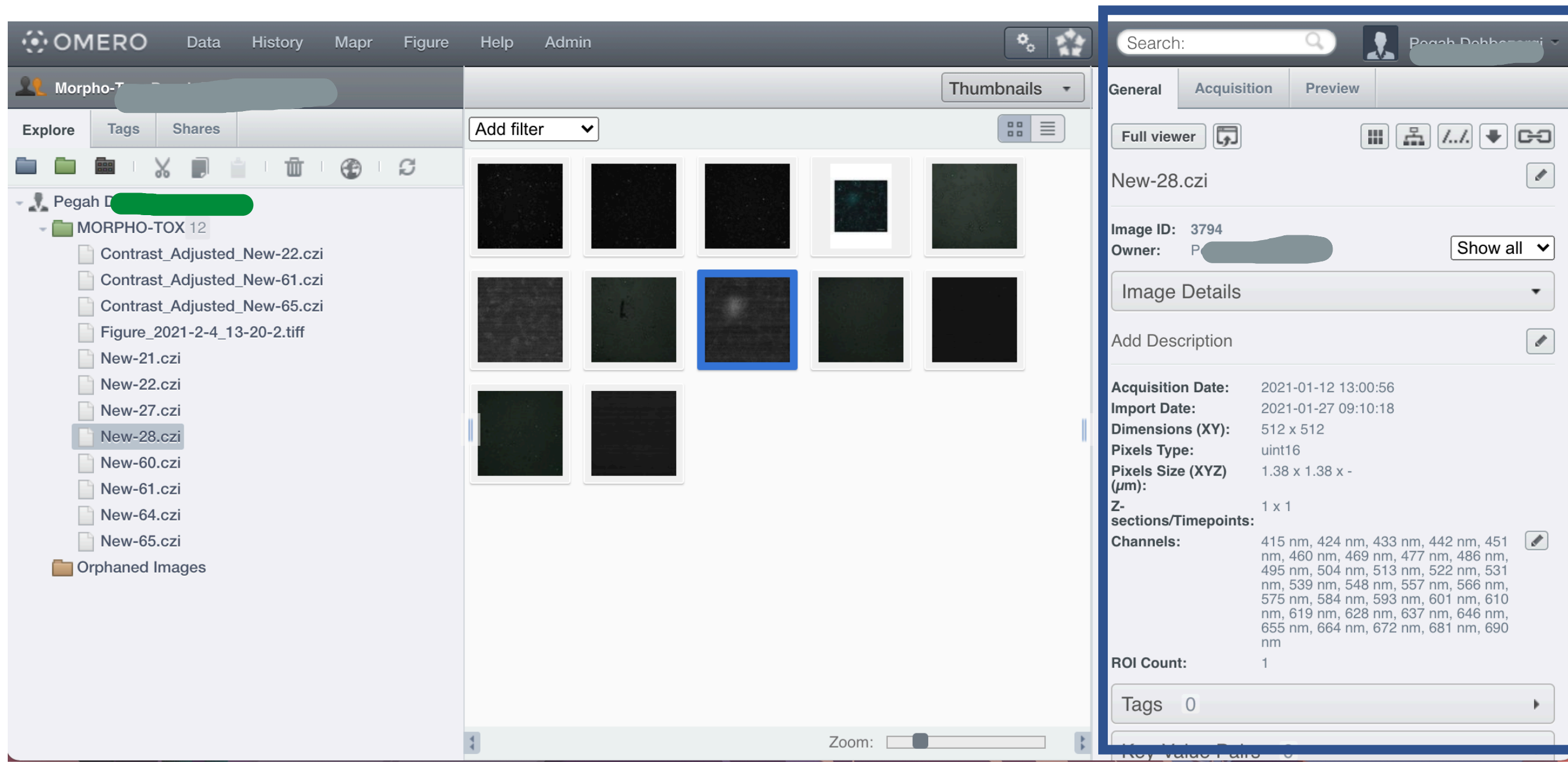


OMERO: Upload Metadata

- Having imported images into OMERO, you can see Metadata associated with them on the right hand side of OMERO window. You can see them either using OMERO.insight or OMERO.web.

