENDOR	
WEIGHT	32 grams

Tissue -	
ANATOMIC_LOCATION	neostriatum
MICROTOME	vibratome
ORIENTATION	coronal
THICKNESS	100 um
TISSUE_PROD_STORAGE	p1207 Slide Box 1
EXTERNAL_FILE_NAME	NA
TISSUE_GROUP_TYPE	NA

Microscopy Product Information -	
MICROSCOPY_PRODUCT_ID	39
IMAGE_BASENAME	wt_g8T6
CREATE_DATE	2003-12-22 00:00:00.0
INSTRUMENT	Hitachi UHVEM
MICROSCOPE_TYPE	UHVEM
PLANE_COUNT	61
PRODUCT_TYPE	single axis tilt series
PURL	NA
SESSION_NAME	
TELESCIENCE_SRB	P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39
X_RESOLUTION	.021 um/pixel
Y_RESOLUTION	.021 um/pixel
XSIZE	1024
YSIZE	1024

Protocol:

Experiment #5 DAT KO mouse 04/22/03

Description: Photoconverted dye-filled striatal medium spiny

neurons for EM

Animal Info: ID# wt3 wt4

Weight: 34g 32g

DOB: 9/30/02 9/30/02

Protocol

1. Perfusion (at Duke)

Nembutal; 4% paraformaldehyde + 0.1% gluteraldehyde

2. Sectioned on Vibratome (at NCMIR)

Thickness = 100 microns

Store in 1X PBS in fridge

3. Fill cells with Lucifer yellow

4. Store slices with filled cells in 4% para in fridge

5. Wash 6x with PBS 1X (on ice)

6. When ready to begin photoconversion, turn on the chiller in confocal room. Set at -4°C . The refrigerator unit should be set at $\text{TEMP} < 45^{\circ}\text{C}$. Switch ON. Stage needs around 20 minutes to come to temperature. Pull unit out into hallway (to avoid increase in temperature).

6. Place slices in 2% glut/PBS on ice for 15 minutes

0.8 ml 25% gluteraldehyde

2 ml 5x PBS

6.2 ml ddH₂O

7. Briefly wash slices in PBS

8. Place slices in PBS/glycine for a few minutes

38 mg glycine

10 ml 1x PBS

9. Follow instructions for Photoconversion of Lucifer Yellow-filled cells

10. After photoconversion, remove DAB solution and wash slice 3x 10 minutes in generous volumes of PBS on ice. Must remove all DAB before beginning osmification.

Microwaving protocol for osmication, dehydration, and embedding of photoconverted slices

* Prepare Resin mix and let it sit covered and undisturbed until needed (instructions by fume hood in embedding area).

* Rinse slices with a generous amount of cold 1X PBS on ice for ~ 10 min.

* Turn on circulating bath (over 20°C, ~ RT): water bath (left hand side) will fill.

* Insert temperature probe

* Fill other T-beaker with water

* Set temperature to 35°C

* Open new bottle of 100% ethanol and prepare following dilutions:

90% ethanol

70% ethanol

50% ethanol

* Make up osmium solution under fume hood and chill on ice

* 1% osmium tetroxide in PBS on ice.

2.0 ml PBS 5X

then 5.5 2x distilled H₂O

2.5 ml Osmium 4%

* Rinse w/ 2x distilled H₂O ? 3 x 5min

* Warm up microwave for 2 minutes on high

* Label tubes & place in rack on ice

* Fill tubes with osmium solution (w/ meniscus at 0.5)

* Using glass hooks, transfer slices to tubes

* Remove temperature probe & set temp above 50°C.

* Put rack w. tubes in for 40 sec at full power

* Change rear water load in T-beaker

* Change osmium solution on ice and microwave for another 40 seconds at full power

* Rinse samples for 2 minutes in distilled water on benchtop (at RT)

* Insert petri bath with H₂O under rack

* Dehydration steps (2 x 40 seconds per step; all @ 35°C)

1st

2nd

50% EtOH

70% EtOH

90% EtOH

100% EtOH

100% Acetone

* All of the dehydration steps should be carried out in microcentrifuge tubes filled with 600 ml of solution. Temperature probe should be in petri dish and set for 35. Change water in rear water load when warm to touch.

