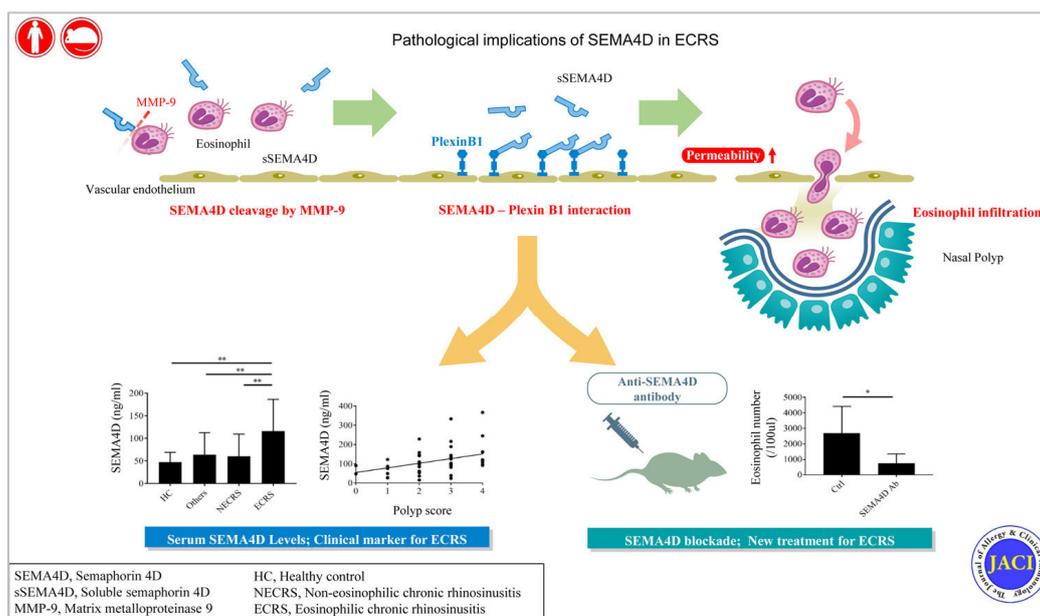


## Pathological and therapeutic implications of eosinophil-derived semaphorin 4D in eosinophilic chronic rhinosinusitis

Eosinophilic chronic rhinosinusitis (ECRS) is a subtype of chronic rhinosinusitis. Clinical markers for ECRS disease activity and treatment strategies have not been sufficiently established. The research group of Osaka University led by Atsushi Kumanogoh (Department of Respiratory Medicine and Clinical Immunology, Osaka University Graduate School of Medicine/IFReC) tried to investigate the pathological functions and therapeutic potential of semaphorin 4D (SEMA4D) in ECRS.

Serum soluble SEMA4D levels were elevated in patients with ECRS and positively correlated with disease severity. Treatment with anti-SEMA4D antibody ameliorated eosinophilic infiltration in sinus tissues and nasal lavage fluid in the ECRS animal model.

Eosinophil-derived SEMA4D aggravates ECRS. Levels of serum SEMA4D reflect disease severity, and anti-SEMA4D antibody has therapeutic potential as a treatment for ECRS.



**Journal:** The Journal of Allergy and Clinical Immunology (Feb. 6, 2020 online)

**Title:** "Pathological and therapeutic implications of eosinophil-derived Semaphorin 4D in eosinophilic chronic rhinosinusitis"

### Authors

Takeshi Tsuda, Masayuki Nishide, Yohei Maeda, Yoshitomo Hayama, Shohei Koyama, Satoshi Nojima, Hyota Takamatsu, Daisuke Okuzaki, Takayoshi Morita, Takeshi Nakatani, Yasuhiro Kato, Yoshimitsu Nakanishi, Yu Futami, Yasuhiko Suga, Yujiro Naito, Hachiro Konaka, Shingo Satoh, Maiko Naito, Mayuko Izumi, Sho Obata, Ayaka Nakatani, Takashi Shikina, Kazuya Takeda, Masaki Hayama, Hidenori Inohara, and Atsushi Kumanogoh.