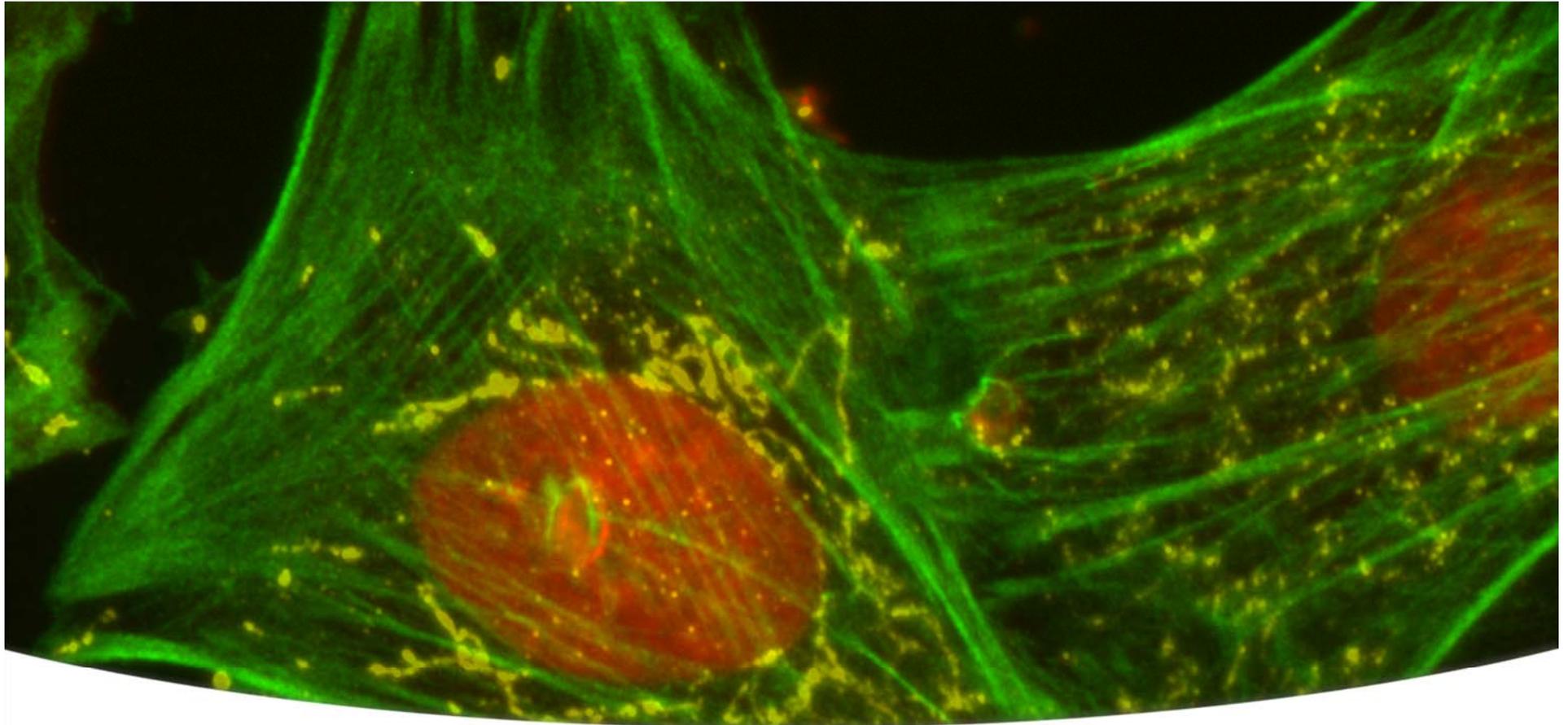




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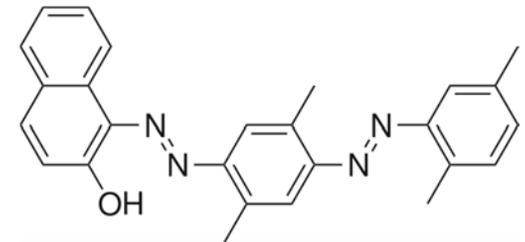


Oil Red O staining of fatty tissue

Paula Gedraitis, Ph.D.
July 2012

Oil Red O Background

- Scientific background
 - One of the Sudan color dyes used to stain lipids
 - Originally discovered in the 1950's
 - Can be used in cells, tissue samples, C. elegans
 - Usually qualitative analysis – not used for HCS until now

