Special Lecture for the International Collaborative Research Promotion Project Meiji University

Tomoko Soga

Brain Research Institute, School of Medicine and Health Sciences Monash University Malaysia

Brain Ageing and Reproductive System

Ageing process entails the deregulation of homeostatic mechanisms that maintain integrity. A key indicator of brain deregulation during aging is reproduction. Age-induced alterations in levels of sex steroids, peptide hormones and associated receptors, and decreased glutamate levels in the brain have all been linked to age-induced sexual dysfunction. In this talk, the role of the gonadotropin-releasing hormone (GnRH) neurons in the preoptic area (POA) is considered in this context. Recent studies have demonstrated that sirtuins, encoded by *sirt 1-7* genes, are known as ageing molecules. In particular, *sirt4* gene plays an important role in glutamate metabolism and its wide distribution in the brain. This seminar will provide new insights into the role of *sirt4* gene through glutamate signalling in GnRH neurons during ageing.

Lecture Schedule: 2016

(1) July 15th (Fri) 10:30-12:00 (2) July 19th (Tue) 14:40-16:10

Writing for Publication Brain Ageing and Reproductive System Poster for Special lecture for the international collaborative research promotion project Meiji university, on July 19th 2016

明治大学国際共同研究支援事業特別講義

Special Lectures for the International Collaborative Research Promotion Project, Meiji University

Research at Brain research institute Monash **University Malaysia (BRIMS)** Dr. Ishwar S Parhar $13:00 \sim 14:30$

Director and Professor, BRIMS, Malaysia

At the BRIMS, we have four research platforms namely, Bioimaging, Functional Genomics, Neurochemistry and Drug Discovery, which have been used to address issues in neuroscience related to reproduction, addiction, neurodegeneration, depression and autism. Extensive research carried out at the institute is related to reproduction. One example is our work on reproductive neuropeptides, such as kisspeptin, neurokinin B and gonadotropin-inhibitory hormone that have led to a significant revision of our understanding of the modulation of gonadotropin-releasing hormone, a pivotal molecule for reproduction, defect of which results in hypogonadotrophic hypogonadism. Another example is our recent work on deep brain photoreceptors, which convey light information for mediating non-image-forming responses. We have identified two genes encoding vertebrate ancient long (VAL)-opsin photoreceptors (valopa and valopb) in the zebrafish, which exhibit differential response to light, time-of-day and contribute to reproduction.

【**後援**】明治大学研究 · 知財戦略機構

明治大学国際交流基金事業特別講義 Special Lectures for the International Exchange Fund, Meiji University

Brain Ageing and Reproductive System Dr. Tomoko Soga $14:40 \sim 16:10$

Associate Professor, BRIMS, Malaysia

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(2階)

【後援】明治大学国際連携本部



Laboratory of Animal Behavior and Environmental Science, Meiji University































