UTokyo Amgen Scholars Program 2027

Host Laboratory and Research Topic

Name of Faculty Member	Akimitsu OKAMOTO, Professor
Name of Graduate School / Institute	Graduate School of Engineering
Research Topic & Description	How are our bodies created from atoms and molecules? We systematically investigate how the atoms and building blocks of biopolymers (nucleic acids and proteins) participate in biological phenomena, introducing synthetic chemistry-based ideas into biological and genetic studies. Research in our group is concerned with diverse aspects of the design and function of biopolymers on an atomic scale. The focus is on the design, synthesis and physical properties of new, man-made biopolymers with various special functions. Also included is the design of unprecedented organic chemical systems for recognizing, transforming and visualizing a single component or atom in biopolymers of interest. These researches are the fundamental studies reflecting the essence of life science on an atomic scale and the material-developing studies to get useful functional materials for the latest studies on life sciences and medical technologies. The lab employs a multidisciplinary approach involving organic synthesis, photophysical chemistry, state-of-the-art spectroscopy, and biological assays to address new approaches to the interface between synthetic chemistry and life science.
Academic Requirements & Expectations	**1) Field(s) of Study** Bioconjugate Chemistry **2) Knowledge/ Skill/ Proficiency** Synthetic Chemistry **3) Academic Background and Research Experience** Synthetic Chemistry
Website & Relevant Information	https://webpark1516.sakura.ne.jp/
Campus / Location	Hongo/ Yayoi
Area of Research	Chemistry Chemical and Biomolecular Engineering Biochemistry