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Functional Study of Live Cells by Laser Trapping Technique

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Abstract: We tested a hypothesis that water ejection takes place in the secretory cell. A micro bead was held at about 1 μ m distant from the cell surface by laser trapping with a 1064 nm light, and the position of the bead was measured by DIC imaging with a visible light. A series of small displacements of the bead was detected transiently upon stimulation of the cell, indicating repetitive occurrences of volume flow. The water ejection from endocrine cell detected by the present technique has a significant role in the exocytotic release of hormones.

Key Words: [Numerical aperture](#), [Exocytosis](#), [Evanescent wave microscopy](#), [Water secretion](#), [Endocrine cell](#)

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