* Change from water to acetone in petri bath under rack ? check acetone bath level every 3 minutes

* Infiltration steps (both @ 50°C):

With a 50/50 mixture of resin and acetone:

1 x 15

min

1:1 Resin:acetone

* Check rear water load at

7.5 minutes

Switch to 100% resin for 3 x 10 minutes:

1st

2nd

3rd

100% Resin

*Periodically check rear water load

* Flat embed samples between mould release slides and place in embedding oven under vacuum.

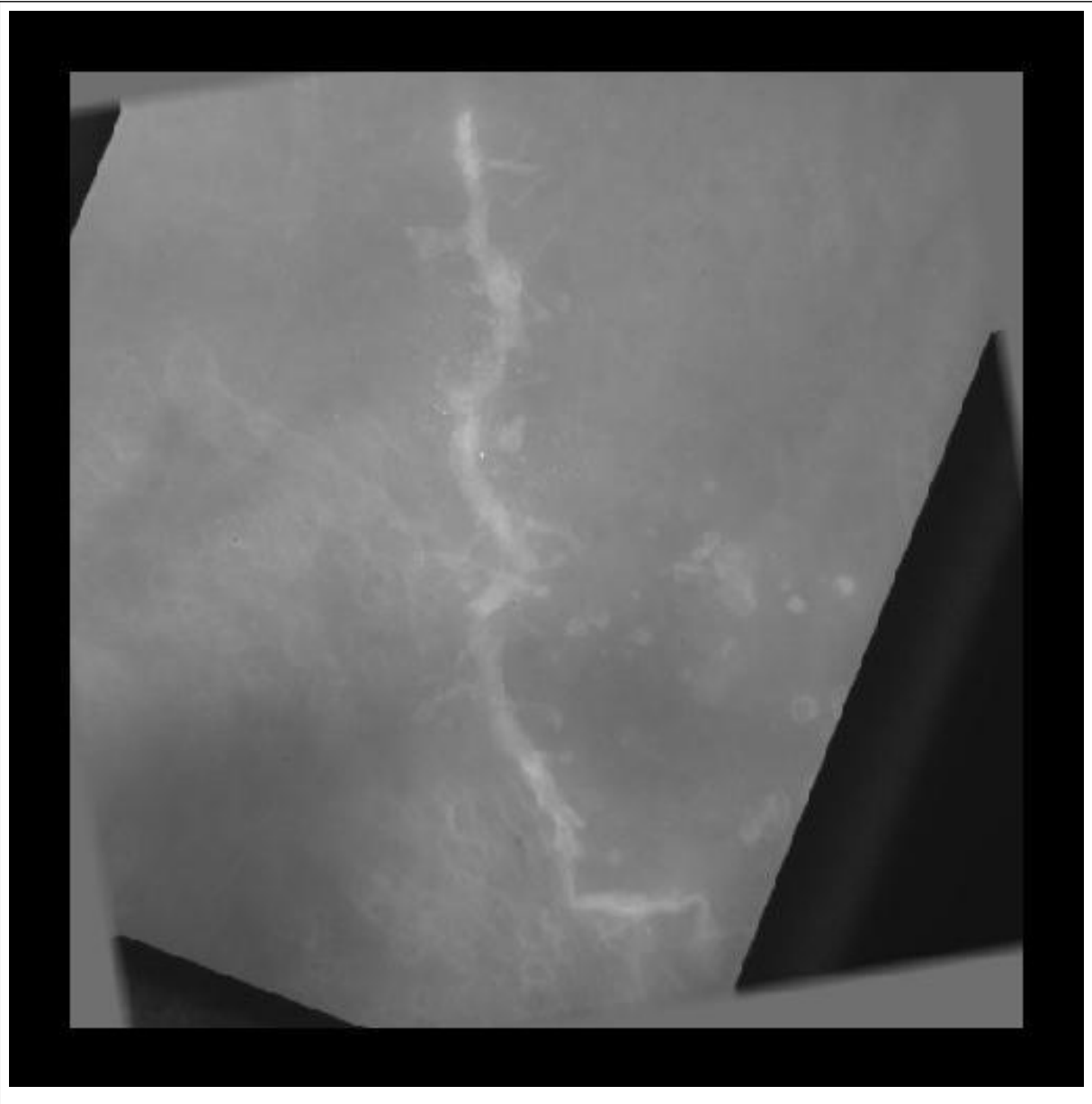
Image Type -	
SINGLE_TILT_IMAGE_SEQ_ID	6116
SINGLET_DESC	Spiny Dendrite Tomo
THROUGH_FOCUS_SERIES_ID	6000
ZSTEP	.25um
THROUGH_PSFFILE	061603B
THROUGH_DESC	transmitted light zseries through medium spiny dendride
THROUGH_NOTES	experiment 5 two sections on slide cell 061603C and 061603B
SINGLEILTIMAGESEQ_ID	10
TILT_INCREMENT	2 degrees
RANGE_MAX	68 degrees
RANGE_MIN	-68 degrees

