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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 mice  2. Genetically modified rats and other species  3. Introduction of functional assays  4. Evaluation method (1): Circulation system  5. Evaluation method (2): Respiration system  6. Evaluation method (3): Autonomic nervous system  7. Methods to evaluate neuronal activity  8. Behavioral method (1): General behavior and health assessment  9. Behavioral method (2): Movement and circadian rhythm  10. Behavioral method (3): Learning  11. Behavioral method (4): Emotion  12. Application and related topics (1): Infants and aged animals  13. Application and related topics (2): Long term multiple measurement  14. Application and related topics (3): Use of computers  15. Summary and future direction | | | | | | Tomoyuki Kuwaki  Hideki Kashiwadani  Ikue Kusumoto  Akira Yamashita  Hiroshi 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 | |  | | | | |