

『知の創造、科学との融合 -advanced for nursing-』

## Wound Management and Skin Care

**We aim at constructing the evidence of wound management and skin care from an interdisciplinary approach!**

### Clinical Research

- Evaluation of skin structure and function using engineering devices such as ultrasonography, thermography and MRI.
- Verbalization of skin and pressure ulcer's shape and characteristics by qualitative sketching technique.
- Evaluation of skin using molecular biological analytical technique.



Qualitative sketching for pressure ulcer

### Nursing Bioengineering

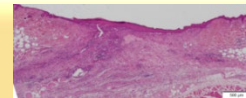
- Development and evaluation of products necessary for medical treatment environment by the Academic-Industrial research collaboration



Development of air-mattress

### Basic Research

- Mechanism elucidation of wound healing using an animal and cell-line model.
- Anatomical verification on the course and positional relationship of nerves and veins, and evaluation of the site determination method for puncture.



Tissue staining of skin

## Skills you are able to develop in our laboratory

### Practical skills of wound management and skin care required for a nurse

- 1) Develop knowledge about pressure ulcer.
- 2) Improve comprehensive wound assessment, practical skills of wound management and skin care.

### Skills needed for basic researchers in nursing field

- 1) Develop knowledge and operation skill about various devices in research.
- 2) Acquire knowledge and technique through animal experiments and molecular biological analysis

### Writing manuscripts and presentation skills

- 1) Learn from planning your research to submission your manuscript.
- 2) Improve presentation skills in weekly seminar and various conferences with Japanese and international researchers.

### Our laboratory staff

All staff support you to acquire these skills!!



Professor  
Mayumi Okuwa



Professor  
Makoto Oe



Associate Prof.  
Kazuhiro Ogai\*



Associate Prof.  
Kanae Mukai



Assistant Prof.  
Yukari Nakajima



Assistant Prof.  
Sayumi Ichihashi

\* AI Hospital/Macro Signal Dynamics Research and Development Center

## Graduate students in our laboratory

### \* The number of present students

Full-time **1** (1 student from Indonesia)  
 Part-time **6**

### \* The number of alumni

Master course **70** (7 international students)  
 Doctor course **34** (8 international students)

(Update on March 16 2021)



**We have many international students!**

# Researches in our supervisors

## Prof. Mayumi Okuwa

### Research Theme

- Wound assessment, management, and preventive care
- Technical development and preventive care for leg ulcer
- Evaluation of vibration massage in patients with high risk for peripheral arterial disease

## Associate Prof. Kazuhiro Ogai

### Research Theme

- Development and utilization of non-invasive skin protein analysis with proteomics technique
- Investigation of the changes of skin physiological functions and skin dysbiosis in older people

## Prof. Makoto Oe

### Research Theme

- Observation of inflammation in the callus using thermography
- Development of an automatic detection function for high-risk areas of foot ulcers using thermography
- Development of DMIST for monitoring healing of diabetic foot ulcers

## Associate Prof. Kanae Mukai

### Research Theme

- Evaluation of the effect of estrogen on cutaneous wound healing
- Investigation of the relationship between cutaneous nerves and veins
- Investigation of the influence of hormones for improvement of the women's wellness

## Collaboration with other fields and facilities



### Other fields in our university

- Medical Sciences
- Pharmaceutical Sciences
- Health Sciences
- Science and Engineering
- Institute for Frontier Science Initiative
- Institute for Gene Research etc.

### Other university

- The University of Tokyo
- Osaka city University
- Kanazawa medical University
- Toyama Prefectural University
- University of Nottingham
- Muhammadiyah University etc.

### Medical care facilities

- Kanazawa University Hospital
- Sengi Hospital
- Johoku Hospital
- Kitamura Clinic in Indonesia etc.

## Presentations in Conferences



### International Conferences

- Asia Pacific Enterostomal Therapy Nurse Association Conference
- International Lymphoedema Framework Conference
- World Union of Wound Healing Societies
- East Asian Forum of Nursing Scholars

### Domestic Conferences

- Japanese Society of Pressure Ulcers
- Japanese Society of Wound, Ostomy & Continence Management
- Japanese Society for Wound Healing

## Career after graduation from our laboratory



### Hospital

- Kanazawa University Hospital
- Nagoya University Hospital
- Yamagata University Hospital etc.

### Educational Institution

- Kanazawa University
- Kanazawa Medical University
- Komatsu University
- Ishikawa Prefectural Nursing University
- The University of Tokyo etc.

**We sincerely welcome international students from abroad!**

**Let's join our laboratory!**

Please visit our website today for more information on specific activities, papers, and lab member

**URL: <http://wmn.w3.kanazawa-u.ac.jp/>**

