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Education:

BS (1974): Pharmaceutical Institute, Tohoku University
(with Prof. Seiichi Takano)

MS (1976): Graduate Course of Pharmaceutical Institute, Tohoku University
(with Prof. Seiichi Takano)

PhD (1979): Graduate Course of Pharmaceutical Institute, Tohoku University
(with Prof. Seiichi Takano)

Experience:

Postdoctoral Fellow (1979, April ~ 1981, May)
Chemistry Department, Harvard University
(with Prof. Yoshito Kishi)

Assistant Professor (1981, June ~ 1993, January)
Pharmaceutical Institute, Tohoku University
(with Prof. Seiichi Takano)

Associate Professor (1993, February ~ 1994, March)
Faculty of Pharmaceutical Sciences, Tokushima Bunri University
(with Prof. Mugio Nishizawa)

Associate Professor (1994, April ~ 1997, March)
School of Pharmaceutical Sciences, Nagasaki University
(with Prof. Hiroshi Irie)

Professor (1997, April ~ 2002, March)
School of Pharmaceutical Sciences, Nagasaki University

Professor (2002, April ~)
Graduate School of Biomedical Sciences, Nagasaki University

Award: 1987: The Pharmaceutical Society of Japan Award of Tohoku Branch for Young Scientists

1994: The Pharmaceutical Society of Japan Award for Young Scientists

2000: The Tokyo Biomedical Research Foundation Award

2001: Nagase Science and Technology Foundation Award

2014: The Pharmaceutical Society of Japan Award

Research Interest: Synthetic Methodology, Asymmetric Synthesis, Natural Product Synthesis

1. Synthetic studies directed toward kaitocephalin: a highly stereocontrolled route to the right-hand pyrrolidine core.
   Keisuke Takahashi, Natsumi Haraguchi, Jun Ishihara, and Susumi Hatakeyama
   Synlett, **2008**, 671-674.
2. Asymmetric Total Synthesis of (+)-Phoslactomycin B
   Setsuya Shibahara, Masataka Fujino, Masashi Tashiro, KeisukeTakahashi, Jun Ishihara, and Susumi Hatakeyama
   Org. Lett. **10**, 2139-2142 (2008).
3. Entry to Heterocycles Based on Indium-Catalyzed Conia-Ene Reactions: Asymmetric Synthesis of (–)-Salinosporamide A
   Keisuske Takahashi, Michiko Midori, Kei Kawano, Jun Ishihara, and Susumi Hatakeyama
   Angew. Chem. Int. Ed., **47**, 6244-6246 (2008).
4. Asymmetric synthesis of (+)-trachyspic acid
   Kenji Morokuma, Yuko Taira, Yumiko Uehara, Setsuya Shibahara, Keisuke Takahashi, Jun Ishihara and Susumi Hatakeyama
   Tetrahedron Lett., **49**, 6043-6045 (2008).
5. Enantioselective Route to Aryl(1,3-butadien-2-yl)methanols: Formal Synthesis of (–)-Sporochnol A
   Daisuke Yanagimoto, Kazuyuki Kawano, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
   Heterocycles, **77**, 249-253 (2009).
6. Indium-catalyzed Conia-ene reaction for alkaloid synthesis
   Susumi Hatakeyama
   Pure Appl. Chem., **81**, 217-226 (2009).
7. Synthetic studies of vitamin D analogs. Part 35. An improved synthesis of 1-epi-ED-71, a biologically interesting diastereomer of 1a,25-dihydroxy-2b -(3-hydroxypropoxy)vitamin D_3 (ED-71).
   Kohei Eto, Ayako Fujiyama, Mai Kaneko, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama, Yoshiyuki Ono, Noboru Kubodera
   Heterocycles, **77**, 323-331 (2009).
8. Synthesis of 1α,25-Dihydroxy-2β-(3-hydroxypropoxy)vitamin D_3 (Eldecalcitol) and Related Compounds by the Trost Convergent Methodology.
   Noboru Kubodera and Susumi Hatakeyama
   Heterocycles, **79**, 145-162 (2009).
9. A New Variant of Reformatsky–Claisen Rearrangement Mediated by Indium Chloride

Jun Ishihara, Noriko Koyama, Yukihiro Nishino, Keisuke Takahashi, and Susumi Hatakeyama
Synlett, **2009**, 2351-2355.