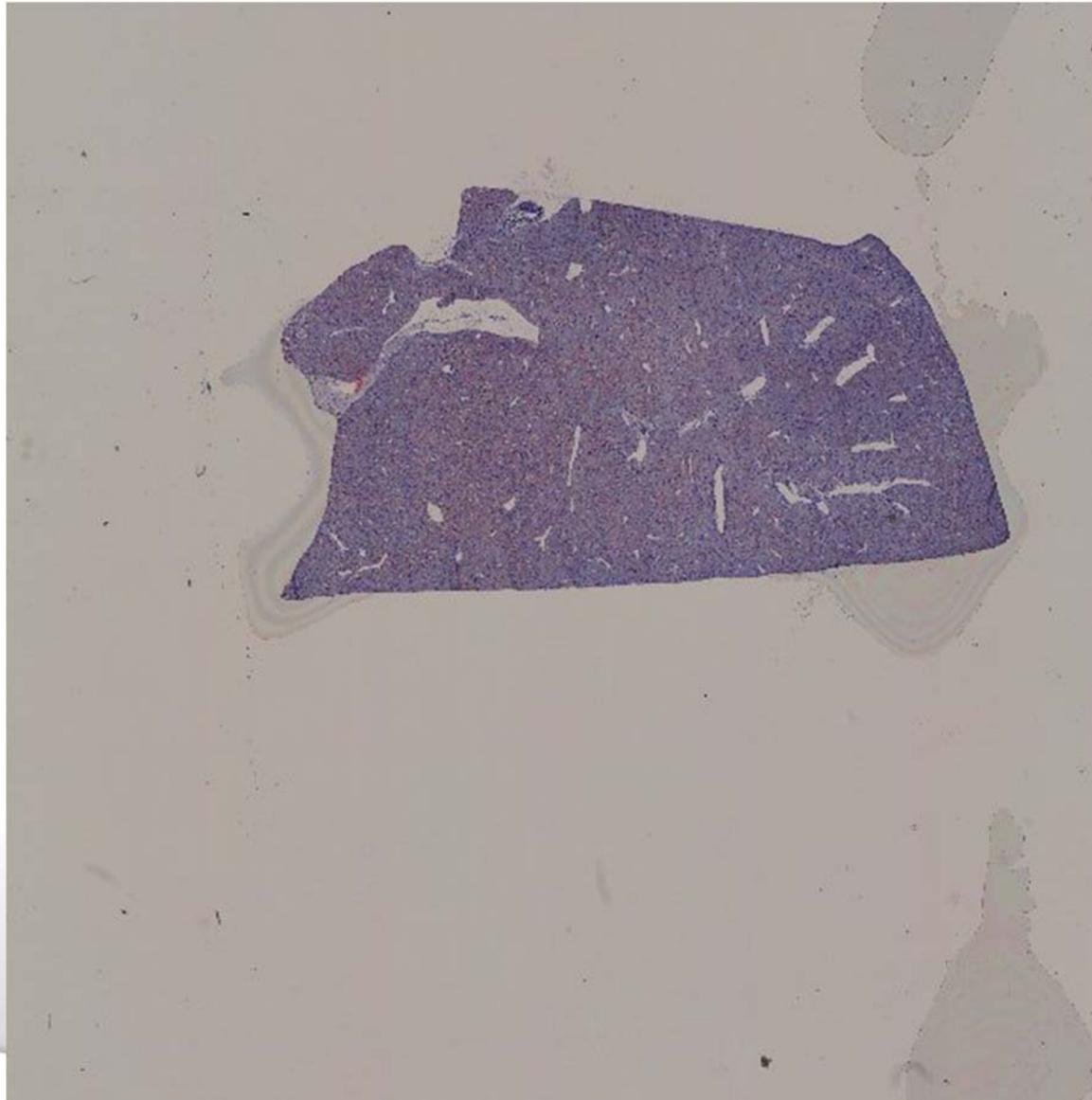


Assay information

- IXM-XL
 - Transmitted Light with RGB filters for color
 - 4x S Fluor objective
 - 15 3-slide holders for high throughput
- Mouse liver tissue slices
 - Mounted on slides
 - Stained with Oil Red O
 - Stained with H&E
- MetaXpress analysis
 - Settings optimized for color balance and shading
 - Journal used to overlay colors and stitch images automatically

Courtesy of Rigel Pharmaceuticals Inc.