Specimen Description -	
ANATOMICAL_DETAIL	6034
ATLAS	Paxinos and Frankliin, 2000
ATLAS_COORD	0, 0, 2.125
CELL_ID	061603B
CELL_TYPE	medium spiny neuron
ORGAN	brain
REGION	neostriatum
STRUCTURE	spiny dendrite
SYSTEM	central nervous

Electron Microscopy Product -	
EM_PRODUCT_ID	10
ACCELERATING_VOLTAGE	3 Mev
MAGNIFICATION	3000

Raw 2D Image

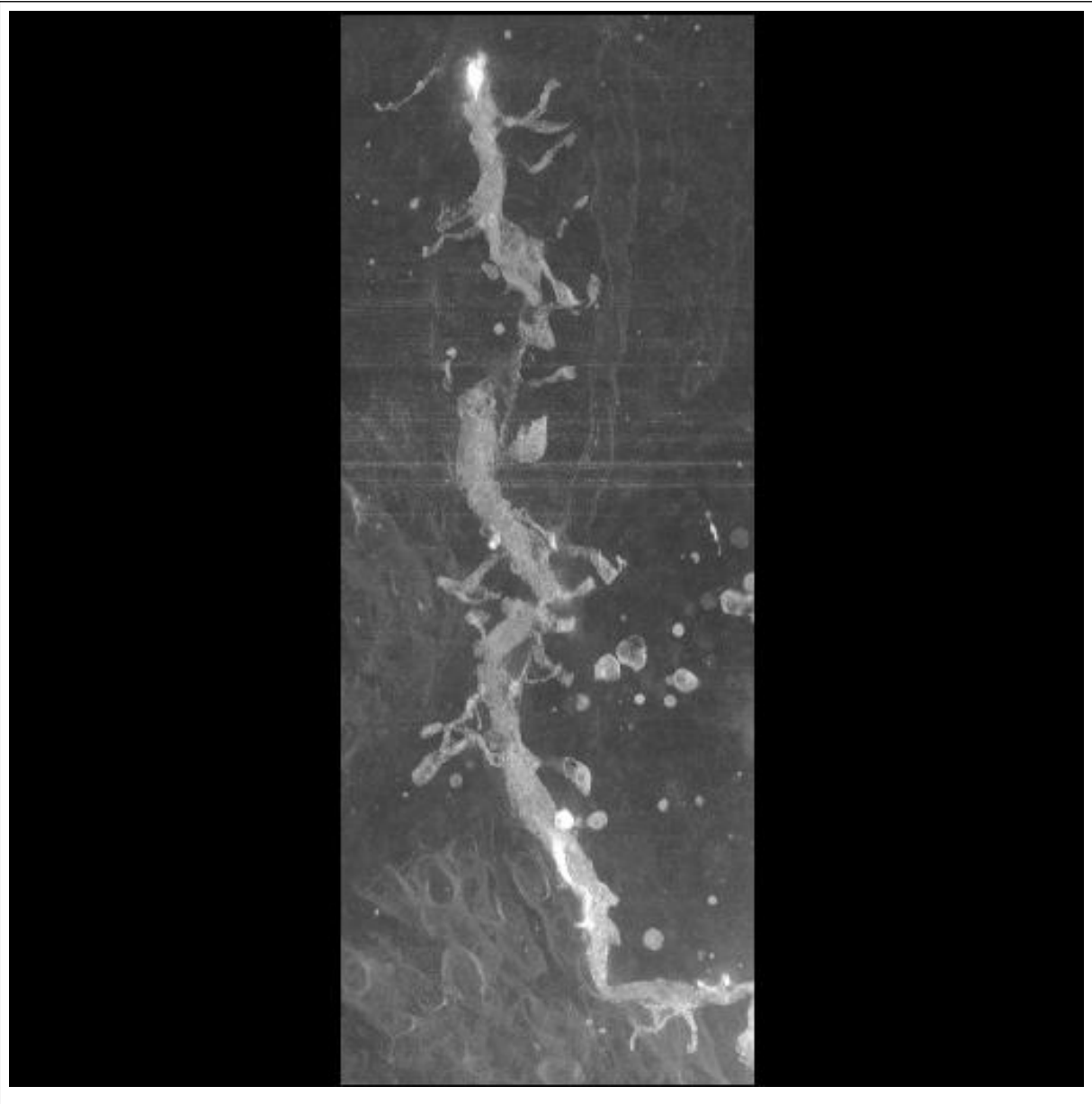
Raw Low Resolution 2D Image -



Raw 2D Image -	
IMAGE2D_ID	6134
IMAGE_DATE	2004-01-27 00:00:00.0
IMAGE_DESC	a .tar file containing IMOD volume reconstruction processing files. Specifically, the .ali, .fid, .preali and .seed files are in the .tar file.
IMAGE_FILE_FORMAT	imod mrc
IMAGE_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_img.jpg
MAGNIFICATION	3000 X
RAW_ANIMATION_DESC	a .mpg animation of the tilt series stack.
RAW_ANIMATION_FILE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_img.mpg
RAW_DATA_FILE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_image.tar
THUMBNAIL_DESC	A 512 by 512 image of a spiny dendrite, taken from the tilt series image stack.
THUMBNAIL_FILE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_img_thumb.jpg
X_SIZE	1024 pixels
Y_SIZE	1024 pixels

