

令和 8 年度 第 31 回 大学院セミナー

令和 8 年 11 月 6 日

分 野 名 Area of Research (責任者名)(内線)	ウイルス感染制御学分野 責任者名(南保 明日香) 内線(7970)
演 題 Title	Harnessing mucosal immunity to prevent respiratory virus infections
講 師 等 Presenter	Dr. Neeltje van Doremalen Mucosal Immunology and Virology Unit (MIVU) Rocky Mountain Laboratories, National Institute of Allergy and Infectious Diseases, National Institutes of Health
概要 Abstract	Respiratory viruses initiate infection at mucosal surfaces, yet most vaccines are delivered systemically and generate limited immunity at the site of entry. We therefore investigate how the route and anatomical distribution of vaccination shape immune responses and protection across the respiratory tract. Using SARS-CoV-2 vaccination models, we found that intranasal vaccination induces local IgA, tissue-resident CD8⁺ T cells, germinal center responses in nasal-associated lymphoid tissue, and more durable protection of the upper respiratory tract than intramuscular vaccination alone. We next used low- and high-volume intranasal vaccination to restrict antigen to the upper respiratory tract or distribute it throughout both the upper and lower respiratory tract. In an influenza model, upper respiratory tract-restricted vaccination was sufficient to reduce replication of seasonal H1N1 and H3N2 viruses and protect the lung despite limited local lung immunity. In contrast, protection against highly pathogenic H5N1 was incomplete. Together, these studies show that the respiratory tract is not a single immunological compartment and that the location of antigen exposure critically shapes mucosal immunity and protection.
開 催 日 時 Date and Time	令和 8 年 11 月 6 日(金) 16:00~17:00
開 催 方 法 Online/Face to face	開催場所: 高度感染症研究センター1F 大会議室
備 考 Notes	問い合わせ先: 高度感染症研究センター E-mail: nanboa@nagasaki-u.ac.jp

- ☐ 先端医療科学特論(基礎編)
☒ 先端新興感染症病態制御学特論
☐ 日本語(Japanese)
☒ 対面(Face to face)

- ☐ 先端医療科学特論(臨床編)
☐ 先端放射線医療科学特論
☒ 英語(English)
☐ オンライン(Online)