



LOCAL ACTION: Winfried Denk captured a brain-tumor cell from a mouse responding to receptor activation. Each panel represents a different depth, with the upper left starting below the cell. A tightly focused two-photon laser scanned back and forth across the cell, locally photolyzing a solution of “caged” receptor agonists outside the cell. The freed agonists bound nearby nicotinic acetylcholine receptors on the cell surface, opening ion channels in the membrane and thus generating electrical current (detected by an electrode within a pipette, lower right). Each pixel represents a single current measurement: the greater the current, the more densely packed the receptors on the cell surface.