SATOSHI YUZAWA

POSITION

Biochemist, Project Scientist, Lawrence Berkeley National Laboratory (United States)

OFFICE

Joint BioEnergy Institute
5885 Hollis Street, Fourth floor
Emeryville, CA 94608
United States
Phone: (408) 623-4867
Email: syuzawa@lbl.gov

EDUCATION

Doctor of Engineering in Chemistry and Biotechnology, 2009, The University of Tokyo (Japan), Advisor: Professor Hiroaki Suga

Master of Engineering in Material Science, 2005, Nagoya Institute of Technology (Japan), Advisor: Professor Toshiki Tanaka

Bachelor of Engineering in Chemistry, 2003, Nagoya Institute of Technology (Japan), Advisor: Professor Toshiki Tanaka

PROFESSIONAL EXPERIENCE

Biochemist, Project Scientist, Lawrence Berkeley National Laboratory (United States), 2016 July-present, Advisor: Professor Jay D Keasling

Assistant Project Scientist (Step V), The California Institute for Quantitative Biosciences, University of California, Berkeley (United States), 2014 Apr-2016 Jun, Advisor: Professor Jay D Keasling

Postdoctoral Fellow, The California Institute for Quantitative Biosciences, University of California, Berkeley (United States), 2010 Oct-2014 Apr, Advisor: Professor Jay D Keasling

Postdoctoral Fellow, Department of Chemistry, Stanford University (United States), 2009 Apr-2010 Oct, Advisor: Professor Chaitan Khosla

REFERENCES

References are available upon request.

Professor Jay D. Keasling (keasling@berkeley.edu, +1 (510) 495-2764), University of California, Berkeley (United States)

Dr. Leonard Katz (katzl@berkeley.edu, +1 (510) 486-5085), University of California, Berkeley (United States)

Professor Chaitan Khosla (khosla@stanford.edu, +1 (650) 723-6538), Stanford University (United States)

Professor Hiroaki Suga (hsuga@chem.s.u-tokyo.ac.jp, +81 (03) 5841-8372), The University of Tokyo (Japan)

HONORS

Outstanding Invention Award, 2014, Joint BioEnergy Institute (United States)

CSJ Student Presentation Award, 2008, The Chemical Society of Japan (Japan)

Excellent Stone Award, 2008, The Japanese Peptide Society (Japan)

PUBLICATIONS (refereed)

Yuzawa, S., Keasling J.D, and Katz, L. Bio-based production of fuels and industrial chemicals by repurposing antibiotic-producing type I modular polyketide synthases: opportunities and challenges. ***The Journal of Antibiotics.*** 70, 378-385 (2017).

Yuzawa, S.**, Deng, K., Wang, G., Baidoo, E.E., Northen T.R., Adams, P.D., Katz, L., and *Keasling J.D. Comprehensive in vitro analysis of acyltransferase domain exchanges in modular polyketide synthase and its application for short-chain ketone production. ***ACS Synthetic Biology. 6, 134-147 (2017), ***Corresponding author**

Yuzawa, S., Keasling J.D, and Katz, L. Insights into polyketide biosynthesis gained from repurposing antibiotic-producing polyketide synthases to produce fuels and chemicals. ***The Journal of Antibiotics.*** 69, 494-499 (2016).

Eng, C.H., **Yuzawa, S.**, Wang, G., Baidoo, E.E., Katz, L., and Keasling J.D. Alteration of polyketide stereochemistry from anti to syn by a ketoreductase domain exchange in a type I modular polyketide synthase subunit. ***Biochemistry.*** 55, 1677-1680 (2016).

Hagen A., Poust S., de Rond T., **Yuzawa, S.**, Katz, L., Adams P.D., Petzold C.J. and Keasling J.D. In vitro analysis of carboxyacyl substrate tolerance in the loading and first extension modules of Borrelidin PKS. ***Biochemistry.*** 53, 5975-5977 (2014).

Yuzawa, S., Eng, C.H., Katz, L., and Keasling J.D. Enzyme analysis of the polyketide synthase leads to the discovery of a novel analogue of the antibiotic α-lipomycin. ***The Journal of Antibiotics.*** 67, 199-201 (2014).

Yuzawa, S., Eng, C.H., Katz, L., and Keasling J.D. Broad substrate specificity of the loading didomain of the lipomycin polyketide synthase. ***Biochemistry.*** 52, 3791-3793 (2013).

Yuzawa, S., Chiba, N., Katz, L., and Keasling J.D. Construction of a part of a 3-hydroxypropionate cycle for heterologous polyketide biosynthesis in Escherichia coli. ***Biochemistry.*** 51, 9779-9781 (2012).

Yuzawa, S., Kapur, S., Cane, D.E., and Khosla, C. Role of a conserved arginine residue in linkers between the ketosynthase and acyltransferase domains of multimodular polyketide synthases. ***Biochemistry.*** 51, 3708-3710 (2012).

Kapur, S., Lowry, B., **Yuzawa, S.**, Kenthirapalan, S., Chen, A.Y., Cane, D.E., and Khosla, C. Reprogramming a module of the 6-deoxyerythronolide B synthase for iterative chain elongation. ***Proceeding of the National Academy of Sciences of the United States of America.*** 109, 4110-4115 (2012).

Yuzawa, S., Kim, W., Katz, L., and Keasling J.D. Heterologous production of polyketides by modular type I polyketide synthases in Escherichia coli. ***Current Opinion in Biotechnology.*** 23, 727-735 (2012).

*Kang, T.J., ***Yuzawa, S.**, and Suga, H. Expression of histone H3 tails with combinatorial lysine modifications under the reprogrammed genetic code for the investigation on epigenetic markers. ***Chemistry & Biology.*** 15, 1166-1174 (2008)., ***Contributed equally**

Yuzawa, S., Mizuno, T., and Tanaka, T. Activating an enzyme by an engineered coiled coil switch. ***Chemistry - A European Journal.*** 12, 7345-52 (2006).

PATENTS

Yuzawa, S., Katz, L., and Keasling J.D. Producing 3-hydroxycarboxylic acid and ketone using polyketide synthase. ***US Patent Application*** 20150307855, (2015)