

## Curriculum Vitae

March 1, 2023

**Miyuki YAMAGUCHI**

### Current Address

52-1 Yada, Suruga-ku, Shizuoka-shi, Shizuoka 422-8526, Japan  
e-mail: yamaguchim (at) u-shizuoka-ken.ac.jp

### Position

Research Assistant Professor, Laboratory of Organic Chemistry,  
School of Pharmaceutical Sciences, University of Shizuoka

### Education

3/2008 Ph. D., Graduate School of Science, Tokyo University of Science  
3/2005 M. S., Graduate School of Science, Tokyo University of Science  
3/2003 B. S., Faculty of Science, Tokyo University of Science

### Research Positions

6/2012-present Research Assistant Professor, School of Pharmaceutical Sciences, University of Shizuoka  
3/2011-5/2012 Project Assistant Professor, Graduate School of Science, University of Tokyo  
9/2008-3/2011 Project Researcher, Graduate School of Science, University of Tokyo  
4/2008-8/2008 Researcher, The HFRE division, ERATO, JST

### Society Membership

The Chemical Society of Japan  
The Pharmaceutical Society of Japan  
The Society of Synthetic Organic Chemistry, Japan

### Research Interests

Development of new catalytic reactions

### Fellowships and Grants

4/2021-3/2024 JSPS Grant-in-aid for Scientific Research (C)  
4/2020-3/2021 Research Grant from the Research Foundation for Pharmaceutical Sciences  
8/2018-7/2019 Research Grant from Hamamatsu Foundation for Science and Technology Promotion  
4/2017-3/2020 JSPS Grant-in-aid for Scientific Research (C)  
4/2015-3/2017 JSPS Grant-in-aid for Young Scientist (B)

4/2015-3/2016 Research Grant from the Uehara Memorial Foundation  
4/2014-3/2016 Research Grant from Asahi Kasei Pharma  
4/2012-3/2014 JSPS Grant-in-aid for Young Scientist (B)  
4/2006-3/2008 Hayashi Fellow (Predoctoral) of Hayashi Memorial Foundation for Female Natural Scientists

## Awards

7/2018 Young Investigator Award in Tokai Area, Synthetic Organic Chemistry, Japan  
2/2014 Asahi Kasei Pharma Award in Synthetic Organic Chemistry, Japan

## Publications

- (1) Yamaguchi, M.; Fujiwara, S.; Mori, Y.; Konishi, H.; Manabe, K.  
Synthesis of Multisubstituted Pyrroles by Ligand-Controlled Site-Selective Arylation and Their Transformation into Multiarylated Pyrrolines and Pyrrolidines.  
*Tetrahedron*, **2022**, *123*, 132962.
- (2) Konishi, H.; Fujita, R.; Yamaguchi, M.; Manabe, K.  
Synthesis of Symmetrical Sulfides Enabled by a Sulfur Dioxide Surrogate Acting as a Divalent Sulfur Source.  
*Org. Lett.*, **2022**, *24*, 3663-3667.
- (3) Yamaguchi, M.; Manabe, K.  
Synthesis of Multisubstituted Benzofurans/Indoles Using Multichlorinated Phenols/Anilines via Palladium-Catalyzed Site-Selective Sonogashira Coupling.  
*Heterocycles*, **2022**, *104*, 3-26.
- (4) Konishi, H.; Kumon, M.; Yamaguchi, M.; Manabe, K.  
Palladium-Catalyzed External-CO-Free Reductive Carbonylation of Aryl Sulfonates.  
*Tetrahedron*, **2020**, *76*, 131639.
- (5) Yamaguchi, M.; Hagiwara, R.; Gayama, K.; Suzuki, K.; Sato, Y.; Konishi, H.; Manabe, K.  
Direct C3-Selective Arylation of N-Unsubstituted Indoles with Aryl Chlorides, Triflates, and Nonaflates Using Palladium-Dihydroxyterphenylphosphine Catalyst.  
*J. Org. Chem.*, **2020**, *58*, 10902-10912.
- (6) Yamaguchi, M.; Ogihara, K.; Konishi, H.; Manabe, K. Synthesis of 2,3-Disubstituted Indoles from Alkynylanilines and 2-Chlorophenols Using Palladium–Dihydroxyterphenylphosphine Catalyst.  
*Tetrahedron Lett.*, **2020**, *61*, 151896.
- (7) Yamaguchi, M.; Fujiwara, S.; Manabe, K.  
Synthesis of 2,2,5-Trisubstituted 2*H*-Pyrroles and 2,3,5-Trisubstituted 1*H*-Pyrroles by Ligand-Controlled Site-Selective Dearomative C2-Arylation and Direct C3-Arylation  
*Org. Lett.*, **2019**, *21*, 6972-6977.
- (8) Yamaguchi, M.; Ozawa, H.; Katsumata, H.; Akiyama, T.; Manabe, K.