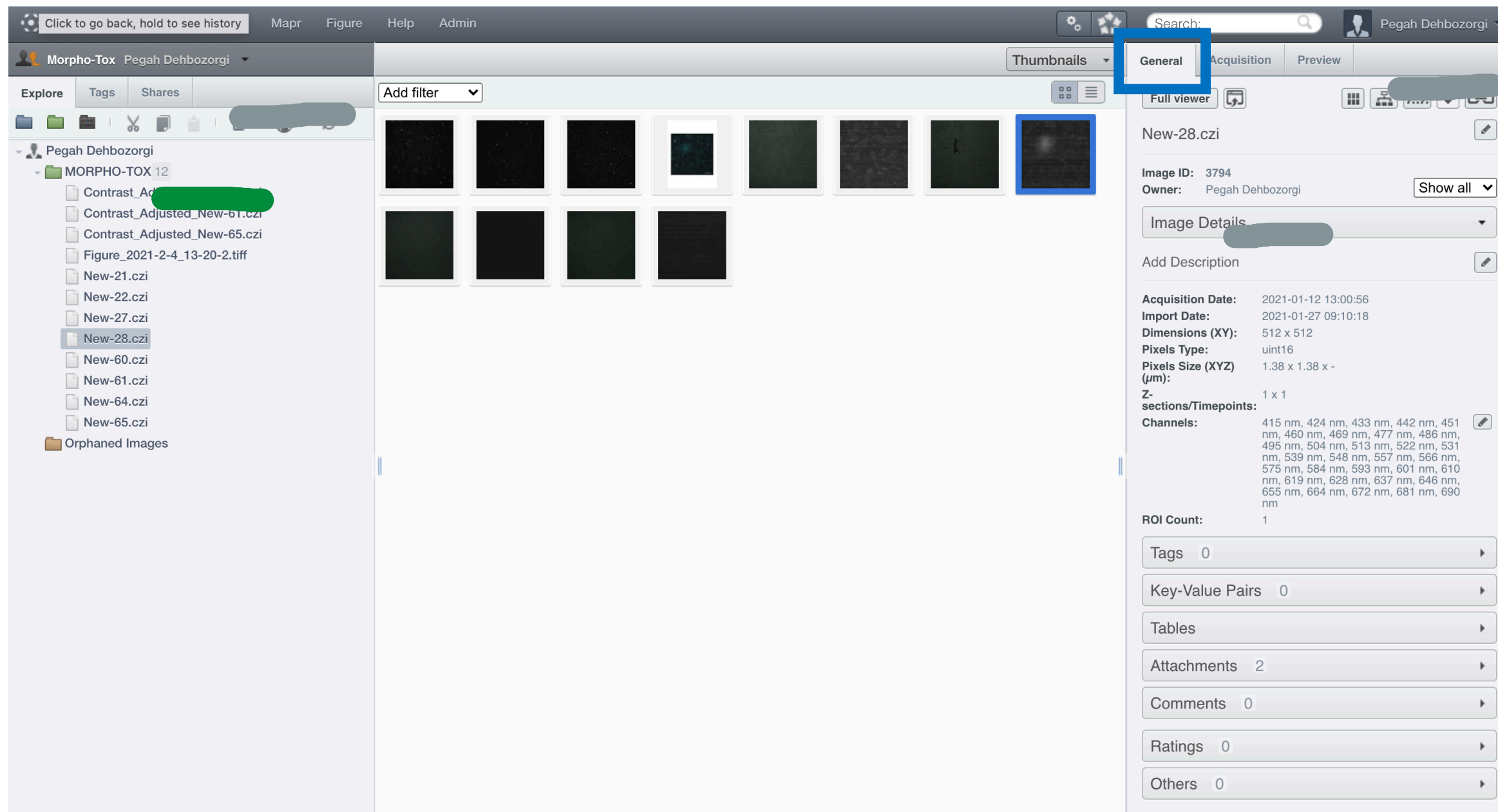


The screenshot displays the OMERO web interface. On the left, a file browser shows a folder named 'MORPHO-TOX 12' containing several image files, with 'New-28.czi' selected. The main area shows a grid of image thumbnails, with one thumbnail highlighted in blue. On the right, a metadata panel for the selected image 'New-28.czi' is visible, showing details such as Image ID (3794), Owner, Acquisition Date (2021-01-12 13:00:56), Import Date (2021-01-27 09:10:18), Dimensions (512 x 512), and a list of channels.

