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CURRICULUM VITAE

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Education:

1997	Ph. D. University of Tokyo
1992-1997	Graduate School of Science, University of Tokyo
1988-1992	Faculty of Science, Tohoku University

Academic Experience:

2013-present	Team Leader, Supramolecular Structural Biology Team, RIKEN Center for Life Science Technologies (CLST)
2012-2013	Senior Research Scientist, RIKEN Systems and Structural Biology Center (SSBC)
2010-2012	Associate professor, Laboratory of Structural Biology, Graduate School of Science, University of Tokyo
2004-2010	Lecturer, Department of Biophysics and Biochemistry, Graduate School of Science, University of Tokyo
2001-2004	Researcher, RIKEN Cellular Signaling Lab.
1999-2001	Special Postdoctoral Researcher, RIKEN Cellular Signaling Lab.
1998-1999	Contract Researcher, RIKEN Cellular Signaling Lab.
1997-1998	JSPS PD Research Fellow, University of Tokyo

Field of research:

Structural Biology, Biochemistry, Molecular Biology

Publications

Journal Articles:

- Sekine, S.,^{*†} Murayama, Y.,^{*} Svetlov, V., Nudler, E. and Yokoyama, S.[†] (2015) The ratcheted and ratchetable structural states of RNA polymerase underlie multiple transcriptional functions. *Mol. Cell* 57, 408-21. (*Co-first authors, [†]correspondence)
- Sekine, S.,[†] Murayama, Y., Svetlov, V., Nudler, E. and Yokoyama, S.[†] (2015) Ratcheting of RNA polymerase toward structural principles of RNA polymerase operations. *Transcription* 6: 56-60. ([†]correspondence)
- Tomabechi, Y., Hosoya, T., Ehara, H., Sekine, S., Shirouzu, M. and Inouye, S. (2015) *Biochem. Biophys. Res. Commun.* 470, 88-93.
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- Higo, T., Suka, N., Ehara, H., Wakamori, M., Sato, S., Maeda, H., Sekine, S., Umehara, T. and Yokoyama, S. (2014) Development of a hexahistidine-3 \times FLAG-tandem affinity purification method for endogenous protein complexes in *Pichia*

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- Severinov, K., Minakhin, L., Sekine, S., Lopatina, A. and Yokoyama, S. (2014) Molecular basis of RNA polymerase promoter specificity switch revealed through studies of *Thermus* bacteriophage transcription regulator. *Bacteriophage* 4, e29399
- Naganuma, M., Sekine, S., Chong, Y.E., Guo, M., Yang, X.L., Gamper, H., Hou, Y.M., Schimmel, P. and Yokoyama, S. (2014) The selective tRNA aminoacylation mechanism based on a single G•U pair. *Nature* 510, 507-511.
- Tagami, S.,* Sekine, S.,* Minakhin, L.,* Esyunina, D., Akasaka, R., Shirouzu, M., Kulbachinskiy, A., Severinov, K. and Yokoyama, S. (2014) Structural basis for promoter specificity switching of RNA polymerase by a phage factor. *Genes Dev.* 28, 521-531. (*Co-first authors)
- Itoh, Y., Bröcker, M.J., Sekine, S., Söll, D. and Yokoyama, S. (2014) Dimer-dimer interaction of the bacterial selenocysteine synthase SelA promotes functional active-site formation and catalytic specificity. *J. Mol. Biol.* 426, 1723-1735.
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- Itoh, Y., Bröcker, M.J., Sekine, S., Hammond, G., Suetsugu, S., Söll, D. and Yokoyama, S. (2013) The decameric SelA tRNA^{Sec} ring structure reveals the mechanism of bacterial selenocysteine formation. *Science* 340, 75-78.
- Murayama, Y., Sekine, S.† and Yokoyama, S.† (2013) Crystallization and preliminary X-ray crystallographic analyses of *Thermus thermophilus* backtracked RNA polymerase. *Acta Cryst. F69*, 174–177. (†correspondence)
- Itoh, Y., Sekine, S. and Yokoyama, S. (2012) Crystallization and preliminary X-ray crystallographic analysis of *Aquifex aeolicus* SelA, a bacterial selenocysteine synthase. *Acta Crystallogr. F68*, 1128-1133.
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Reviews & Book chapters:

- 関根俊一、田上俊輔、横山茂之 (2011) 転写因子による RNA ポリメラーゼの制御のメカニズム- 細菌の転写を阻害する新たな仕組みの解明 化学と生物 49, 732-734.
- 関根俊一、横山茂之 (2011) セレンをタンパク質に正確に取り込む:セレノシステイン tRNA 認識の構造基盤 生物物理 51, 272-273.
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伊藤拓宏, 関根俊一, 横山茂之 (2004) RNA の構造生物学：転写から翻訳まで
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