Curriculum Vitae

Name: Akihiro OGURA, Ph.D.

Address: 3-14-1 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa, 223-8522, JAPAN

E-mail: ogura@applc.keio.ac.jp

Telephone: +81-45-566-1546

Date of birth: 27th Apr 1985

ORCID ID: 0000-0002-4793-5706

I currently do not accept any post-docs, Ph.D. candidate or any other forms of students. Anyone who wants to join the Takao group should contact Prof. Takao in person or by post. All application e-mails to me are ignored !

Education and Occupation

2022~ Senior Assistant Professor, Keio Univ.

2021~ Assistant Professor, Keio Univ.

2016~ Research Associate, Keio Univ. (Prof. Ken-ichi Takao)

2013~ Postdoctoral Fellow, RIKEN (Dr. Katsunori Tanaka)

2013 Ph.D. (Prof. Tohru Fukuyama)

2010~ JSPS Research Fellow, Univ. of Tokyo (Prof. Tohru Fukuyama)

2008~ Graduate School of Pharmaceutical Sciences, Univ. of Tokyo (Prof. Tohru Fukuyama)

Publication List:

1) Ogura, A.; Yamada, K.; Yokoshima, S.; Fukuyama, T.
"Total Synthesis of (–)-Anisatin"
Org. Lett. **2012**, *14*, 1632-1635.
2nd Most Read Paper of *Org. Lett.* during 2012,
Highlighted in Synfacts
Virtual Issue "A Platinum Anniversary Collector's Edition" Most-read article published in 2012

2) Ogura, A.; Kurbangalieva, A.; Tanaka, K.
"In vivo kinetics and biodistribution analysis of neoglycoproteins: effects of

chemically introduced glycans on proteins"
Glycoconjugate J. **2014**, *31*, 273-279.

3) Ogura, A.
"Metal-catalyzed Organic Reactions in Live Cell"
J. Synth. Org. Chem., Jpn. **2014**, *72*, 726-727.
小椋 章弘
「金属触媒を用いた細胞内有機化学反応」
有機合成化学協会誌 **2014**, *72*, 726-727.

4) Ogura, A.; Kurbangalieva, A.; Tanaka, K.
"Metal-catalized Organic Reaction in Live Cell: Future Prospect of Time- and Space-selective Glycan Conjugation In Live Systems"
Trends Glycosci. Glycotechnol. **2014**, *26*, 73-75.

5) Pradipta, A. R.; Tsutsui, A.; Ogura, A.; Hanashima, S.; Yamaguchi, Y.; Kurbangalieva, A.; Tanaka, K.
"Microfluidic mixing of polyamine with acrolein enables the detection of the [4+4] polymerization of intermediary unsaturated imines: The properties of a cytotoxic 1,5-diazacyclooctane hydrogel"
Synlett **2014**, 2442-2446.

6) Ogura, A.; Kurbangalieva, A.; Tanaka, K.
"Chemical Glycan Conjugation Controls the Biodistribution and Kinetics of Proteins in Live Animals"
Mini Rev. Med. Chem. **2014**, 14, 1072-1077.

7) Ogura, A.; Tanaka, K.
"Azaelectrocyclization on cell surface: convenient and general approach to chemical biology research"
Tetrahedron **2015**, 71, 4518-4521.

8) Ogura, A.; Tahara, T.; Nozaki, S.; Morimoto, K.; Kizuka, Y.; Kitazume, S.; Hara, M.; Kojima, S.; Onoe, H.; Kurbangalieva, A.; Taniguchi, N.; Watanabe, Y.; Tanaka, K.
"Visualizing Trimming Dependence of Biodistribution and Kinetics with Homo- and Heterogeneous *N*-Glycoclusters on Fluorescent Albumin"
Sci. Rep. **2016**, 6, 21797.

9) Ogura, A.¶; Tsutsui, A.¶; Tahara, T.; Nozaki, S.; Urano, S.; Kitazume, S.; Hara, M.; Kojima, S.; Kurbangalieva, A.; Onoe, H.; Watanabe, Y.; Taniguchi, N.; Tanaka, K. (¶ equal contribution)

"In Vivo Imaging of Advanced Glycation Endo Products (AGEs) of Albumin: First Observation of Significantly Reduced Clearance and Liver Deposition Properties in Mice"

Org. Biomol. Chem. **2016**, *14*, 5755-5760.