Property	Value
Image ID	3794
Owner	P [redacted]
Acquisition Date	2021-01-12 13:00:56
Import Date	2021-01-27 09:10:18
Dimensions (XY)	512 x 512
Pixels Type	uint16
Pixels Size (XYZ) (µm)	1.38 x 1.38 x -
Z-sections/Timepoints	1 x 1
Channels	415 nm, 424 nm, 433 nm, 442 nm, 451 nm, 460 nm, 469 nm, 477 nm, 486 nm, 495 nm, 504 nm, 513 nm, 522 nm, 531 nm, 539 nm, 548 nm, 557 nm, 566 nm, 575 nm, 584 nm, 593 nm, 601 nm, 610 nm, 619 nm, 628 nm, 637 nm, 646 nm, 655 nm, 664 nm, 672 nm, 681 nm, 690 nm
ROI Count	1

OMERO: Upload Metadata

- In General tab, you will find general information about the imported image, for instance indication of size of the image, or Channels.



The screenshot displays the OMERO web interface. The left sidebar shows a file tree under 'MORPHO-TOX 12' with 'New-28.czi' selected. The main area shows a grid of image thumbnails, with 'New-28.czi' highlighted. The right panel is the 'General' tab, which contains the following metadata:

- Image ID:** 3794
- Owner:** Pegah Dehbozorgi
- Acquisition Date:** 2021-01-12 13:00:56
- Import Date:** 2021-01-27 09:10:18
- Dimensions (XY):** 512 x 512
- Pixels Type:** uint16
- Pixels Size (XYZ) (µm):** 1.38 x 1.38 x -
- Z-sections/Timepoints:** 1 x 1
- Channels:** 415 nm, 424 nm, 433 nm, 442 nm, 451 nm, 460 nm, 469 nm, 477 nm, 486 nm, 495 nm, 504 nm, 513 nm, 522 nm, 531 nm, 539 nm, 548 nm, 557 nm, 566 nm, 575 nm, 584 nm, 593 nm, 601 nm, 610 nm, 619 nm, 628 nm, 637 nm, 646 nm, 655 nm, 664 nm, 672 nm, 681 nm, 690 nm
- ROI Count:** 1

Below the metadata, there are sections for 'Tags' (0), 'Key-Value Pairs' (0), 'Tables', 'Attachments' (2), 'Comments' (0), 'Ratings' (0), and 'Others' (0).

OMERO: Upload Metadata

- In Acquisition tab, you can see instrument settings, for example indication of objective lens which was used to record this data. You can also see all the Metadata associated with each Channels for the specific image.

The screenshot displays the OMERO web interface. The top navigation bar includes 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. The user is logged in as 'Morpho-Tox'. The left sidebar shows a file explorer with a folder named 'MORPHO-TOX 12' containing several image files, with 'New-28.czi' selected. The main area shows a grid of image thumbnails, with the selected image highlighted in blue. The right panel is titled 'Acquisition' and shows the following metadata:

- Microscope:** Type: Inverted; Model: Plan-Apochromat 20x/0.8 M27; Nominal magnification: 20.0; Lens NA: 0.8; Immersion: Air; Correction: Unknown; Working distance (μm): 610.0.
- Detector:** Type: Unknown.
- Detector:** Type: Other; Offset: 0.0; Zoom: 0.6.
- Image:** Channels: 415 nm, 424 nm.
- Pin hole size (μm):** 699.3549640945.
- Fluor:** ChS.
- Mode:** SpectralImaging.
- Detector:** Type: Other; Zoom: 0.6.

