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## Rabphilin-3A as a targeted auto antigen in lymphocytic infundibulo-neurohypophysitis

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Central diabetes insipidus (CDI) can be caused by several diseases, but in about half of the patients the etiological diagnosis remains unknown. Lymphocytic infundibulo-neurohypophysitis (LINH) is an increasingly recognized entity among idiopathic CDI; however, the differential diagnosis from other pituitary diseases including tumors can be difficult due to similar clinical manifestations. The definite diagnosis of LINH requires invasive pituitary biopsy. The study was designed to identify the autoantigen(s) in LINH and thus develop a diagnostic test based on serum autoantibodies. Rabphilin-3A proved the most diagnostically useful autoantigen. Anti-rabphilin-3A antibodies were detected in 22 of the 29 (76%) patients (including 4 of the 4 biopsy-proven samples) with LINH. In contrast, these antibodies were absent in patients with biopsy-proven sellar/suprasellar masses without lymphocytic hypophysitis (n=34), including 18 patients with CDI. Rabphilin-3A was expressed in posterior pituitary and hypothalamic vasopressin neurons but not anterior pituitary. In conclusion, these results suggest that rabphilin-3A is a major autoantigen in LINH. Autoantibodies to rabphilin-3A may serve as a biomarker for the diagnosis of LINH, and be useful for the differential diagnosis in patients with CDI.

### Biography

Yoshihisa Sugimura is currently working as Professor in the Division of Endocrinology and Metabolism, Department of Internal Medicine at Fujita Health University, Japan. He did his PhD at Nagoya University Graduate School of Medicine, Japan and he joined as an Assistant Professor in the same university. His main research interest is in endocrinology, diabetes, neuroendocrinology, water, sodium metabolism and hypernatremia vasopressin.

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