

# Tissue Printing: A New Way to Study Plant Structure

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When plant tissues are pressed onto nitrocellulose membranes with an even force, an imprint of the tissue is made on the membrane. The imprint of the tissue, called a *physical tissue print*, reveals a great deal of cellular detail that can be viewed with low power magnification. This simple technique for visualizing the anatomy of plant tissues can be used in the laboratory to provide students with a more hands-on laboratory experience in plant structure than is afforded by the usual examination of prepared slides.

Since the proteins (Bickar and Reid, 1992) and nucleic acids within the tissues are also transferred to the membrane, the technique can be used to localize these macromolecules within anatomical structures. Tissue printing, therefore, lends itself to introductory cell biology experiments usually performed in upper-level courses. For a complete guide to the uses and techniques of tissue printing see Reid and Pont-Lezica (1992).

Bickar, D., and P. D. Reid. 1992. A high-affinity protein stain for Western blots, tissue printing, and electrophoretic gels. *Analytical Biochemistry*, 203:109–115.

Reid, P. D., and R. F. Pont-Lezica (Editors). 1992. *Tissue printing: Tools for the study of anatomy, histochemistry, and gene expression*. Academic Press, San Diego, California, 188 pages.