The URL at the bottom is https://repo.ipht-jena.de/webclient/img_detail/3797?dataset=204.

OMERO: Upload Metadata

- In Preview tab, you can view the image or also change the display settings, turning on or off a specific channel for an image and even save it.

The screenshot displays the OMERO web interface. The top navigation bar includes 'OMERO', 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. The user is logged in as 'Morpho-Tox'. The main interface is divided into three sections: a file explorer on the left, a thumbnails grid in the center, and a full viewer on the right. The file explorer shows a folder named 'MORPHO-TOX 12' containing several image files, with 'New-28.czi' selected. The thumbnails grid shows a grid of image thumbnails, with the selected image highlighted. The full viewer shows a grayscale image of a cell, with a histogram and various display settings. The histogram shows the distribution of pixel intensities for each channel. The display settings include 'Grayscale' (checked), 'Active' (unchecked), and 'Show Histogram' (unchecked). The channels are listed with their respective wavelengths and pixel counts.

Channel	Wavelength (nm)	Pixel Count
415 nm	415 nm	498
424 nm	424 nm	1385
433 nm	433 nm	2726
442 nm	442 nm	4457
451 nm	451 nm	6164
460 nm	460 nm	8892
469 nm	469 nm	10530
477 nm	477 nm	11787
486 nm	486 nm	12424
495 nm	495 nm	13358

OMERO: Upload Metadata

- Sometimes beside Metadata which will be imported automatically into OMERO while importing Images, you may have for instance, sample Metadata which are not recordable during the experiment , or even Metadata provided in **.txt** or **.xlsx** file formats along with your images. The only step which needed to be taken before importing them into OMERO is changing their format (whatever it is) to **.CSV** file format.
- In the following you will find out how you can import Metadata from a local **.CSV** and end with a OMERO.table.

OMERO: Upload Metadata

- First of all you need to login into OMERO.web
- Choose your desired Dataset which you need to incorporate the Metadata
- Attach the locally saved **.CSV** file to that Dataset

