

Kuwahara +

# What is Kuwahara Filter?

The Kuwahara filter is a non-linear smoothing filter used in image processing to reduce noise and enhance details while preserving edges. It was invented by Japanese computer scientist Masayuki Kuwahara in 1976.

The Kuwahara filter works by dividing an image into non-overlapping squares and then computing the mean and variance of pixel values within each square. Based on these statistics, the filter replaces the pixel values within each square with the mean value, resulting in a smoothed image.

The Kuwahara filter is unique because it adapts its smoothing effect based on the local variance of pixel values, resulting in different levels of smoothing for regions with varying texture and detail. This makes it particularly effective for reducing noise while preserving edges and fine details in textured regions of an image.

Originally the Kuwahara filter was proposed for use in processing RI-angiocardigraphic images of the cardiovascular system. The fact that any edges are preserved when smoothing makes it especially useful for feature extraction and segmentation in medical imaging.

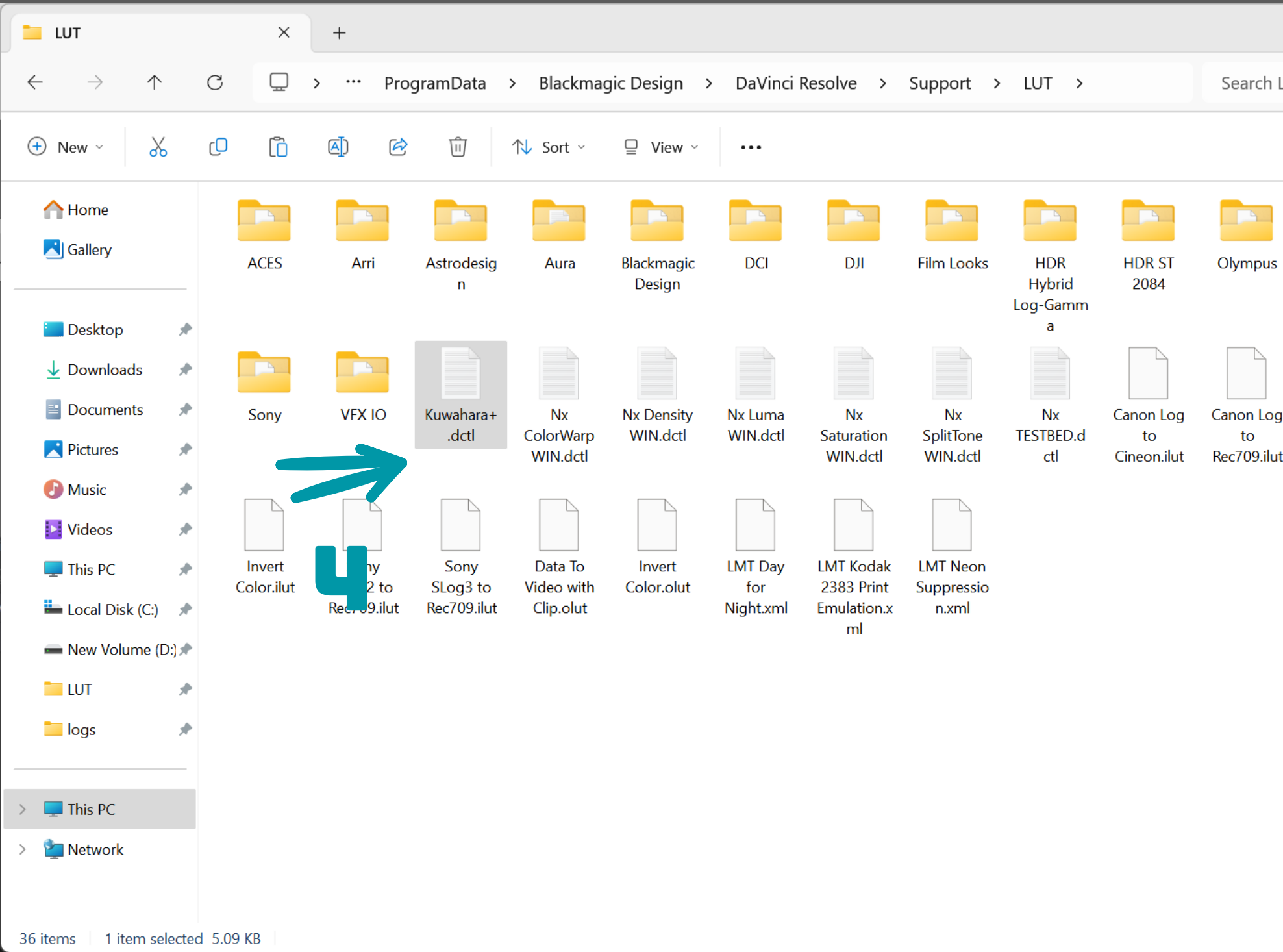
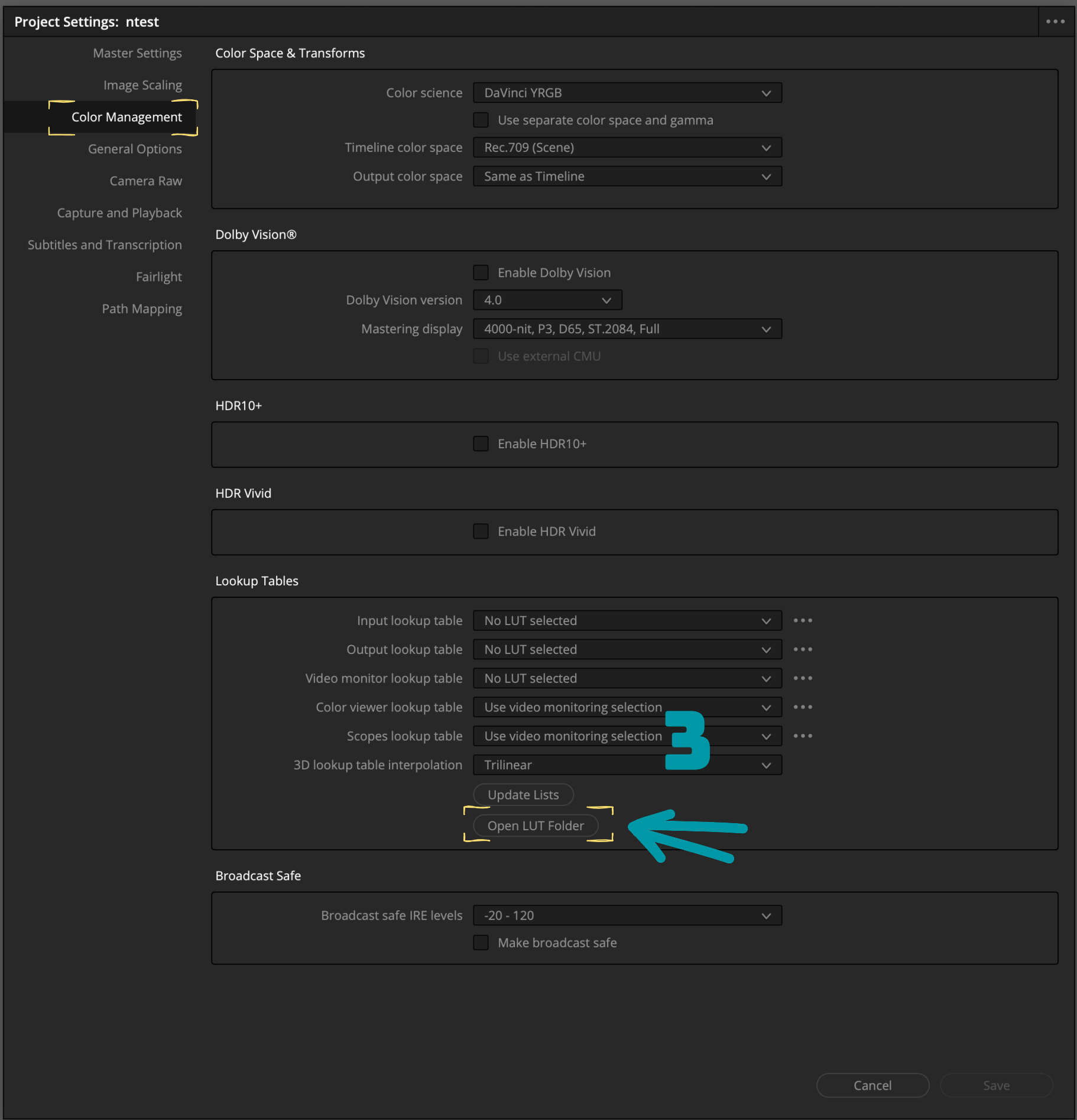
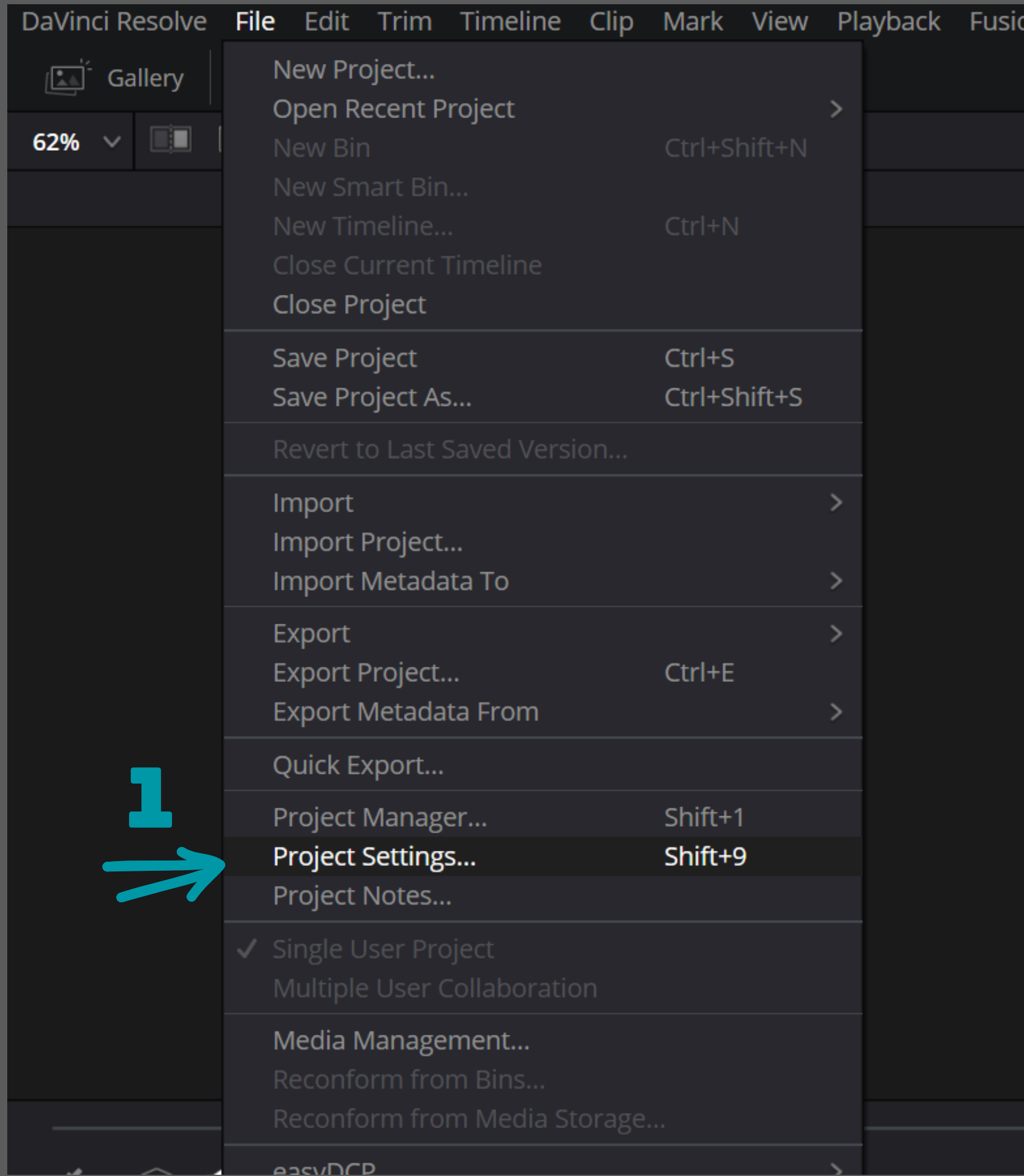
The Kuwahara filter also finds many applications in artistic imaging and fine-art photography due to its ability to remove textures and sharpen the edges. The level of abstraction helps create a desirable painting-like effect in artistic photographs especially in the case of the colored image version of the filter. These applications have known great success and have encouraged similar research in the field of image processing for the arts.



