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# 医工薬融合 GCOE Seminar Series

*Center for Medical System Innovation through Multidisciplinary Integration The University of Tokyo*

# Empowering Natural Product Drug Discovery through Biosynthesis


## Bradley S. Moore

**Professor**

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**Date: Wednesday, March 27, 2013**

**Time: 16:00 - 18:00**

**Venue: 10F. Conference Room, Faculty of Pharmaceutical Science Research Bldg., the University of Tokyo**


Cross coupling and homocoupling reactions are important organic transformations that conjoin hydrocarbon fragments through the aid of a metal catalyst. Nature has evolved a myriad of approaches to similarly couple organic molecules through enzyme catalysis using redox proteins. One evolving method involves the use of halogenating enzymes to activate C-H bonds for regioselective and stereoselective coupling reactions. In my lecture, I will summarize our current understanding of different approaches employed by halogenases and holoperoxidases to facilitate various types of coupling reactions in marine actinomycete biosynthesis toward the merochlorine, marinopyrrole, and chlorizidine antibiotics.


**Organizer: GCOE Program Center for Medical System Innovation through Multidisciplinary Integration, the University of Tokyo**
**Ikuro Abe, Professor,**
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**Cooperation: Graduate Program for Leaders in Life Innovation, the University of Tokyo**
**Center for NanoBio Integration, the University of Tokyo**


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