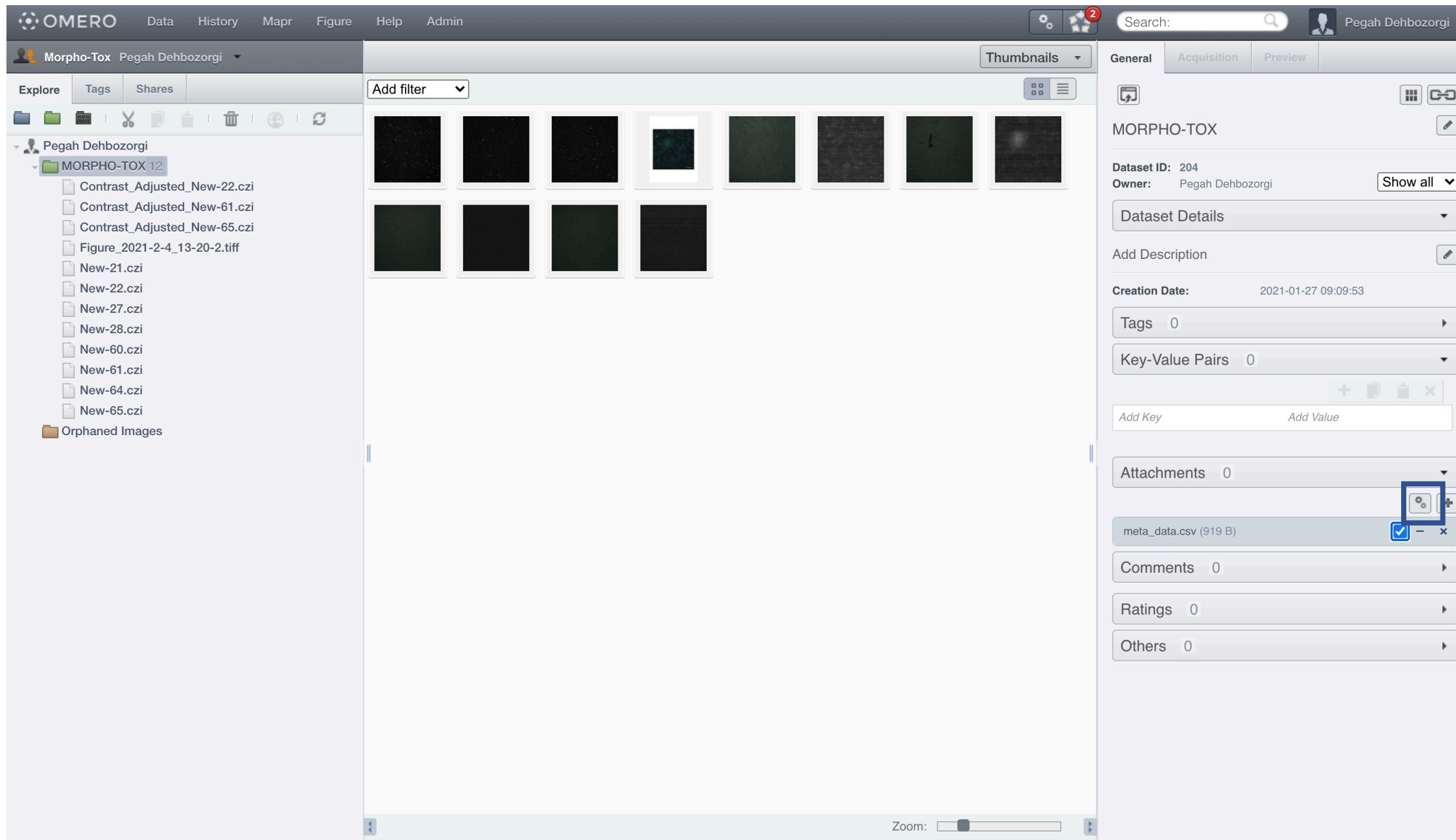
Desired Dataset

The screenshot displays the OMERO web interface. On the left, a file explorer shows a dataset named 'MORPHO-TOX 12' with various image files. A blue arrow points to this dataset from the text 'Desired Dataset'. The main area shows a grid of image thumbnails. On the right, the 'General' tab for the dataset 'MORPHO-TOX' is visible, showing details like 'Dataset ID: 204' and 'Owner: [redacted]'. Under the 'Attachments' section, a file named 'meta_data.csv (919 B)' is listed, with a blue arrow pointing to it from the text 'Attaching .CSV file to the Dataset'. The interface includes a search bar, navigation tabs, and a zoom control at the bottom.

