Course Title | Advanced Food Functionality  
Instructor | Yoshiaki KOHZUMA  
Code | MA052300  
Credit(s) | 1  
Day/Period | Tue, 2  
Description Code | A-AGC-611  
Outline | Food factors with body modulating functions (disease risk reduction and health maintenance) have been applied to "functional foods". Some of them are approved as "foods for specified health uses: FoSHU" in Japan. This lecture focuses on proteinaceous food factors, especially protease inhibitors. The structures, functions and applications are explained with technique of the studies.  
Keywords | functional food, FoSHU, milk basic protein, cystatin, protease, protease inhibitor  
Goals | Understanding of biological functions and the utilization of food factors (especially, protease inhibitors). Searching of research papers concerning foods factors with body-modulating function and presentation about overview of the functional foods (FoSHU). [Diploma Policy (Graduate School)] 1 Academic and research skills in the specialized field  
Course Plan | 1. Functional food and Food with Health Claims (FHC)  
2. Proteinaceous food factors, especially function of milk basic protein (MBP)  
3. Classification and properties of proteases and their inhibitors  
4. Structures and functions of cysteine protease inhibitors  
5. Utilization of cystatins (especially oryzacystatin)  
6. Serine protease inhibitors (BBI type) and cancer  
7. Seminar 1  
8. Seminar 2  
Advice for Preview and Review | Handouts will be provided in class. After lecture, students should study about the topics concerning the contents of the lecture. Several exercises (including numerical calculation of inhibition constant) will be given. In the seminar 1 and 2, students  
Prerequisite | 1. For preparation of handouts, students must finish LiveCampus resistration in a defined period. Registration on the first day of lecture can not be accepted.  
2. Basic knowledge about food functionality and biochemistry (especially proteins and enzymes) will be needed for attending the class.  
3. Students should ask questions aggressively in seminars.  
Grading Criteria | Attitude in the lecture (e.g. the number of question and answer for a question) (20%) and presentation (80%)  
Texts/References | To be announced in the lectures.