


## Requests for Collaboration

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<b>Research Interests</b>	
<ul style="list-style-type: none"><li>● Control of microbial biofilm and floc formation</li><li>● Development of human intestinal devise</li><li>● Sterilization of microbes</li></ul>	
<b>Creative Achievements in The Application of New and Existing Science and Technology</b>	
<p>(1) Induction of spontaneous microbial flocculation for application in biotechnology field. The flocculation of <i>Escherichia coli</i> is induced by the overproduction of outer membrane vesicles (extracellular vesicles). I can display the recombinant protein on the <i>E. coli</i> floc surface for preferable reaction.</p> <p>(2) Development of human intestinal devise, which can co-culture human intestinal cells and microbial cells in compact artificial devise. Our devises enable to evaluate the interaction between human intestinal cells and microbial cells for intestinal flora research.</p> <p>(3) Evaluation of sterilization of microbes. I can evaluate the sterilization process using typical microbes and pathogenic microbes. Sterilization processes are UV irradiation, photo-excited catalyst, coating materials etc.</p>	
<b>Technology (Product, Process, Device, Service etc.) That I Want to Request for Collaboration</b>	
<ul style="list-style-type: none"><li>● Induction of spontaneous microbial flocculation</li><li>● Human intestinal devise for intestinal flora research</li><li>● Evaluation of sterilization of microbes</li></ul>	
<b>A List of 5 Key Publications</b>	
<ul style="list-style-type: none"><li>• Y. Ojima, S. Nunogami, M. Azuma, M. Taya: Displaying a recombinant protein on flocs self-produced by <i>Escherichia coli</i> through fused expression with elongation factor Ts, <i>Enzyme Microb Technol</i>, 108, 21-25 (2018).</li><li>• Y. Ojima, K. Yamaguchi, M. Taya: Quantitative evaluation of recombinant protein packaged into outer membrane vesicles of <i>Escherichia coli</i> cells, <i>Biotechnol Prog</i>, 34(1), 51-57 (2018).</li><li>• Y. Liu, Y. Ojima, M. Horie, E. Nagamori, H. Fujita: Design and fabrication of devices for investigating cell-sheet stretch, <i>BioChip J</i>, 11(3), 173–179 (2017).</li><li>• Y. Ojima, S. Nunogami, M. Taya: Antibiofilm effect of warfarin on the biofilm formation of <i>Escherichia coli</i> promoted by antimicrobial treatment, <i>J Glob Antimicrob Re</i>, 7, 102–105 (2016).</li><li>• Y. Ojima, MH. Nguyen, R. Yajima, M. Taya: Flocculation of <i>Escherichia coli</i> cells in association with the enhanced production of outer membrane vesicles, <i>Appl Environ Microbiol</i>, 81(17), 5900-5906 (2015).</li></ul>	