

**Department of Molecular Hematopathology,  
Okayama University Medical School,  
Faculty of Health Sciences**

**Staffs**

***Professor Yasuharu Sato***

**<https://www.researchgate.net/profile/Yasuharu-Sato>**

***Associate Professor Midori Filiz Nishimura***

**<https://www.researchgate.net/profile/Midori-Filiz-Nishimura>**

***Assistant Professor Asami Kei Nishikori***

**<https://www.researchgate.net/profile/Asami-Nishikori>**

**Research topics**

**Our department focuses on hematopathology based on morphology, pathological diagnosis and molecular pathology. In particular, we specialize in lymphomas and lymphoproliferative disorders.**

**For more information, please visit our website (in Japanese).**

**<https://sato-lab-pathology.jimdofree.com/>**

**Required research skills**

**Our laboratory does not require advanced research skills. Rather, we're looking for your motivation and research mindset.**

# Biomedical Informatics Group

Faculty of Interdisciplinary Science and Engineering in Health Systems,  
Okayama University

(Concurrent faculty member of the Faculty of Health Sciences, Okayama University Medical School)

<https://www.bilab.jp>

## STAFF

Professor MORITA Mizuki

<https://researchmap.jp/mizuki/?lang=en>

## RESEARCH TOPICS

Our research group aims to **process biometric data** acquired by **wearable devices** and apply them as **digital biomarkers (dBM)** in clinical practices and clinical trials (e.g., for diagnosis, determination of severity of disease, and evaluation of treatment efficacy).

We are also conducting research on the analysis of **clinical data** obtained from hospital **electronic medical records (EMRs)**, and the evaluation of the **quality of biospecimens** stored in Okayama University Hospital Biobank (**Okadai Biobank**).

## REQUIRED SKILLS

Our research group does not require any special skills. However, it is necessary to be **comfortable with** computer-based data analysis.

If you will conduct research on biospecimens from biobanks, we do not perform computer-based data analysis.

Prof.

**Nobuaki MIYAHARA**

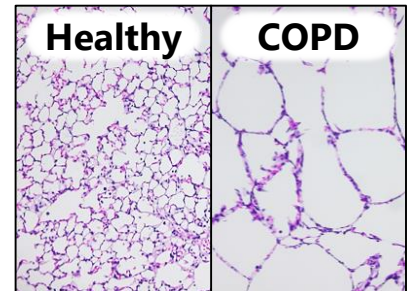
**TOPIC:** Asthma, Pulmonary fibrosis, COPD

**Achievements**

- ✓ Establishment of murine models for respiratory diseases
- ✓ Efficacy and safety validation of nintedanib for pulmonary fibrosis (retrospective cohort)

**Next Research Question**

- ✓ Treatment of respiratory diseases with mesenchymal stem cells
- ✓ Clinical assessment of severe bronchial asthma



Associate Prof.

**Eri KATSUYAMA**

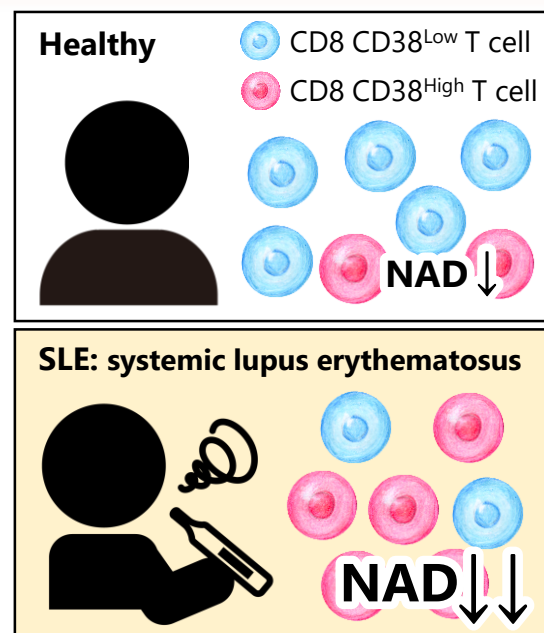
**TOPIC:** Autoimmunity (SLE, Rheumatoid arthritis)

**Achievements**

- ✓ Sirtuin1 (NAD-dependent enzyme) activity is decreased in CD8<sup>+</sup>CD38<sup>High</sup> T cells.
- ✓ CD8 T cell-cytotoxicity is impaired in SLE patients due to high expression of CD38.

**Next Research Question**

- ✓ Is CD38 a target for SLE treatment?
- ✓ How the NAD metabolism and NAD-dependent enzymes are altered in SLE?



Assistant Prof.

