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### **Education:**

- B.S. Life science, Tokyo Institute of Technology, March, 1997
- M.S. Life science, Tokyo Institute of Technology, March, 1999
- Ph.D. Life science, Tokyo Institute of Technology, September, 2001

### **Professional Career:**

- 2001-2003: Postdoctoral Researcher, ATP System Project, Tokyo Institute of Technology
- 2003-2006: Researcher, Bio-frontier Laboratories, Kyowa Hakko Kogyo, Co. Ltd.
- 2006-2009: Research Associate, Consolidated Research Institute for Advanced Science and Medical Care, Waseda University
- 2009- : Assistant Professor, Organization of Advanced Science and Technology, Kobe University
- 2012- : Associate Professor, Organization of Advanced Science and Technology, Kobe University
- 2015- : Associate Professor, Graduate School of Nutritional and Environmental Sciences, University of Shizuoka

### **Research Interests**

- Energetic Cell Factory
- Synthetic Bioengineering
- Metabolic Engineering
- Fine Chemical Production
- Biorefinery

## Review:

Kiyotaka Y. Hara, Jyumpei Kobayashi, Ryosuke Yamada, Daisuke Sasaki, Yuki Kuriya, Yoko Hirono-Hara, Jun Ishii, Michihiro Araki, Akihiko Kondo (2017) Transporter engineering in biomass utilization by yeast. *FEMS Yeast Res.* **17(7)**.

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Tomohisa Hasunuma, Fumio Okazaki, Naoko Okai, Kiyotaka Y. Hara, Jun Ishii, Akihiko Kondo (2013) A review of enzymes and microbes for lignocellulosic biorefinery and the possibility of their application to consolidated bioprocessing technology. *Bioresource Technology* **135**, 513-522.

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## Journal articles:

- Hirono-Hara Y, Miyuu Y, Hara KY (2022) Active transglutaminase production from synthetic whey using engineered *Saccharomyces cerevisiae*. *Bioresource Technology Reports.* **19**, 101154.

- Kobayashi J, Sasaki D, Hara KY, Hasunuma T, Kondo A (2022) A metabolic engineering of the L-serine biosynthetic pathway improves glutathione production in *Saccharomyces cerevisiae*. *Microbial Cell Factories.* **21(1)**, 153.

- Toya Y, Hirono-Hara Y, Hirayama H, Kamata K, Tanaka R, Sano M, Kitamura S, Otsuka K, Abe-Yoshizumi R, Tsunoda SP, Kikukawa H, Kandori H, Shimizu H, Matsuda F, Ishii J, Hara KY (2022) Optogenetic reprogramming of carbon metabolism using light-powering microbial proton pump systems. *Metab Eng.* **72**, 227-236.

• Hirono-Hara Y, Mizutani Y, Murofushi K, Iwahara K, Sakuragawa S, Kikukawa H, Hara KY (2022) Effect of spent coffee grounds extract on astaxanthin production by *Xanthophyllomyces dendrorhous*. *Bioresorce Technology Reports*. **17**, 100953.

Kikukawa H, Shimizu C, Hirono-Hara Y, Hara KY (2022) Effect of ethanol on astaxanthin and fatty acid production in the red yeast *Xanthophyllomyces dendrorhous*. *Journal of Applied Microbiology*. **132**, 2034-2041.

Hara KY, Yagi S, Hirono-Hara Y, Kikukawa H (2021) A method of solubilizing and concentrating astaxanthin and other carotenoids. *Marine Drugs*. **19**, 462.

Hirono-Hara Y, Mizutani Y, Murofushi K, Iwahara K, Sakuragawa S, Kikukawa H, Hara KY (2021) Glutathione fermentation by *Millerozyma farinosa* using spent coffee grounds extract and seawater. *Bioresorce Technology Reports*. **15**, 100777.

Kikukawa H, Shimizu C, Hirono-Hara Y, Hara KY (2021) Screening of plant oils promoting growth of the red yeast *Xanthophyllomyces dendrorhous* with astaxanthin and fatty acid production. *Biocatalysis and Agricultural Biotechnology*. **35**, 102101.

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Hara KY, Aoki N, Kobayashi J, Kiriyama K, Nishida K, Araki M, Kondo A. (2015) Improvement of oxidized glutathione fermentation by thiol redox metabolism engineering in *Saccharomyces cerevisiae*. *Appl Microbiol Biotechnol* **99**, 9771-9778.

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Kiyotaka Y. Hara, Songhee Kim, Hideyo Yoshida, Kentaro Kiriyaama, Takashi Kondo, Naoko Okai, N, Chiaki Ogino, Hideo Fukuda, Akihiko Kondo (2012) Development of a glutathione production process from proteinaceous biomass resources using protease-displaying *Saccharomyces cerevisiae*. *Applied Microbiology and Biotechnology* **93(4)**, 1495-1502.

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**Book (English):**

Kiyotaka Y. Hara (2009) Methods in Molecular Biology: Methods and Protocols, Reverse Chemical Genetics (Section 2.7. Permeable Cell Assay: a method for high-throughput measurement of cellular ATP synthetic activity), Methods in Molecular Biology (Humana Press) **577**, 251-257.