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CORTICAL AFFERENTS TO INFERIOR TEMPORAL CORTEX IN  
THE MACAQUE

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ABSTRACT IN THIS BOX

The inferior temporal (IT) cortex of the monkey is an exclusively visual area important for visual learning. To investigate its anatomical relationship to other cortical visual areas we first mapped the borders of IT cortex with single and multi-unit recording. Ventral, anterior and dorsal to IT cortex are polysensory areas. Posterior lies the prestriate visual areas. To determine the cortical inputs to IT cortex we made multiple injections of horseradish peroxidase in six macaques. Labelled cells were found throughout IT cortex but not in the adjacent polysensory areas. Outside of IT cortex labelled cells were found only in the anterior prestriate region, including the prelunate gyrus, the cortex in front of the inferior occipital sulcus, and part of the lower bank of the superior temporal sulcus. Except for its most ventral part the labelled region appeared to lie exclusively within the V4 complex and STS "color" region described by Zeki (Proc. Roy. Soc. B. 197). Combined HRP injections in IT cortex and Fink-Heimer staining after a striate lesion suggested that IT cortex does not receive afferents from the striate recipient areas VII, VIII and STS "movement" area.

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