Example image

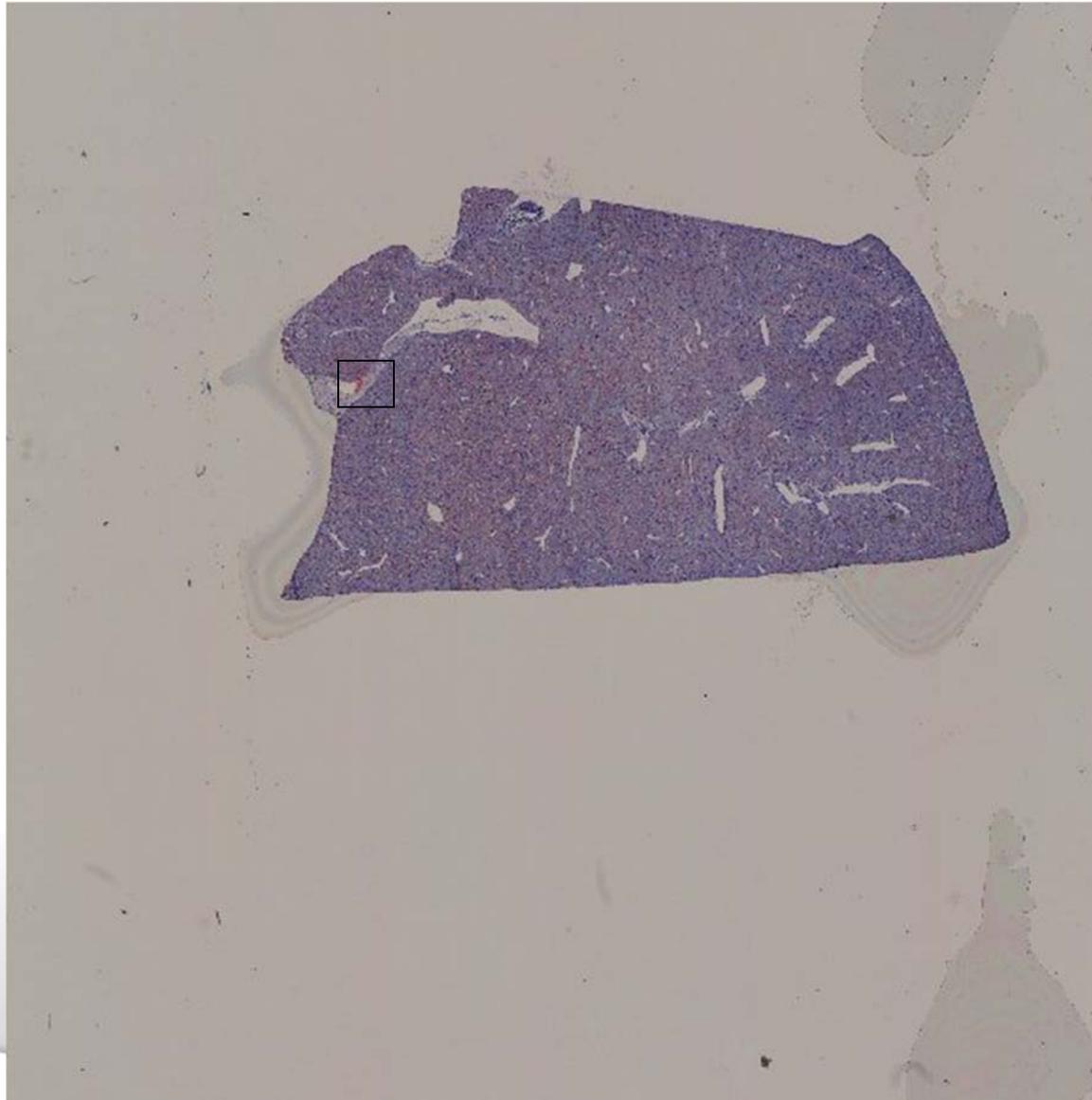


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Example image

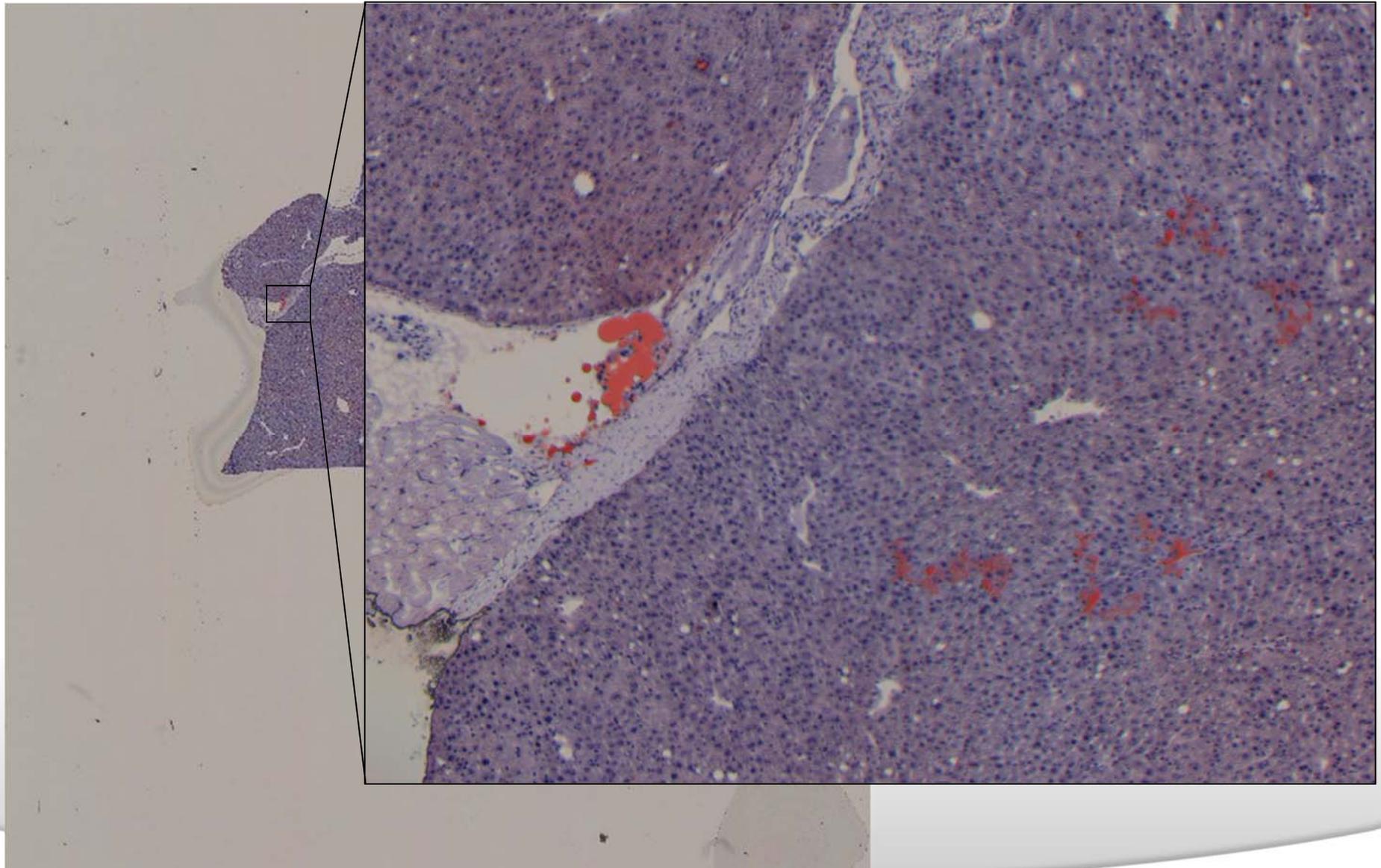


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Example image



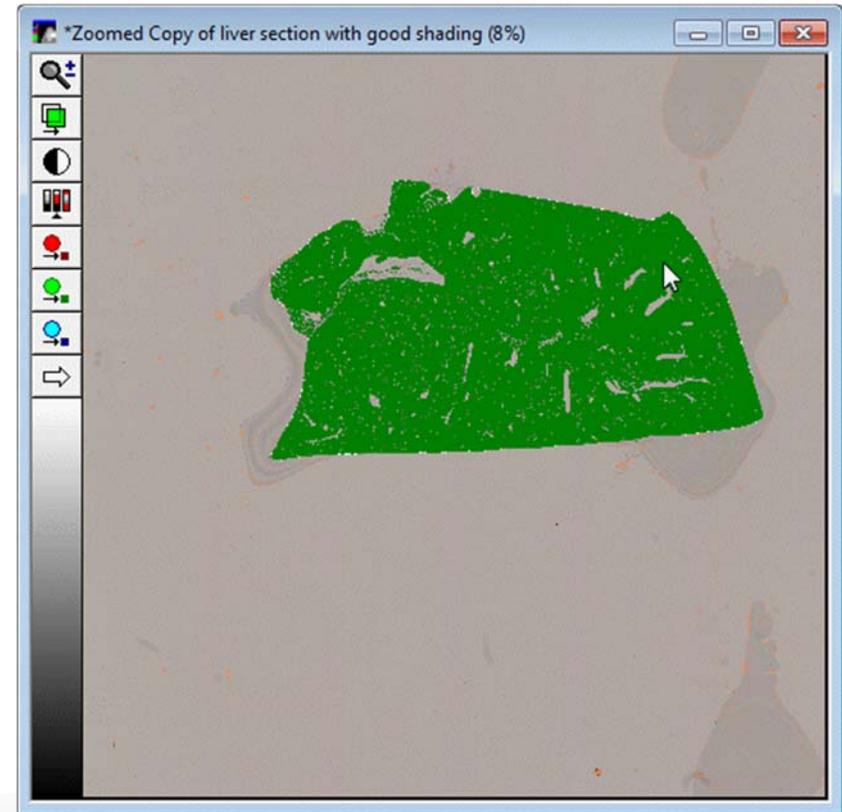
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Brief analysis description – custom journal

- Set color threshold to find entire tissue section
- Use morphology filters (dilate/erode) to smooth object, then IMA with area filter to select large section
- Measure area of section
- Set color threshold to find areas of red stain
- Measure area of red stain
- Calculate % of section stained with Oil Red O



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