Images should clearly and correctly represent research results. Minor image processing may be acceptable but, as depicted below there’s a fine line between enhancing an image and distorting it.

**TIPS FOR PRESENTING SCIENTIFIC IMAGES WITH INTEGRITY**

**BE AWARE:** Undocumented image manipulations can lead to accusations of research misconduct. 67% of ORI’s closed research misconduct cases involved image manipulation.*

*Between 2011 and 2015.

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**ORIGINAL IMAGE**

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**COLOR ENHANCEMENTS**

**Changing the contrast, color, or brightness**

- Ensure that the meaning of the image stays the same and fine details are not removed.
- Contrast and saturation were increased causing the background cells to disappear.

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**SPLICE & PASTE**

**Combining multiple images into one image**

- Clearly indicate where two images were joined using a dividing line and labels.
- Two images were combined causing them to look like new data.

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**CROP**

**Cutting out components and resizing**

- Use a magnification panel to highlight desired visual data.
- Reference information was selectively removed from the image causing loss of data.

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**WHAT ELSE MUST YOU DO?**

- Clearly document all changes made to an image.
- Retain the unprocessed image for your records.
- Follow journal guidelines for premissible processing.

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**LEARN MORE ABOUT IMAGE PROCESSING:**

http://ori.hhs.gov/ImageProcessing

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**REFERENCES:**

1. Infographic provided by U.S. Dept. of Health & Human Services.
2. Contact: RIO - researchintegrity@purdue.edu, EVPRP - RCRTraining@purdue.edu.