



[Chemical and Biological Engineering](#) > SHIMABUKURO Katsuya



SHIMABUKURO Katsuya

Organization	Chemical and Biological Engineering
Position	Associate Professor
Academic Title	Ph. D
Research Fields	Biophysics, Cell Biology

<< Research Subjects >>

1. [Molecular mechanism of amoeboid motility in nematode sperm](#)
2. [Developing methods for correlative light and electron microscopy](#)

<< Academic Activities >>

Papers and Notes

1. [Watanabe R., Okuno D., Sakakihara S., Shimabukuro K., Iino I., Yoshida M., Noji M.: "Mechanical modulation of reaction-rate constants and equilibrium constants on single F1-ATPase molecule", Nat. Chem. Biol. 2011 8:86-92.](#)
2. [Shimabukuro, K., Noda, N., Stewart, M., and Roberts, T.M.: "Reconstitution of amoeboid motility in vitro identifies a motor-independent mechanism for cell body retraction", Curr. Biol. 2011 21:1727-31.](#)
3. [Takeda M., Suno-Ikeda C., Shimabukuro K., Yoshida M., and Yokoyama K.: "Mechanism of inhibition of the V-type molecular motor by tributyltin chloride", Biophys J. 2009 96:1210-7.](#)
4. [Miao L., Vanderlinde O., Liu J., Grant R.P., Wouterse A., Shimabukuro K., Philipse A., Stewart M., and Roberts T.M.: "The role of filament-packing dynamics in powering amoeboid cell motility", Proc Natl Acad Sci U S A. 2008 105:5390-5395.](#)
5. [Watanabe R., Iino R., Shimabukuro K., Yoshida M., and Noji H.: "Temperature-sensitive reaction intermediate of F1-ATPase" EMBO Rep. 2008 9:84-90.](#)
6. [Shimabukuro K., Muneyuki E., and Yoshida M.: "An alternative reaction pathway of F1-ATPase suggested by rotation without 80 degrees/40 degrees substeps of a sluggish mutant at low ATP", Biophysical J. 2006 90:1028-32.](#)
7. [Imamura H., Takeda M., Funamoto S., Shimabukuro K., Yoshida M., and Yokoyama K.: "Rotation scheme of V1-motor is different from that of F1-motor". Proc Natl Acad Sci USA. 2005 102:17929-33.](#)
8. [Pavlova P., Shimabukuro K., Hisabori T., Groth G., Lill H., and Bald D.: "Complete inhibition and partial Re-activation of single F1-ATPase molecules by tentoxin: new properties of the re-activated enzyme", J. Biol. Chem. 2004 279:9685-9688.](#)
9. [Shimabukuro K., Yasuda R., Muneyuki E., Hara K.Y., Kinosita K. Jr., and Yoshida M.: "Catalysis and rotation of F1 motor: cleavage of ATP at the catalytic site occurs in 1 ms before 40 degree substep rotation", Proc Natl Acad Sci USA. 2003 100:14731-6.](#)
10. [Mitome N., Ono S., Suzuki T., Shimabukuro K., Muneyuki E., and Yoshida M.: "The presence of phosphate at a catalytic site suppresses the formation of the MgADP-inhibited form of F\(1\)-ATPase", Eur J Biochem. 2002](#)

Presentations

1. [Shimabukuro K., Haruyama T., Chijimatsu R., and Konno H.: "Observation of MSP Filaments in Cell-free Extract from Ascaris Sperm by High-speed Atomic Force Microscopy", Biophysical Society of Japan, 51th annual meeting, Kyoto, Poster \(2013\)](#)
2. [Shimabukuro K., Noda N., Stewart M., and Roberts TM.: "Simultaneous reconstitution of MSP-based protrusion and retraction in the amoeboid sperm of Ascaris", American Society for Cell Biology 50th annual meeting, Philadelphia, USA, Poster \(2010\).](#)
3. [Shimabukuro K., Stewart M., and Roberts TM.: "Mechanism of MSP-based Cell Body Retraction in the Amoeboid Sperm of Nematodes", Biophysical Society 52th Annual Meeting, Boston, USA, Poster\(2009\).](#)
4. [Shimabukuro K., Noda N., Stewart M., and Roberts TM.: "Simultaneous reconstitution of MSP-based protrusion and retraction in the amoeboid sperm of Ascaris", American Society for Cell Biology 49 th annual meeting, San Diego, USA, Poster \(2009\).](#)

5. [Shimabukuro K., Stewart M., and Roberts TM.: "Mechanism of MSP-based Cell Body Retraction in the Amoeboid Sperm of Nematodes", American Society for Cell Biology 47 th annual meeting, Washington DC, USA, Poster \(2007\).](#)
6. [Shimabukuro K., Stewart M., and Roberts TM.: "Mechanism of MSP-based Cell Body Retraction in the Amoeboid Sperm of Nematodes", American Society for Cell Biology 46 th annual meeting, San Diego, USA, Poster \(2006\)](#)
7. [Shimabukuro K., Muneyuki E., and Yoshida M.: "Analysis of F1 mutant: The effect of duration in the ATP-binding dwell on the duration of the catalytic dwell", Biophysical Society 48 th Annual Meeting, Long Beach, USA, Poster \(2005\).](#)
8. [Shimabukuro K., Muneyuki E., and Yoshida M.: "Catalysis and rotation of F1 motor; cleavage of ATP at the catalytic site occurs in 1 ms before 40°substep rotation", New Horizons in Molecular Sciences and Systems: An Integrated Approach, Okinawa, Japan, Poster \(2003\)](#)
9. [Shimabukuro K, Muneyuki E., and Yoshida M.: "Analysis of the two catalytic events that induce a 30° substep rotation of F1-ATPase", Biophysical Society 46 th Annual Meeting, San Antonio, USA, Poster \(2003\)](#)