# Installing Kuwahara+

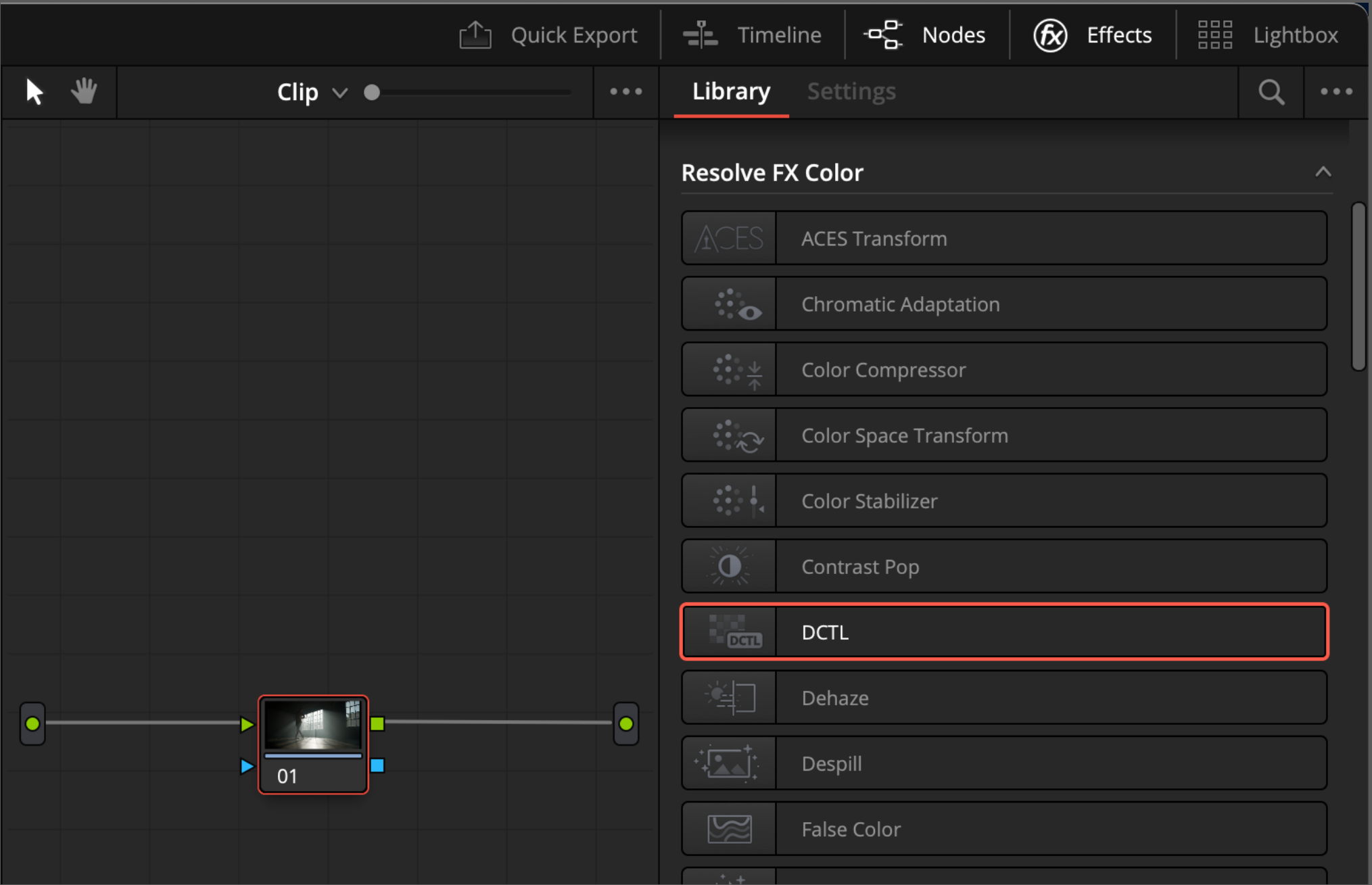
Kuwahara+ Works On Mac / Windows / Linux

