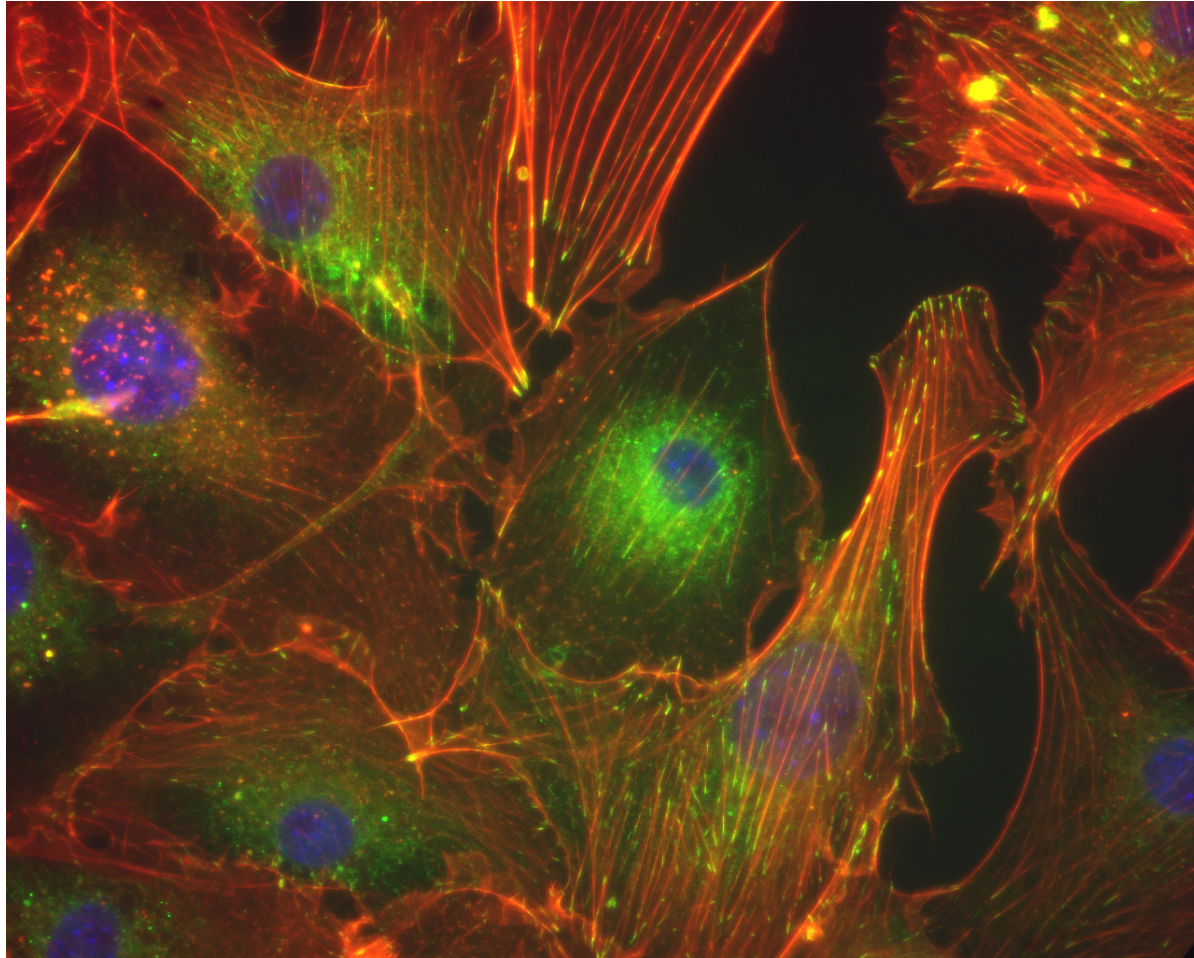
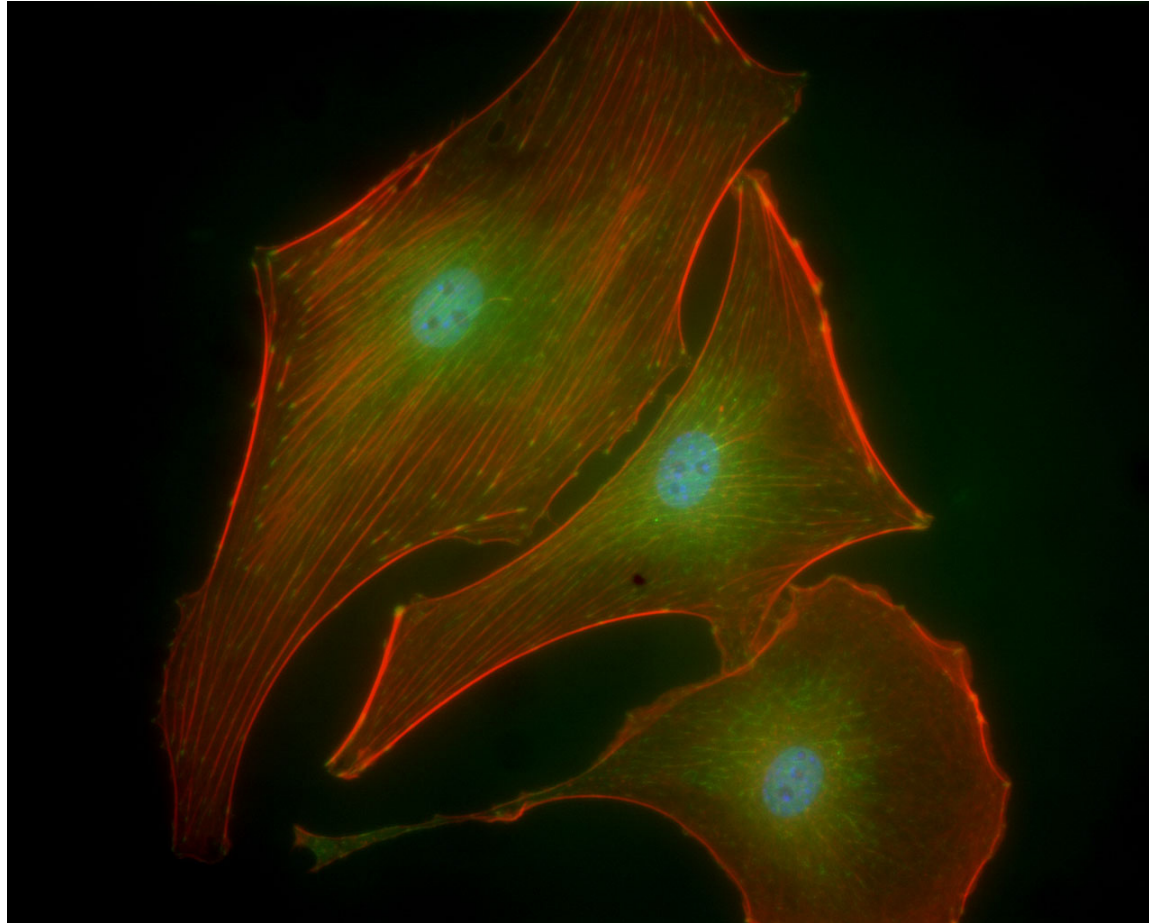


# Immunofluorescence of Focal Adhesions in Adipose Derived Mesenchymal Stem Cells



Courtesy of Dr. Carly Kemmis in the Wagner Lab.

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Focal Adhesions = sites where integrins attached to the extracellular matrix (cell culture dish) are linked to the actin cytoskeleton.

Methods: Actin is stained with rhodamine-phalloidin (red). Phalloidin is a mushroom toxin that tightly binds actin, preventing depolymerization (hence the toxicity) and making it great for imaging actin.

Nuclei are stained with DAPI (blue). DAPI is a DNA intercalator, meaning it slides between the DNA bases when it binds (*in vivo*, this is a mutagen, as it causes error in DNA replication) making it very specific to DNA and RNA.

The focal adhesion protein vinculin is labeled via an anti-vinculin antibody conjugated to FITC (green). Localization of vinculin to the ends of actin is a common way to evaluate focal adhesions in a cell.

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