Reconstruction

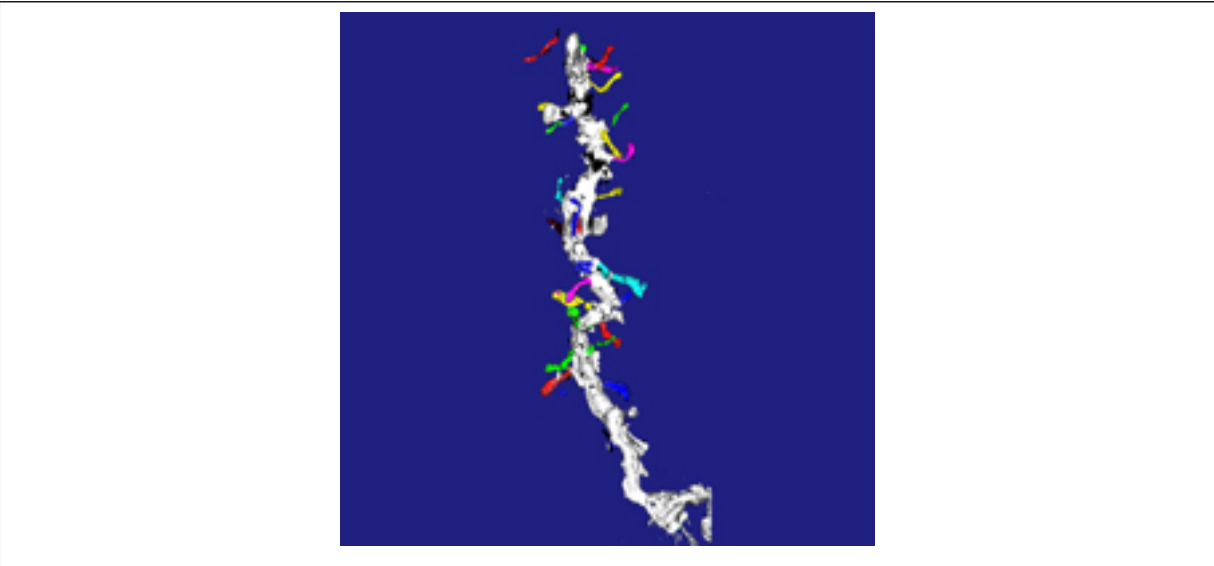
Reconstruction Image -



Reconstruction -	
RECONSTRUCTION3D_ID	39
ALIGNMENT_METHOD	semi-automatic
ALIGNMENT_PROGRAM	IMOD
BASENAME_ORIGFILE	NA
CORRELATED_VOLUME_NAME	wt_g14T5.70
CROPPING_COORDINATE1	,
CROPPING_COORDINATE2	,
FIDUCIAL_MARK_FILE	Mar2004DATKOM/WT/wt_g8T6/wt_g8T6.fid
IMAGE_MAP_FILE	Mar2004DATKOM/WT/wt_g8T6/wt_g8T6_imagemap.tiff
RECON_ALGORITHM	R-weighted back projection
RECON_DATE	2004-01-26 00:00:00.0
RECON_DESC	Reconstruction of selectively stained spiny dendrite from single axis tilt tomography
RECON_PROGRAM	IMOD
RECON_TYPE	single tilt electron tomography
THUMBNAIL	P1207/wt_g8T6_vt.jpg
VOLUME_DIMENSION	381, 975, 141
VOLUME_NAME	Mar2004DATKOM/WT/wt_g8T6/wt_g8T6_vol.tar
VOXEL_SCALE	, ,
RECONSTRUCTION_IMAGES_ID	39
RECON_IMAGE_DESC	Maximum intensity project of a tomographic reconstruction of a spiny dendrite from a 4 ?m thick section throuh medium spiny neuron of mouse caudateputamen
RECON_FILE_NAME	Mar2004DATKOM/WT/wt_g8T6/wt_g8T6_MIP.gif
VOLUME_THUMBNAIL	P1207/wt_g8T6_vt.jpg
ANIMATION_FILE	Mar2004DATKOM/WT/wt_g8T6/wt_g8T6_rotmovie.qt
ANIMATION_DESC	maximum intensity projection of selectively stained spiny dendrite rotated along the y axis

Segmentation

Segmentation Image -



Segmentation -	
SEGMENTED_OBJECT_ID	189
OBJECT_DESC	spiny dendrite with individual spines segmented
OBJECT_TYPE	surface
SEGMENTED_OBJ_2D_IMAGE	Mar2004DATKOM/thumbnails/wt_g8T6_seg.jpg
SEGMENT_PERSON_NAME	Masako Terada
SEG_DESC	Spine necks were manually defined using Analyze image edit functions. Segmentation was then performed using morphology and object definition tools provided by Analyze; segmented objects are contained in the Analyze .obj file
SEG_FILE_NAME	Mar2004DATKOM/WT/wt_g8T6/wt_g8T6_seg.tar

Segmentation -	
SEGMENTED_OBJECT_ID	6488
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6492
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6498
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6503
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6507
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6512
ANALYSIS_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/segmented_object_input_template_wt_g8T6.xls
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENTED_OBJ_2D_IMAGE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_seg.jpg
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines
SEG_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_seg.tar
THUMBNAIL	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_seg_thumb.jpg

Segmentation -	
SEGMENTED_OBJECT_ID	6485
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6486