Attaching .CSV file to the Dataset

OMERO: Upload Metadata

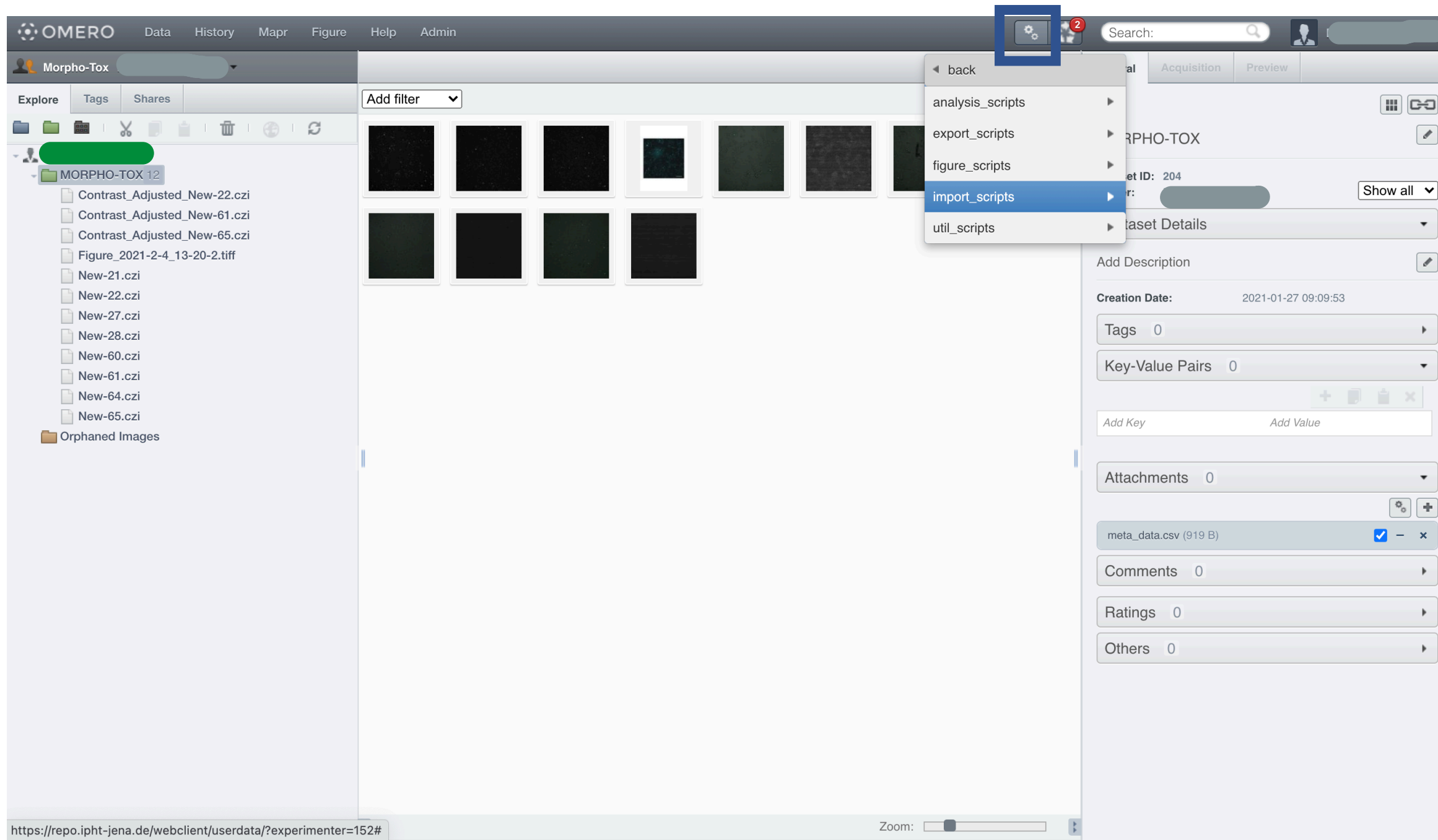
- Select the **.CSV** file by clicking on  icon next to the plus button.



The screenshot displays the OMERO web interface. On the left, a file explorer shows a folder named 'MORPHO-TOX 12' containing several .czi files and a .tiff file. The main area shows a grid of image thumbnails. On the right, the 'General' tab is active, displaying dataset details for 'MORPHO-TOX'. A 'meta_data.csv' file (919 B) is listed under the 'Attachments' section, with a blue checkmark and a plus icon next to it. A blue box highlights the plus icon next to the 'meta_data.csv' entry, indicating the step to click on the gear icon next to the plus button to select the .CSV file.

OMERO: Upload Metadata

- Find the script icon  above the central panel. Then you need to expand it and find the Import Script.



The screenshot displays the OMERO web client interface. At the top, a navigation bar includes 'OMERO', 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. A search bar and user profile are on the right. Below the navigation bar, a sidebar on the left shows a file tree for 'MORPHO-TOX 12' with various image files. The central panel shows a grid of image thumbnails. A blue box highlights a gear icon (script icon) in the top right of the central panel. A dropdown menu is open, listing script categories: 'analysis_scripts', 'export_scripts', 'figure_scripts', 'import_scripts' (highlighted in blue), and 'util_scripts'. The right panel shows details for a dataset, including 'Creation Date: 2021-01-27 09:09:53', 'Tags: 0', 'Key-Value Pairs: 0', and 'Attachments: 0'. A file named 'meta_data.csv (919 B)' is listed with a checked checkbox. The browser address bar at the bottom shows 'https://repo.ipht-jena.de/webclient/userdata/?experimenter=152#'. A zoom slider is visible in the bottom right corner.