10) Ogura, A.; Kurbangalieva, A.; Tanaka, K.

"Exploring the glycan interaction in vivo: Future prospects of neo-glycoproteins for diagnostics"

Glycobiology **2016**, *26*, 804-812.

11) Ogura, A.; Tahara, T.; Nozaki, S.; Onoe, H.; Kurbangalieva, A.; Watanabe, Y.; Tanaka, K.

"Glycan multivalency effects toward albumin enable *N*-glycan-dependent tumor targeting"

Bioorg. Med. Chem. Lett. **2016**, *26*, 2251-2254.

12) Latypova, L.; Sibgatullina, R.; Ogura, A.; Fujiki, K.; Khabibrakhmanova, A.; Tahara, T.; Nozaki, S.; Urano, S.; Tsubokura, K.; Onoe, H.; Watanabe, Y.; Kurbangalieva, A.; Tanaka, K.

"Sequential Double "Clicks" Toward Structurally Well-defined Heterogeneous *N*-Glycoclusters: The Importance of Cluster Heterogeneity on Pattern Recognition *In Vivo*"

Adv. Sci. **2017**, *4*, 1600394.

Selected as "Cover Picture"

13) Tsubokura, K.; Vong, K. K. H.; Pradipta, A. R.; Ogura, A.; Urano, S.; Tahara, T.; Nozaki, S.; Onoe, H.; Nakao, Y.; Sibgatullina, R.; Kurbangalieva, A.; Watanabe, Y.; Tanaka, K.

"In vivo gold complex catalysis within live mice"

Angew. Chem. Int. Ed. **2017**, *56*, 3579-3584.

Selected as "Hot Paper" "Back Cover"

14) Takao, K.; Nemoto, R.; Mori, K.; Namba, A.; Yoshida, K. Ogura, A.

"Total Synthesis and Structural Revision of Clavilactone D"

Chem. Eur. J. **2017**, *23*, 3828-3831.

15) Matsuki, K.; Miyazaki, S.; Yoshida, K.; Ogura, A.; Sasazawa, Y.; Takao, K.; Simizu, S.

"Synthesis and evaluation of biological activities of vibsanin A analogs"

Bioorg. Med. Chem. Lett. **2017**, *27*, 4536-4539.

Selected as "Cover Picture"

16) Takao, K.; Mori, K.; Kasuga, K.; Nanamiya, R.; Namba, A.; Fukushima, Y.; Nemoto, R.; Mogi, T.; Yasui, H.; Ogura, A.; Yoshida, K.; Tadano, K.
"Total Synthesis of Clavilactones"
J. Org. Chem. **2018**, *83*, 7060-7075.

17) Ogura, A.; Urano, S.; Tahara, T.; Nozaki, S.; Sibgatullina, R.; Vong, K.; Suzuki, T.; Dohmae, N.; Kurbangalieva, A.; Watanabe, Y.; Tanaka, K.
"A viable strategy for screening the effects of glycan heterogeneity on target organ adhesion and biodistribution in live mice"
Chem. Commun . **2018**, *54*, 8693-8696.

18) Yoshida, K.; Fujino, Y.; Takamatsu, Y.; Matsui, K.; Ogura, A.; Fukami, Y.; Kitagaki, S.; Takao, K.
"Enantioselective Total Synthesis of (–)-Misramine"
Org. Lett. **2018**, *20*, 5044-5047.
2nd Most Read Paper of *Org. Lett.* in Sep 2018
10th Most Read Paper of *Org. Lett*. during Sep 2018-Aug 2019
Highlighted in Synfacts
Virtual Issue "*Organic Letters* Global Enterprise": most-read article published from Japan in 2018

19) Ogura, A.; Tanaka, K.
"Next-generation glycocluster for achieving pattern recognition in living system"
J. Synth. Org. Chem., Jpn. **2019**, *77*, 163-172.
小椋 章弘、田中 克典
「生体内でのパターン認識を可能とする次世代糖鎖クラスター」
有機合成化学協会誌 **2019**, *77*, 163-172.

