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## **Disregulated of immune-cell trafficking signaling and development of autoimmunity**

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### **Abstract**

Dynamic trafficking of immune cells throughout the body plays important roles in immunosurveillance. We discovered the small GTPase Rap1 in controlling immune cell trafficking, and have clarified the regulatory mechanism. Unexpectedly, impairment of the Rap1 signaling to control trafficking have led to autoimmunity of multiple organs in mice. This project aims to clarify the mechanism and function of trafficking regulatory signaling in self tolerance, and further investigate the involvement in intractable autoimmune disease in human.