OMERO: Upload Metadata

- Select Populate Metadata Script from Import Script.

The screenshot displays the OMERO web client interface. The top navigation bar includes 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. The main content area is divided into three sections: a left sidebar for file exploration, a central image viewer, and a right-hand metadata panel. The left sidebar shows a tree view with a folder named 'MORPHO-TOX 12' containing several image files (e.g., Contrast_Adjusted_New-22.czi, New-21.czi, etc.) and an 'Orphaned Images' folder. The central image viewer displays a grid of image thumbnails. A dropdown menu is open over the image viewer, showing 'Populate Metadata...' as the selected option. The right-hand panel displays the metadata for the dataset 'MORPHO-TOX', including fields for Dataset ID (204), Owner, Creation Date (2021-01-27 09:09:53), Tags (0), Key-Value Pairs (0), Attachments (0), and a list of files including 'meta_data.csv (919 B)'. The browser address bar at the bottom shows the URL 'https://repo.ipht-jena.de/webclient/script_ui/51/'. The browser's address bar also shows 'Zoom: [slider]

OMERO: Upload Metadata

- By clicking on the Populate Metadata, you should see the script dialog. Click on the Run Script button.

Populate Metadata.py

This script processes a csv file, attached to a container, converting it to an OMERO.table, with one row per Image or Well. The table data can then be displayed in the OMERO clients. For full details, see <http://help.openmicroscopy.org/scripts.html#metadata>
Authors: Emil Rozbicki, OME Team
Contact: ome-users@lists.openmicroscopy.org.uk