One-Pot Synthesis of 2,3-Disubstituted Benzofurans from 2-Chlorophenols Using Palladium-Dihydroxyterphenylphosphine Catalyst.

*Tetrahedron Lett.*, **2018**, *59*, 3175-3178.

- (9) Yamaguchi, M.; Suzuki, K.; Sato, Y.; Manabe, K.  
Palladium-Catalyzed Direct C3-Selective Arylation of *N*-Unsubstituted Indoles with Aryl Chlorides and Triflates.  
*Org. Lett.*, **2017**, *19*, 5388-5391.
- (10) Yamaguchi, M.; Manabe, K.  
Three-Step Synthesis of 2,5,7-Trisubstituted Indoles from *N*-Acetyl-2,4,6-trichloroaniline Using Pd-Catalyzed Site-Selective Cross-Coupling.  
*Org. Biomol. Chem.*, **2017**, *15*, 6645-6655.
- (11) Yamaguchi, M.; Akiyama, T.; Sasou, H.; Katsumata, H.; Manabe, K.  
One-Pot Synthesis of Substituted Benzo[b]furans and Indoles from Dichlorophenols/Dichloroanilines Using a Palladium-Dihydroxyterphenylphosphine Catalyst.  
*J. Org. Chem.*, **2016**, *81*, 5450-5463.
- (12) Yamaguchi, M.; Higuchi, M.; Tazawa, K.; Manabe, K.  
Three-Step Synthesis of Fluoranthenes through Pd-Catalyzed Inter and Intramolecular C-H Arylation.  
*J. Org. Chem.*, **2016**, *81*, 3967-3974.
- (13) Yamaguchi, M.; Manabe, K.  
Ligand-Controlled Site-Selective Cross-Coupling.  
*Site-Selective Catalysis* (Kawabata, T. Ed.): Springer International Publishing: Switzerland, **2016**, pp1-25
- (14) Yamaguchi, M.; Suzuki, K.; Manabe, K. Scalable Synthesis of Dihydroxyterphenylphosphine Ligands.  
*Tetrahedron*, **2015**, *71*, 2743-2747.
- (15) Konishi, H.; Muto, T.; Ueda, T.; Yamada, Y.; Yamaguchi, M.; Manabe, K.  
Imidazole Derivatives as Accelerators for Ruthenium-Catalyzed Hydroesterification and Hydrocarbonylation of Alkenes: Extensive Ligand Screening and Mechanistic Study.  
*ChemCatChem*, **2015**, *7*, 836-845.
- (16) Manabe, K.; Yamaguchi, M.  
Catalyst-Controlled Site-Selectivity Switching in Pd-Catalyzed Cross-Coupling of Dihaloarenes.  
*Catalysts*, **2014**, *4*, 307-320.
- (17) Yamaguchi, M.; Manabe, K.  
One-pot Synthesis of 2,4-Disubstituted Indoles from *N*-Tosyl-2,3-dichloroaniline Using Palladium-Dihydroxyterphenylphosphine Catalyst.  
*Org. Lett.*, **2014**, *16*, 2386-2389.
- (18) Yamaguchi, M.; Kimura, T.; Shinohara, N.; Manabe, K.

Repetitive Two-Step Method for *o,o,p*- and *o,p*-Oligophenylene Synthesis through Pd-Catalyzed Cross-Coupling of Hydroxyterphenylboronic Acid  
*Molecules* **2013**, *18*, 15207-15219.