Fully Compatible with Metal / CUDA / OpenCL

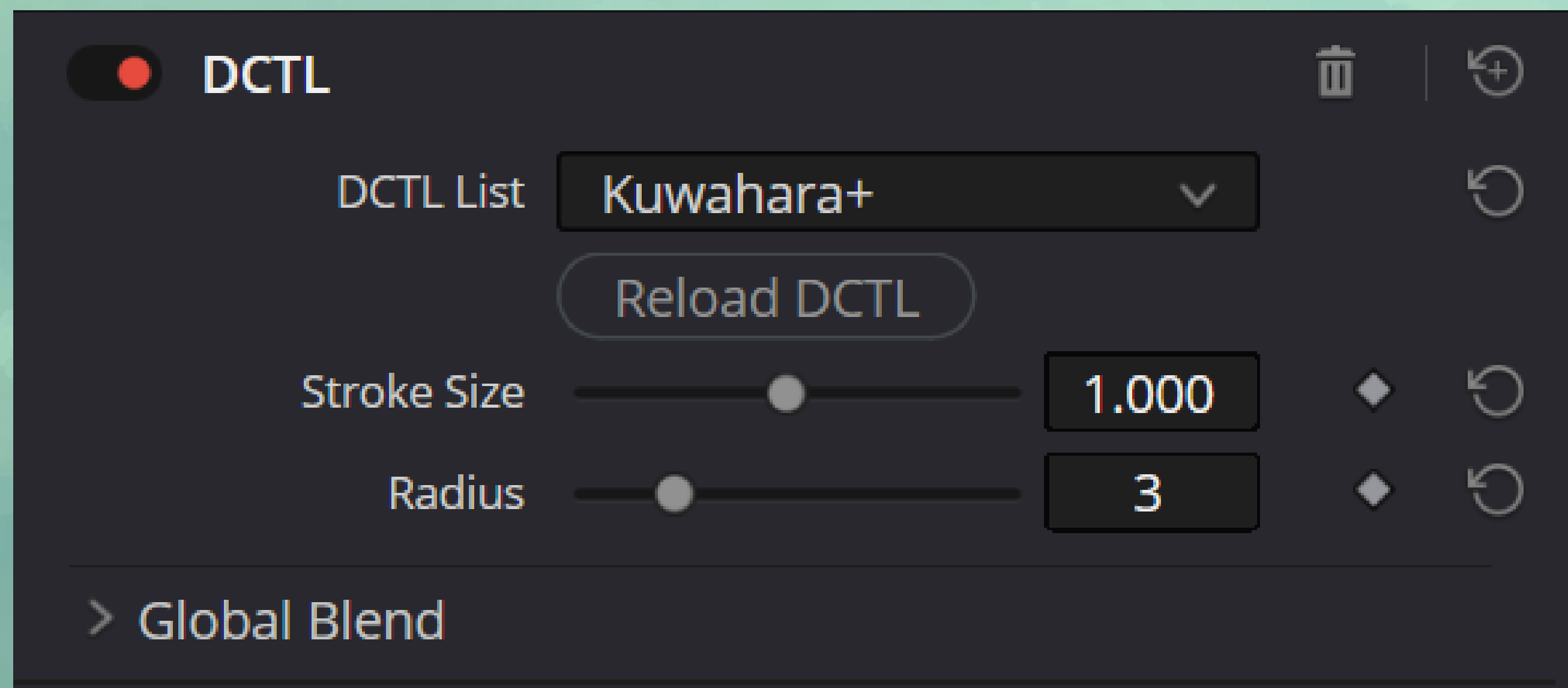


Paste the Downloaded Kuwahara+.dctl into the "LUT" Folder and restart Davinci Resolve Studio

Open your project and go to the Color Page Drag and Drop DCTL from the Library on to the Node



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**TIP:**

If you want an effect of painted image try adding saturation using our Saturation DCTL from ColorTwist..

You can also try emboss OpenFX to give a texture to the image...