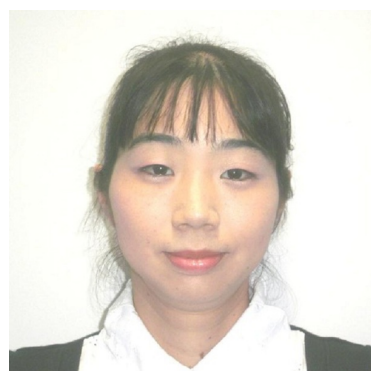




[Chemical and Biological Engineering](#) > HIROHARA Shiho



**HIROHARA Shiho**

Organization	Chemical and Biological Engineering
Position	Associate Professor
Academic Title	Doctor of Science
Research Fields	Bioorganic chemistry

## << Research Subjects >>

- [Development of photosensitizers for Photodynamic Therapy](#)
- [Development of Positron Emission Tomography tracers](#)

## << Academic Activities >>

### Papers and Notes

- [M. Tamura, H. Matsui, S. Hirohara, K. Kakiuchi, M. Tanihara, N. Takahashi, K. Nakai, Y. Kanai, H. Watabe, J. Hatazawa: "Selective accumulation of \[62Zn\]-labeled glycoconjugated porphyrins as multi-functional positron emission tomography tracers in cancer cells", \*Bioorg. Med. Chem.\*, Vol. 22, pp. 2563-2570 \(2014\).](#)
- [M.Obata, R.Asato, K. Mitsuo, S. Hirohara: "Radical Polymerization of Trifluoromethyl-substituted Methyl Methacrylates and Their Application for Use in Pressure-Sensitive Paint", \*J. Polym. Sci. Part A: Polym. Chem.\*, Vol.52, pp.963-972 \(2014\).](#)
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- [S. Hirohara, M. Nishida, K. Sharyo, M. Obata, T. Ando, M. Tanihara, "Synthesis, Photophysical Properties and Photocytotoxicity of Mono-, Di-, Tri- and Tetra-Glucosylated Fluorophenylporphyrins", \*Bioorg. Med. Chem.\* Vol.18, pp.1526-1535 \(2010\).](#)
- [S. Hirohara, M. Obata, H. Alitomo, K. Sharyo, T. Ando, M. Tanihara, S. Yano: "Synthesis, Photophysical Properties and Sugar-Dependent In Vitro Photocytotoxicity of Pyrrolidine-Fused Chlorins bearing S-Glycosides", \*J. Photochem. Photobiol. B: Biol.\*, Vol.97, pp.22-33 \(2009\).](#)
- [S. Hirohara, M. Obata, H. Alitomo, K. Sharyo, T. Ando, S. Yano, M. Tanihara: "Synthesis and Photocytotoxicity of S-Glucosylated 5,10,15,20-Tetrakis\(tetrafluorophenyl\)porphyrin Metal Complexes as Efficient 1O2-Generating Glycoconjugates", \*Bioconjugate Chem.\*, Vol.20, pp.944-952 \(2009\).](#)
- [S. Hirohara, M. Obata, H. Alitomo, K. Sharyo, T. Ando, S. Yano, M. Tanihara: "Structure-Photodynamic Effect Relationships of 24 Glycoconjugated Photosensitizers in HeLa Cells", \*Biol. Pharm. Bull.\*, Vol.3, pp.2265-2272 \(2008\).](#)
- [S. Hirohara, M. Obata, S. Ogata, K. Kajiwara, C. Ohtsuki, M. Tanihara, S. Yano: "Sugar-Dependent Aggregation of Chlorins and Its Effect on Photocytotoxicity in HeLa Cells", \*J. Photochem. Photobiol. B: Biol.\*, Vol.84, pp.56-63 \(2006\).](#)
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- [S. Hirohara, M. Obata, S. Ogura, I. Okura, S. Higashida, C. Ohtsuki, S. Ogata, Y. Nishikawa, M. Takenaka, H. Ono, Y. Mikata, S. Yano: "Log P Values of Glycoconjugated Porphyrins for Photodynamic Therapy Evaluated by Reverse-Phase HPLC", \*J. Porphyrins Phthalocyanines\*, Vol.8, pp.1289-1292 \(2004\).](#)
- [S. Hirohara, M. Obata, A. Saito, S. Ogata, C. Ohtsuki, S. Higashida, S. Ogura, I. Okura, Y. Sugai, Y. Mikata, M. Tanihara, S. Yano: "Cellular Uptake and Photocytotoxicity of Glycoconjugated Porphyrins in HeLa Cells", \*Photochem. Photobiol.\*, Vol.80,](#)

## Presentations

1. [S. Hirohara, M. Nishida, K. Sharyo, M. Obata, T. Ando, M. Tanihara: "Synthesis and PDT effect of glucosylated porphyrin metal complexes", 14th International Conference on Biological Inorganic Chemistry, Japan, July 25-30, 2009.](#)
2. [S. Hirohara, H. Alitomo, K. Syaryo, M. Obata, S. Yano, T. Ando, M. Tanihara: "In vitro screening study of glycoconjugated tetraphenylporphyrins and chlorines derivatives for photodynamic therapy \(PDT\) drugs", 12th International Symposium on Nanoscience and Photoscience, Japan, Nara, July 21, 2007.](#)
3. [S. Hirohara, Y. Mikata, I. Okura, S. Ogura, I. Kinoshita, T. Kakuchi, S. Higashida, M. Hoshino, S. Yano: "Property and application of sugar-linked bacteriochlorin derivatives to photodynamic therapy", 8th International SPACC Symposium, China, October 17-19, 2001.](#)
4. [S. Hirohara, Y. Onchi, Y. Sugai, Y. Mikata, I. Okura, S. Ogura, I. Kinoshita, T. Kakuchi, S. Yano: "Development of sugar-linked bacteriochlorin derivatives for photodynamic therapy", 10th International Conference on Bioinorganic Chemistry, Italy, August 26-31, 2001.](#)
5. [S. Hirohara, Y. Mikata, S. Ogura, I. Okura, I. Kinoshita, T. Kakuchi, S. Yano: "Development of tetra-glycoconjugated porphyrin derivatives for photodynamic therapy", The 2000 International Chemical Congress of Pacific Basin Societies, Hawaii, USA, December 14-19, 2000.](#)
6. [S. Hirohara, Y. Onchi, Y. Yasuda, Y. Sugai, Y. Mikata, S. Ogura, I. Okura, I. Kinoshita, T. Kakuchi, M. Takenaka, H. Ono, S. Yano: "Development of sugar-linked chlorin derivatives for photodynamic therapy", 7th International SPACC Symposium, Osaka, July 21, 2000.](#)