10. Total Synthesis of (+)-Fostriecin and (+)-Phoslactomycin B
Setsuya Shibahara, Masataka Fujino, Yasumasa Tashiro, Nanako Okamoto, Tomoyuki Esumi, Keisuske Takahashi, Jun Ishihara, and Susumi Hatakeyama
Synthesis, **2009**, 2935-2953.
11. Enantio- and stereoselective route to the phoslactomycin family of antibiotics: formal synthesis of (+)-fostriecin and (+)-phoslactomycin B
Shaheen M. Sarkar, Everlyne N. Wanzala, Setsuya Shibahara, Keisuske Takahashi, Jun Ishihara, and Susumi Hatakeyama
Chem. Commun., **2009**, 5907-5909.
12. Synthetic Studies on Vitamin D Analogs. 37. Synthesis of 20-Epi-1a,25-dihydroxy-2b-(3-hydroxypropoxy)vitamin D_3: 20-Epi-ED-71
Madoka Yoshino, Kohei Eto, Keisuke Takahashi, Jun Ishihara, Susumi Hatakeyama, Yoshiyuki Ono, Hitoshi Saito, and Noboru Kubodera
Heterocycles **81**, 381-394 (2010).
13. Synthetic Study on Clutiolide Based on a Remote Chelation Controlled Ireland-Claisen Rearrangement
Jun Ishihara, Okihisa Tokuda, Kazunori Shiraishi, Yukihiro Nishino, Keisuke Takahashi, and Susumi Hatakeyama
Heterocycles, **80**, 1067-1079 (2010).
14. 145. Synthesis and preliminary biological evaluation of 20-epi-eldecalcitol [20-epi-1a,25-dihydroxy-2b-(3-hydroxypropoxy)vitamin D_3: 20-epi-ED-71]
Susumi Hatakeyama, Madoka Yoshino, Kohei Eto, Keisuke Takahashi, Jun Ishihara, Yoshiyuki Ono, Hitoshi Saito, and Noboru Kubodera
J. Steroid, Biochem., **121**, 25-28 (2010).
15. Indium-catalyzed Conia-ene Reaction and Total Syntheses of Biologically Active Alkaloids
Keisuke Takahashi and Susumi Hatakeyama
J. Synth. Org. Chem. Jpn., **68**, 951-961 (2010).
16. Organocatalytic asymmetric synthesis of quinine and quinidine
Shaheen M. Sarkar, Yuko Taira, Ayako Nakano, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
Tetrahedron Lett., **52**, 923-927 (2011).
17. Indium-mediated Reformatsky-Claisen rearrangement
Jun Ishihara, Yuki Watanabe, Noriko Koyama, Yukihiro Nishino, Keisuke Takahashi, and

Susumi Hatakeyama

Tetrahedron, **67**, 3659-3667 (2011).

18. Synthesis of 1-Deoxyeldecalcitol, a Biologically Interesting Analog of 1a,25-Dihydroxy-2b-(3-hydroxypropoxy)vitamin D_3 (Eldecalcitol)
    Hirotaka Sasaki, Kohei Eto, Keisuke Takahashi, Jun Ishihara, Susumi Hatakeyama, and Noboru Kubodera
    Heterocycles, **83**, 1385-1394 (2011).
19. Total Synthesis of NW-G01, a Cyclic Hexapeptide Antibiotic, and 34-epi-NW-G01
    Setsuya Shibahara, Takaaki Matsubara, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
    Org. Lett., **13** (17), 4700–4703 (2011).
20. Total Synthesis of Oxazolomycin A
    Kohei Eto, Madoka Yoshino, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
    Org. Lett., **13** (19), 5398–5401 (2011).
21. Process Development for the Practical Production of Eldecalcitol by Linear, Convergent and Biomimetic Syntheses
    Noboru Kubodera and Susumi Hatakeyama
    Anticancer Res., **32**, 303-310 (2012)
22. Total Synthesis of (−)-Kaitocephalin Based on a Rh-Catalyzed C–H Amination
    Keisuke Takahashi, Daisuke Yamaguchi, Jun Ishihara, and Susumi Hatakeyama
    Org. Lett., **14**, 1644–1647 (2012).
23. Stereocontrolled Total Synthesis of (−)-Englerin A
    Keisuke Takahashi, Keita Komine, Yuichi Yokoi, Jun Ishihara, and Susumi Hatakeyama
    J. Org. Chem., **77**, 7364–7370 (2012).
24. Organocatalytic asymmetric syntheses of inthomycins A, B and C
    Madoka Yoshino, Kohei Eto, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
    Org. Biomol. Chem., **10**, 8164-8174 (2012).
25. A New Method for the Protection of Carboxylic Acids with a Triisopropylsiloxymethyl Group
    Hikaru Yoshimura, Kohei Eto, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
    Chem. Pharm. Bull., **60**, 1334-1339 (2012).
26. Recent Developments in the Reformatsky-Claisen Rearrangement
    Jun Ishihara and Susumi Hatakeyama
    Molecules, **17**, 14249-14259 (2012).
27. Sereoselective Synthesis of the Fused γ-Lactone/δ-Lactone Core of Ophiodilactones

Takaaki Matsubara, Keisuke Takahashi, Jun Ishihara, and Susumi Hatakeyama
Heterocycles, **86**, 155-158 (2012).