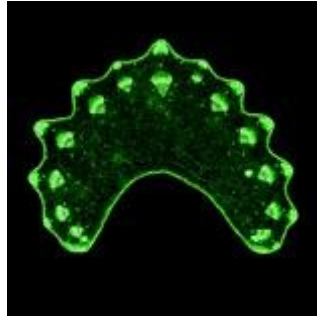


## Transverse section through a green celery stalk



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By using transmitted light thin and translucent biological samples can be studied and photographed with a microscope. For a botanist, microscopes are invaluable tools for investigating the internal structure of plant organs.

As most organs are too thick for their individual cells to be examined directly, they are usually cut into very thin translucent slices. These slices can be hand-cut using razor blades; as done by many first-year bachelor students in our faculty (Biology, Biochemistry & Biotechnology).

To obtain high-quality slices, researchers often use a microtome, a machine with a sharp blade that operates like a meat slicer. Here a 50 micron (i.e. 20 times thinner than a millimetre) thick section through a green celery stalk was photographed using a light microscope.

The true green colour of celery stalks originates from the presence of countless chloroplasts, small structures packed into most cells and required for photosynthesis. As sample preparation bleaches the green chlorophyll colour, this image was false-coloured green using image editing software.