

## Young Researchers' Presentations

Four recipients of the Osaka City University Presidential Awards for Encouragement will give presentations about their research.

### **Eriko Sato**

(Lecturer, Graduate School of Engineering)  
Graduate School of Engineering Osaka City University, Ph.D.  
Member of Society of Polymer Science, Adhesion Society of Japan, Chemical Society of Japan, Society of Rubber Science and Technology, Japan

#### ***Precise Synthesis of Acrylic Polymers and Application to High Performance Dismantlable Adhesive Materials***

Dismantlable adhesion materials have both good adhesion properties in use and on demand dismantlability, and are attractive materials to help the efficient use of energy in terms of resource saving and productivity growth. In this presentation, the design strategy of the novel dismantlable adhesion materials using the property changes of reactive acrylic polymers induced by external stimuli will be described and then investigations concerning practical applications including stability improvement by using dual-rock system, the enhancement of adhesion strength and stimuli responsibility, and the development of oxygen tolerance polymerization system will be presented.

### **Keisuke Yaku**

(Doctoral student, Graduate School of Human Life Science)  
Graduated the masters program at the Osaka City University Graduate School of Human Life Science, Master of Human Life Science.  
Member of Japanese Biochemical Society, Japan Society of Nutrition and Food Science

#### ***Neuroprotective effect of 1'-acetoxychavicol acetate extracted from *Alpinia galangal****

Neurodegenerative diseases are progressive diseases caused by death of neurons in brain. The incidence increases with aging. It is important to prevent neurodegeneration in our aging society. I will present the effect of 1'-acetoxychavicol acetate which is extracted from *Alpinia galangal* on neuroprotection.

### **Go Yonezawa**

(Associate Professor, Graduate School for Creative Cities)  
Graduate School of Science, Osaka City University, Ph.D.  
Member of Japan Society of Geoinformatics, GIS Association of Japan etc.

#### ***Urban Spatiotemporal Transformation and Sustainability of Hanoi, Vietnam Using Open Source***

Hanoi city, the capital of Vietnam, is one of the fastest-growing cities in Southeast Asia. However, the serious urban problems are increasing year after year. To consider the city as a three dimensional (3-D) spatial area (from underground to surface), and generate the basis data for diverse study fields is important. This presentation indicates the fundamental urban 3-D model and its application for the transformation of Hanoi city.

### **Kazunobu Okazaki**

(Associate Professor, Research Center of Urban Health and Sports)  
Shinshu University Graduate School of Medicine, Ph.D.  
Member of Japanese Society of Physical Fitness and Sports Medicine, Japanese Physiological Society, American College of Sports Medicine, American Physiological Society, Japanese Society of Physical Education, Osaka Society of Physical Education, Japan Society of Exercise and Sports Physiology, Society for Running

#### ***Practical method for the prevention of heat related illness in the elderly***

One of the life-threatening problems in the summer is 'heat related-illness'. Especially, about 70% of the number of deaths from the disorder is affects the elderly, therefore it is required to develop the effective measures for it. In this presentation, I will present that thermoregulatory capacity in a hot environment measured by the enhanced sweating and skin vasodilation to the increased core body temperature deteriorates with biological aging. In addition, I will present the effectiveness of endurance exercise training in conjunction with the post-exercise protein and carbohydrate intake to enhance thermoregulatory capacity in the elderly.