

## Satoshi KUCHIIWA Ph.D.

Kagoshima University  
Graduate School of Medical and Dental Sciences  
Department of Morphological Science (formerly Neuroanatomy)



## Toshiko KUCHIIWA Ph.D.

Kagoshima Immaculate Heart University  
Graduate School of Human Science  
Department of Clinical Psychology



## Greetings

This website is operated with the purpose of introducing the research achievements of our research group. We engage in research activities related to neuroscience, particularly autonomic neuroscience, environmental hormone neurotoxicology, psychopharmacology, behavioral pharmacology, and sexology. In order to make our activities understandable to the general public, we strive to explain our research content without relying on specialized terminology as much as possible. We hope you will take the time to read and understand our work.

While this website initially began as part of the research results disclosure project funded by the Japan Ministry of Education, Culture, Sports, Science, and Technology, it is currently privately operated.

## Collaborators

### Shibin Cheng

Brown University, United States  
<https://www.researchgate.net/profile/Shibin-Cheng>

### Osamu Murakami

Representative of ExpResAP, Japan  
<https://expresap.com>

### Kento Igarashi

Graduate School of Medical and Dental Sciences, Kagoshima University, Japan  
<https://www2.kufm.kagoshima-u.ac.jp/field/advanced-therapeutics/f105/07.html>

## Research of our Group

- Behavioral, anatomical, and biochemical studies of depression and schizophrenia and such in model animals of mental illnesses.  
(We invented a machine to measure irritation of animals and applying it to research. With the invention of this machine, we are now able to measure aggressive behavior towards inanimate objects. As we know that aggressive behavior towards inanimate objects also increases as symptoms of mental illness become stronger, we can diagnose psychiatric symptoms of laboratory animals.)
- Development of technology that can treat specific cells of the brain by pinpoint.  
(We Invented the technology to deliver drugs only to Purkinje cells that administer motor controls as well as raphe nucleus serotonin cells and obtained a patent for it. Using this technology, there is now a possibility to discover wonder drugs for the treatment of refractory movement disorders and mental illnesses (such as depression). We abandoned Our Patent & Joint Research to speed up the development of new drugs and encouraged research at other institutes. Currently, we have communicated this technology to a prominent laboratory in America and we are advancing our research.)
- Research regarding blood flow regulation in head, face, and oral cavity  
(Research regarding the workings of cells related to the blood distribution regulation in the brain and face. We are analyzing the mechanism of blood flow regulation in detail.)
- Mental effects of environmental hormones (dioxins)  
(Research on whether dioxins may have an effect on the brain. We were the first in Japan to report that dioxins have an adverse effect on brain development.)
- Morphological and psychological research regarding parasympathetic ganglia  
(How the autonomic nerve cells and nerve fibers are distributed in the brain, face, and oral cavity. Research regarding the distribution, formation, and function of nerve cells that perform exocrine, vascular, and smooth muscle regulation.)
- Morphological and physiological research regarding pupillomotor and sneeze reflex  
(Mechanism of pupillomotor, neurological research regarding photic sneeze reflex.)