Data Type: *

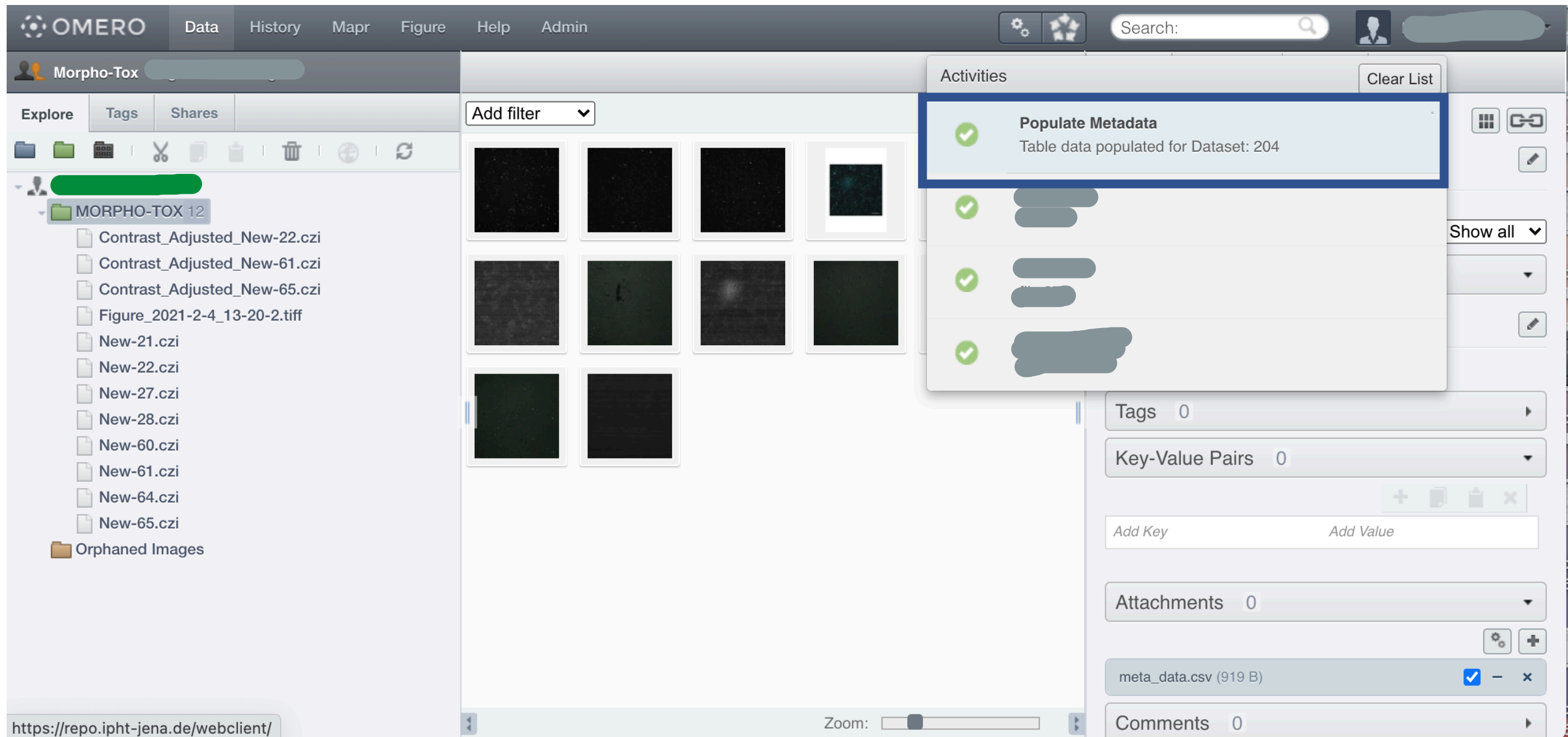
IDs: *

File Annotation: OR No file chosen

[View Script](#)

OMERO: Upload Metadata

- Wait to see a message in the activities section .



The screenshot displays the OMERO web client interface. The top navigation bar includes 'OMERO', 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. The user is logged in as 'Morpho-Tox'. The main workspace shows a grid of image thumbnails. On the right, the 'Activities' panel is open, displaying a list of recent actions. The top activity, 'Populate Metadata', is highlighted with a blue border and shows a green checkmark and the text 'Table data populated for Dataset: 204'. Below it are three other activities, each with a green checkmark and redacted text. The bottom right panel shows the 'meta_data.csv' file attached to the dataset.

OMERO: Upload Metadata

- Click again on your Dataset, refresh the tree, and you will see that there is a new Attachment above previously uploaded .CSV file .

The screenshot displays the OMERO web interface. The top navigation bar includes 'OMERO', 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. The user is logged in as 'Morpho-Tox'. The left sidebar shows a tree view with a folder named 'MORPHO-TOX 12' containing various image files like 'Contrast_Adjusted_New-22.czi' and 'New-21.czi'. The main area shows a grid of image thumbnails. The right sidebar contains a 'General' tab with dataset details: 'Dataset ID: 204', 'Owner: [redacted]', and 'Creation Date: 2021-01-27 09:09:53'. The 'Attachments' section is highlighted with a blue box, showing two items: 'bulk_annotations (76.13 KB)' and 'meta_data.csv (919 B)'. The bottom status bar shows a zoom slider.

OMERO: Upload Metadata

- Click on any single image inside your Dataset and you will see that in "Tables" in the right-hand side of window, there are new values coming originally from your **.CSV** file.

The screenshot displays the OMERO web interface. The top navigation bar includes 'Data', 'History', 'Mapr', 'Figure', 'Help', and 'Admin'. The main content area shows a dataset named 'Morpho-Tox' with a grid of image thumbnails. The 'New-27.czi' file is selected, and its metadata is displayed in the 'Tables' section on the right. The metadata includes fields like Image Name, cells, Excitation, Detection, Type, Depth, Dimension x/y, Time point, Substance, Cryo batch, Passage, Well, Scan, and Image.

INFO	
Image Name:	New-27.czi
cells:	HEK FlpIn AOR
Excitation:	405nm
Detection:	446-686nm + PMT
Type:	confocal
Depth:	16 Bit
Dimension x:	512
Dimension y:	512
Time point:	t0
Substance:	no substance
Cryo batch:	1
Passage:	3
Well:	3
Scan:	1
Image:	3793