- (19) Yamaguchi, M.; Katsumata, H.; Manabe, K.  
One-Pot Synthesis of Substituted Benzo[*b*]furans from Mono- and Dichlorophenols Using Palladium Catalysts Bearing Dihydroxyterphenylphosphine  
*J. Org. Chem.* **2013**, *78*, 9270–9281.
- (20) Kobayashi, S.; Kiyohara, H.; Yamaguchi, M.  
Catalytic Silicon Mediated Carbon-Carbon Bond-Forming Reactions of Unactivated Amides.  
*J. Am. Chem. Soc.* **2011**, *133*, 708-711.
- (21) Yamaguchi, M.; Morita, N.; Schneider, U.; Kobayashi, S.  
Catalytic Use of a Soluble Organoindium(III) Species for Allylation and Crotylation of Ketones with Boronates.  
*Adv. Synth. Catal.* **2010**, *352*, 1461-1465.
- (22) Chakrabarti, A.; Konishi, H.; Yamaguchi, M.; Schneider, U.; Kobayashi, S.  
Indium(I)-Catalyzed Asymmetric Allylation, Crotylation, and alpha-Chloroallylation of Hydrazones with Rare Constitutional and High Configurational Selectivities.  
*Angew. Chem. Int. Ed.* **2010**, *49*, 1838-1841.
- (23) Kobayashi, S.; Yamaguchi, M.; Agostinho, M.; Schneider, U.  
Catalytic Use of Strontium Hexamethyldisilazide in the Asymmetric Michael Addition of Malonate to Chalcone Derivatives.  
*Chem. Lett.* **2009**, *38*, 296-297.
- (24) Yamaguchi, M.; Ueki, M.  
Study on Interactions of Oligo(tyrosine sulfate)s with Synthetic Heparin-Binding Peptides by Affinity Chromatography and MALDI-TOF-MS.  
*Adv. Exp. Med. Biol.* **2009**, *611*, 529-530.
- (25) Ueki, M.; Yamaguchi, M.  
Analysis of Sulfo- and Phospho-Peptides as Tetrabutylammonium Salts by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry.  
*Res. Commun. Biochem. Cell Mol. Biol.* **2008**, *12*, 37-49.
- (26) Yamaguchi, M.; Ohmori, T.; Sakata, Y.; Ueki, M.  
Oligo(tyrosine sulfate)s as Heparin Pentasaccharide Mimic: Evaluation by Surface Noncovalent Affinity Mass Spectrometry.  
*Bioorg. Med. Chem.* **2008**, *16*, 3342-3351.
- (27) Yamaguchi, M.; Kikuchi, F.; Ueki, M.  
Direct Detection and Comparison of Non-Covalent Complex Formation of Oligo(tyrosine sulfate)s with Synthetic Heparin-Binding Peptides by MALDI-TOF-MS.  
*Peptide Science 2007, Proceedings of the 44th Japanese Peptide Symposium* (S. Aimoto ed.),

**2008**, pp213-216.

(28) Ueki, M.; Yamaguchi, M.

A Study on Interactions of Oligo(tyrosine sulfate)s with a Heparin-Binding Peptide by MALDI-TOF-MS.

*Peptide Science 2006, Proceedings of the 43rd Japanese Peptide Symposium/4th Peptide Engineering Meeting* (H. Ishida and H. Mihara eds.), **2006**, pp188-189.

(29) Ueki, M.; Yamaguchi, M.

Enhanced Detection of Sulfo-peptides as Onium Salts in Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry.

*Rapid Commun. Mass Spectrom.* **2006**, *20*, 1615-1620.

(30) Ueki, M.; Yamaguchi, M.

Detection of Sulfated Peptides as Their Onium Salts in the Positive Mode by MALDI-TOF Mass Spectrometry.

*Peptide Science 2005, Proceedings of the 42nd Japanese Peptide Symposium* (T. Wakamiya ed.), **2006**, pp177-180.

(31) Ueki, M.; Yamaguchi, M.

Analysis of Acidic Carbohydrates as Their Quaternary Ammonium or Phosphonium Salts by Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry.

*Carbohydr. Res.* **2005**, *340*, 1722-1731.

(32) Ueki, M.; Yamaguchi, M.; Fujiwara, S.

Analysis of Sulfo- and Phospho-Peptides as Quaternary Ammonium Salts by MALDI-TOF MS.

*Peptide Science 2004, Proceedings of the 1st Asian Pacific Ocean International Peptide Symposium/41st Japanese Peptide Symposium* (Y. Shimohigashi ed.), **2005**, pp.187-190.

(33) Ueki, M.; Takekawa, A.; Yamaguchi, M.

Solid Phase Synthesis, Characterization, and Physical Properties of Oligo(tyrosine sulfate)s.

*Peptide Science 2003, Proceedings of the 40th Japanese Peptide Symposium* (M. Ueki ed.), **2004**, pp.151-154.