20) Nakajima, T.; Takiguchi, K.; Yoshida, K.; Ogura, A.; Takao, K.
"Studies toward the synthesis of perforatumone: synthesis of the 7-oxabicyclo-[4.2.1]nonane-8,9-dione core"
Heterocycles **2019**, *99*, 661-668.

21) Takao, K.; Kai, H.; Yamada, A.; Fukushima, Y.; Komatsu, D.; Ogura, A.; Yoshida, K.
"Total Syntheses of (+)-Aquatolide and Related Humulanolides"
Angew. Chem. Int. Ed. **2019**, *58*, 9851-9855.
Highlighted in Synfacts

22) Otake, K.; Yamada, K.; Miura, K.; Sasazawa, Y.; Miyazaki, S.; Niwa, Y.; Ogura,

A.; Takao, K.; Simizu, S.
"Identification of topoisomerases as molecular targets of cytosporolide C and its analog"
Bioorg. Med. Chem. **2019**, *27*, 3334-3338.

23) Miura, K.; Matsuki, W.; Ogura, A.; Takao, K.; Simizu, S.
"Identification of vibsanin A analog as a novel HSP90 inhibitor"
Bioorg. Med. Chem. **2020**, *28*, 115253.

24) Takao, K.; Ogura, A.; Yoshida, K.; Simizu, S.
"Total Synthesis of Natural Products Using Intramolecular Nozaki–Hiyama–Takai–Kishi Reactions"
Synlett **2020**, *31*, 421-433.

25) Sakama, A.; Kameshima, R.; Motohashi, Y.; Sumida, W.; Unno, Y.; Yoshida, K.; Ogura, A.; Takao, K.
"Stereoselective Synthesis of the Tricyclic Core of (–)-Callophycoic Acid A"
J. Org. Chem. **2020**, *85*, 3245-3264.

26) Ogura, A.; Ichii, N.; Shibata, K.; Takao, K.
"Red-Light-Mediated Barton–McCombie Reaction"
Bull. Chem. Soc. Jpn. **2020**, *93*, 936-941.
Selected as "Selected Paper"

27) Ogura, A.; Takao, K.
"Recent Advances in the Total Synthesis of Clavilactones"
Heterocycles **2020**, *100*, 1355-1370.

28) Yoshinaga, T.; Shinoda, M.; Iso, Y.; Isobe, T.; Ogura, A.; Takao, K.
"Glycothermally Synthesized Carbon Dots with Narrow-Bandwidth and Color-Tunable Solvatochromic Fluorescence for Wide-Color-Gamut Displays"
ACS Omega **2021**, *6*, 1741-1750.

29) Ogura, A.; Ito, T.; Moriya, K.; Horigome, H.; Takao, K.
"Asymmetric Diels–Alder Reaction between Furans and Propiolates"
Tetrahedron Lett. **2021**, *72*, 153075.

30) Shibata, K.; Takao, K.; Ogura, A.
"Diaryliodonium Salt-based Synthesis of *N*-Alkoxyindolines and Further Insights into the Ishikawa Indole Synthesis"
J. Org. Chem. **2021**, *86*, 10067-10087.

31) Saegusa, J.; Osada, Y.; Miura, K.; Sasazawa, Y.; Ogura, A.; Takao, K.; Simizu, S.

"Elucidation of structure-activity relationship of humulanolides and identification of humulanolide analog as a novel HSP90 inhibitor"
Bioorg. Med. Chem. Lett. **2022**, *60*, 128589.
Selected as "Cover Picture"

32) Oga, M.; Takamatsu, Y.; Ogura, A.; Takao, K.
"Asymmetric Synthesis of Cyclopentene Compounds Containing All-Carbon Quaternary Stereocenters by (3 + 2) Cycloaddition and Formal Synthesis of (*R*)-(–)-Puraquinonic Acid"
J. Org. Chem. **2022**, *87*, 8788-8795.

33) Fukuhara, R.; Ogura, A.; Yoshinaga, S.; Fukunaga, T.; Kinoshita, T.; Sumiyoshi, W.; Higuchi, Y.; Tanaka, K.; Takegawa, K.
"*In vivo* imaging of fluorescent albumin modified with pyruvylated-human-type complex oligosaccharide reveals sialylation-like biodistribution and kinetics"
Bioorg. Med. Chem. **2022**, *70*, 116943.

