

Respiratory Medicine and Infectious Diseases

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We have five internal research groups to manage the clinical research problems, including the infectious disease group, the diffuse lung disease group, the oncology group, the allergic disease group, and the physiology group. The infectious disease group is aggressively conducting basic and clinical researches in anti-infectious therapy, molecular epidemiology, and nosocomial infection control. The diffuse lung disease group performs elementary analysis of clinical lung samples to clarify the pathophysiological mechanism.



The oncology group is developing new therapeutic strategies that are focused on cancer stem cell-specific proteins and tumor-associated regulatory T cells, leading clinical studies of cytotoxic and molecular-target anticancer drugs. The allergic disease group engages in various forms of researches, such as questionnaire surveys of asthma patients as well as establishment of a mouse model for exercise-induced asthma. The physiology group has a considerable interest in clinical research of sleep apnea syndrome and respiratory rehabilitation in preoperative and chronic phases.

Research and Clinical interests

1. New treatments of severe influenza virus infection
2. Molecular epidemiology of lung tuberculosis and other mycobacterial diseases
3. Effects of sublingual immunotherapy in murine model of asthma
4. Novel antitumor immunotherapy via immune reconstitution after chemotherapy for advanced lung cancer

Materials and methods for collaborations

1. Exercise induced bronchoconstriction in murine model
2. EGFR-TKI-resistance in mouse model

Links to additional info

1. Watanabe S et al. Prognostic significance of the radiologic features of pneumonitis induced by anti-PD-1 therapy. *Cancer Med.* 2020 Mar 9. doi: 10.1002/cam4.2974. [Epub ahead of print]
<https://onlinelibrary.wiley.com/doi/full/10.1002/cam4.2974>
2. Ueno H et al. Cysteinyl Leukotriene synthesis via Phospholipase A2 Group IV Mediates Exercise-induced Bronchoconstriction and Airway Remodeling. *Am J Respir Cell Mol Biol.* 2020 Mar 17. doi: 10.1165/rcmb.2019-0325OC.
<https://www.atsjournals.org/doi/abs/10.1165/rcmb.2019-0325OC>
3. Bamba Y et al. Multiplex cytokine analysis in Mycobacterium avium complex lung disease: relationship between CXCL10 and poor prognostic factors. *BMC Infect Dis.* 2019;18;19(1):263.
<https://bmcinfectdis.biomedcentral.com/articles/10.1186/s12879-019-3888-4>
4. Lab HP (Japanese). <https://www.med.niigata-u.ac.jp/resp/welcome.html>