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| Specialized basic subjects | Class style | Lecture and laboratory training | 2 credit (the first semester or second semester) |
| Course title | Integrative and Molecular Physiology |
| Theme | Autonomic and endocrine regulation of the body |
| Semester | One semester or two semesters, Wednesday (10:40-12:10) |
| Location | Research laboratory seminar room |
| Couse director | Tomoyuki Kuwaki, Hideki Kashiwadani, Ikue Kusumoto, Akira Yamashita |
| GIO | Learn about basic molecular mechanisms and the methods of research on homeostasis and homeodynamics |
| SBO |  | 1. Explain the basic molecular mechanisms of homeostasis and homeodynamics.2. Explain the animal models for the research on homeostasis and homeodynamics.3. Explain the advantages and pitfalls in methods for study on homeostasis and homeodynamics. |
| Course descriptions | Instructors |
| 1. Genetically modified mice2. Genetically modified rats and other species3. Introduction of functional assays4. Evaluation method (1): Circulation system5. Evaluation method (2): Respiration system6. Evaluation method (3): Autonomic nervous system7. Methods to evaluate neuronal activity8. Behavioral method (1): General behavior and health assessment9. Behavioral method (2): Movement and circadian rhythm10. Behavioral method (3): Learning11. Behavioral method (4): Emotion12. Application and related topics (1): Infants and aged animals13. Application and related topics (2): Long term multiple measurement14. Application and related topics (3): Use of computers15. Summary and future direction | Tomoyuki KuwakiHideki KashiwadaniIkue KusumotoAkira YamashitaHiroshi Nishimaru (\*)Genshiro Sunagawa (\*) |
| Course materials | Will be provided according to the individual theme |
| Evaluation scheme | The attitude of participation and the content of discussion (100%) |
| Office hour | Tuesday (13:00-17:00) |
| e-mail address | kuwaki@m3.kufm.kagoshima-u.ac.jp |
| After class | Anytime in the office hour |
| remarks |  |