34) Katakami, R.; Sato, K.; Ogura, A.; Takao, K.; Iso, Y.; Isobe, T.
"Open system synthesis of narrow-bandwidth red-fluorescent carbon quantum dots with a function of multi-metal ion sensing"
J. Mater. Chem. C **2023**, *11*, 4143-4152.

35) Yamamoto, H.; Yamaoka, K.; Shinohara, A.; Shibata, K.; Takao, K.; Ogura, A.
"Red-Light-Mediated Barton Decarboxylation Reaction and One-Pot Wavelength-Selective Transformations"
Chem. Sci. **2023**, *14*, 11243-11250.

36) Uchida, T.; Saito, R.; Takao, K.; Ogura, A.
"Synthesis of Indoles via Sigmatropic Rearrangements and Olefin Isomerization"
Adv. Synth. Catal. **2024**, *366*, 465-472.

37) Matagawa, T.; Sasazawa, Y.; Agui, K.; Fujimaki, M.; Kawano, S.; Ogura, A.; Takao, K.; Igarashi, M.; Simizu, S.
"Antiproliferative activities through accelerating autophagic flux by basidalin and its analogs in human cancer cells"
Bioorg. Med. Chem. Lett. **2024**, *104*, 129713.

Books (includes chapter):

1) Ogura, A.
"可視光照射で進行する Birch 還元" (Review of Chemistry in 2020)
化学 **2020**, *75*, 60-61.

Presentations:

72 oral presentations, including

18th International Conference on Organic Synthesis (Bergen, Norway)
20th International Conference on Organic Synthesis (Budapest, Hungary)
Pacifichem 2015 (Honolulu, USA)

29 poster presentations, including

The 11th International Kyoto Conference on New Aspects of Organic Chemistry
The 8th AFMC International Medicinal Chemistry Symposium (Tokyo, Japan)
9th Pacific Symposium on Radical Chemistry (Pacific Grove, USA)

Patents:

1) Katsunori Tanaka, Yasuyoshi Watanabe, Akihiro Ogura, Takahiro Yamamoto
"Albumin-sugar chain complex"
PCT Int. Appl. WO 2017002918 A1, 2017

Invited Lectures:

1) Ogura, A.
"One-pot Fluorescence Labeling of Live Cell Surface by 6π-Azaelectrocyclization"
Kazan (Volga Region) Federal University, 3rd Jul. 2015
2) 小椋 章弘
"クリック反応を駆使した糖鎖クラスターの合成"
東京医科歯科大学生体材料工学研究所、東京、2018 年 3 月 2 日
3) Akihiro Ogura, Ken-ichi Takao
"Red-Light-Mediated Radical Reactions and Wavelength-Selective Transformations"
16th Keio LCC-Yonsei CBMH Joint Symposium
Keio Univ.、4th Nov. 2023
4) 小椋 章弘

"「触媒の先」を見たい反応開発"
第 11 回慶應有機化学若手シンポジウム、横浜、2024 年 5 月 11 日

Research Grant List (External Funds Only):

1) JSPS Fellowship for Young Scientists (DC1), 2010~2013
2) AstraZeneca R&D Grant 2013
3) JSPS Grants-in-Aid for Scientific Research (KAKENHI), 2014~2017
4) Tobe Maki Scholarship Foundation Research Grant 2018
5) JSPS Grants-in-Aid for Scientific Research (KAKENHI), 2019~2022
6) JSPS Grants-in-Aid for Scientific Research (KAKENHI), 2022~2025
7) Fujimori Science and Technology Foundation Research Grant 2023
8) Nakatani Foundation Grant for Research Study 2023

Here are links for Organic Synthesis Exercises Based on Takao Group Journal Club.

2016-2	2017-1	2017-2	2018-1	2018-2
2019-1	2019-2	2020-1	2020-2	2021-1
2021-2	2022-1	2022-2	2023-1	2023-2

2016-2-a	2017-1-a	2017-2-a	2018-1-a	2018-2-a
2019-1-a	2019-2-a	2020-1-a	2020-2-a	2021-1-a
2021-2-a	2022-1-a	2022-2-a	2023-1-a	2023-2-a