**Shusei YAMAMOTO**

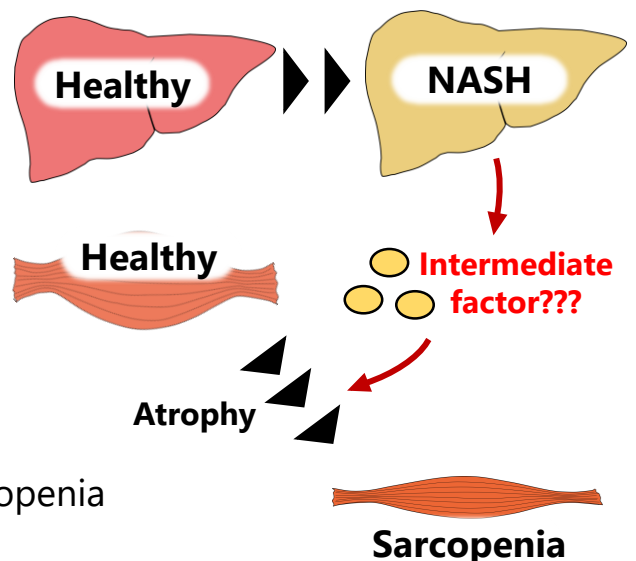
**TOPIC:** NASH, Sarcopenia

**Achievements**

- ✓ Establishment of the rat model for NASH-induced sarcopenia
- ✓ The effects of bile acids in NASH

**Next Research Question**

- ✓ Investigation of the mechanisms of sarcopenia associated with NASH
- ✓ Identification of novel pharmacotherapeutics for NASH



# Department of Molecular Biology and Cardiovascular Physiology

## Faculty of Health Sciences, Okayama University



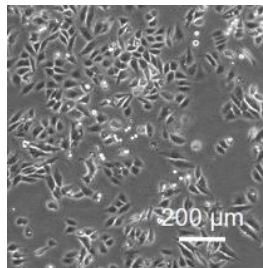
*Professor*

**Satoshi HIROHATA**

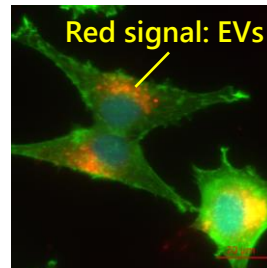
- ❑ E-mail:  
hirohas@cc.okayama-u.ac.jp
- ❑ [Homepage](#)
- ❑ [Researchmap](#)

### [Research]

Osteoarthritis (OA) is caused by mechanical stress and inflammation, leading to limited mobility and pain in joints. The molecular mechanisms of OA are not completely understood and effective treatments for OA are not established. ADAMTS, MMPs and CEMIP are enzymes cleaving the extracellular matrix, such as collagen and aggrecan, and their expression is closely related to the OA progression. We investigate **the molecular mechanisms and therapeutic targets of OA**, focusing on extracellular vesicles (EVs) and microRNAs.



OUMS-27  
chondrosarcoma cell

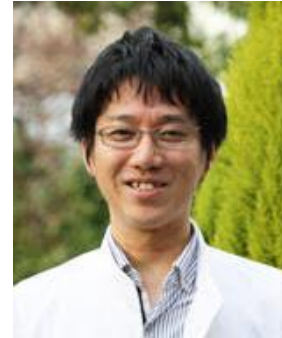


EVs uptake

### [Required skills]

- Cell culture technique
- laboratory animal care

※You can master these skills through research activities.



*Associate Professor*

**Shogo WATANABE**

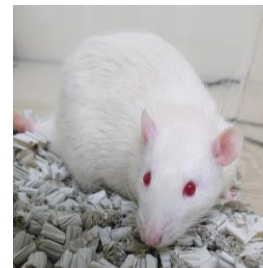
- ❑ E-mail:  
watanabe1224@okayama-u.ac.jp
- ❑ [Homepage](#)
- ❑ [Researchmap](#)

### [Research]

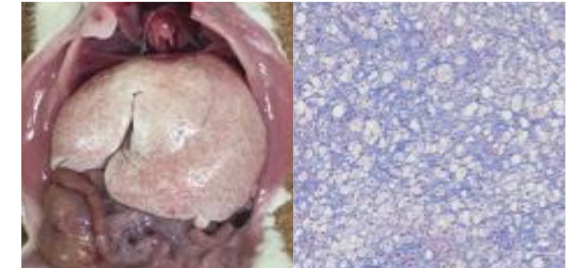
Spontaneously Hypertensive Rat Stroke-Prone 5 (SHRSP5/Dmcr) develops nonalcoholic steatohepatitis (NASH) by feeding a high-fat diet. In addition, this animal also induces aortic lipid deposition and ischemic myocardial injury. We investigate that **the relationship between NASH and cardiovascular disease** using SHRSP5/Dmcr model.

### [Required skills]

- laboratory animal care & anatomy
- ※You can master these skills through research activities.



SHRSP5/Dmcr



Liver and fibrosis in NASH

# Department of Microbiology and Genetics, Okayama University Medical School, Faculty of Health Sciences

## Staffs

### Microbiology Research Group

Professor Kenji Yokota

Associate Professor Kazuyoshi Gotoh

### Genetics Research Group

Associate Professor Tetsuya Ishikawa

## Research Topics

### Microbiology Research Group

1. Investigating the relationship between oral commensal bacteria and gastric cancer facilitated by *Helicobacter pylori*.
2. Understanding immunosuppression pathogenicity caused by the emerging pathogen, *Elizabethkingia anophelis*.
3. Assessing food poisoning risks associated with the consumption of edible insects
4. Analyzing the cancer microbiome.

### Genetics Research Group

1. Analysis of nutrient uptake in mosquitoes
2. Analysis of mosquito-virus interactions  
e.g. ACE protein in Asian tiger mosquito and SARS-CoV-2 spike protein interaction

## Required Research Skills

No specific skills are required for our research projects. We highly value good laboratory communication and collaboration.

Web Site: <https://microbio-genetics.jimdofree.com/>