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## **The results of a study on the usefulness of sublingual vaccines in influenza made the cover of the scientific journal Vaccines.**

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Our paper on the efficacy and safety of sublingual vaccine in influenza was published in the scientific journal Vaccines.

Furthermore, this paper was selected for the cover of "Vaccines, Volume 12, Issue 6 (June 2024)", which features 139 articles, and has garnered significant attention from researchers.

Cover URL: <https://www.mdpi.com/2076-393X/12/6>

Title of the Thesis : Molecular Events in Immune Responses to Sublingual Influenza Vaccine with Hemagglutinin Antigen and Poly(I:C) Adjuvant in Nonhuman Primates, Cynomolgus Macaques

Magazine Name : Vaccines

Author Name : Tetsuro Yamamoto, Makoto Hirano, Fusako Mitsunaga, Kunihiko Wasaki, Atsushi Kotani, Kazuki Tajima, Shin Nakamura

DOI : <https://doi.org/10.3390/vaccines12060643>

URL : <https://www.mdpi.com/2076-393X/12/6/643>

Thesis Outline :

Sublingual administration of influenza virus HA antigen and the adjuvant Poly(I:C) to cynomolgus monkeys induced both mucosal and systemic immune responses. For mucosal immunity, HA antigen-specific secretory IgA was produced in saliva and nasal lavage fluid. For systemic immunity, HA antigen-specific IgA and IgG were produced in the blood. The safety of this vaccine was confirmed through blood tests. Additionally, the vaccine was shown not to increase inflammatory cytokines or upregulate gene expression of pro-inflammatory cytokines.

Previously, we have reported on the utility of sublingual vaccines against SARS-CoV-2※, but the results of this study demonstrate efficacy against a different antigens, indicating the potential

applicability of sublingual vaccines against a wide range of infectious diseases.

Sublingual vaccines hold promise for "ease of self-administration by patients", "broad efficacy ranging from infection prevention to reduction of severe cases" and "high safety profile". Through our research and development of sublingual vaccines, our company aims to realize a healthy society capable of responding to pandemic infectious diseases.

※Name of the Thesis : SARS-CoV-2 sublingual vaccine with RBD antigen and poly(I:C) adjuvant:  
Preclinical study in cynomolgus macaques

DOI : <https://doi.org/10.1093/biomet/bpad017>

URL : <https://academic.oup.com/biomet/article/8/1/bpad017/7266774>

#### **【About EPS Innovative Medicine Co., Ltd.】**

We are a core company of EPS Creative Health Technology Group Co., Ltd. in the pharmaceutical discovery business. Our goal is to develop the seeds introduced from academia and Biotech venture companies and the seeds found in our research department based on the knowledge and know-how cultivated by the EPS Group over many years, expanding the value of seeds and aims at promoting to Japan and China markets, or to license out to the partner enterprises.