

## Professor Kenji Mizuseki, Physiology, Graduate School of Medicine

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Professor Mizuseki specializes in Physiology. He studies the mechanism of memory using electrophysiology and optogenetics, focusing on the hippocampus, which is a brain region essential for memory, and its associated regions. For neural activity in the brain, which had only been able to be observed before, Professor Mizuseki's laboratory succeeded in controlling its activity using optogenetics. The advantage of Professor Mizuseki's laboratory is that they can step into the causal relationship between neural activity and memory by artificially controlling neural activity.

In March, 2016, Professor Mizuseki was awarded the prize of the 56th Toray Science and Technology Grant for "An elucidation of the principles of

projection-specific information routing by principal cells in the subiculum". This was a study of determining what type of information is transferred from the subiculum, which is an exit of the information entered in the hippocampus, to each brain region, and it has been receiving attention in that field.

Today Professor Mizuseki still continues his studies, believing that basic research about the mechanism of memory will help to prevent dementia, depression and/or posttraumatic stress disorder (PTSD) and provide a basis for a highly effective therapeutic development in the future.



### Another side

Professor Mizuseki played soccer in junior high school, high school and university. He goes to the gym every day after work, and also likes to swim and run. In March, 2016, he completed the 10 km Takoyaki Marathon in Osaka! (His time is a secret).

Professor Mizuseki, who loves to not only study but also exercise, is working out daily to be able to run in a full marathon someday.