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6487
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6489
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6490
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6491
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6493
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6481
ANALYSIS_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/segmented_object_input_template_wt_g8T6.xls
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENTED_OBJ_2D_IMAGE	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_seg.jpg
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines
SEG_FILE_NAME	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_seg.tar
THUMBNAIL	/telescience/home/CCDB_DATA_USER.portal/P1207/Experiment_19/Subject_19/Tissue_33/Microscopy_39/wt_g8T6_seg_thumb.jpg

Segmentation -	
SEGMENTED_OBJECT_ID	6482
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6484
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6494
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6497
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6499
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6495
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6496
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6505
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6506
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6508
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6509
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6510
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6511
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6500
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6501
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6502
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6504
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

Segmentation -	
SEGMENTED_OBJECT_ID	6483
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
ANALYZE_DESC	Volume, surface area and lengths for the dendritic shaft and individual spines. All partial spines are noted with a "p" in the object's name. Subsequently, no measurements are taken of these partial spines.
DISPLAY_IMAGE_DESC	a 512 by 512 image of a segmented spiny dendrite specimen.
DOWNLOADABLE_FILE_DESC	a .tar file containing the segmented shaft and dendritic spines from a spiny dendrite specimen.
IS_MANUAL	N
LABELING_RANK	none
NUMBER_OF_OBJECT	0
SEGMENT_PERSON_NAME	Masako Terada
SEG_ALGORITHM	simple threshold
SEG_DESC	Spiny dendrite shaft and dendritic spines

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ACKNOWLEDGEMENT

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Maryann Martone