Research for Molecular Mechanisms of Genome Editing for the next generation Genome Editing System

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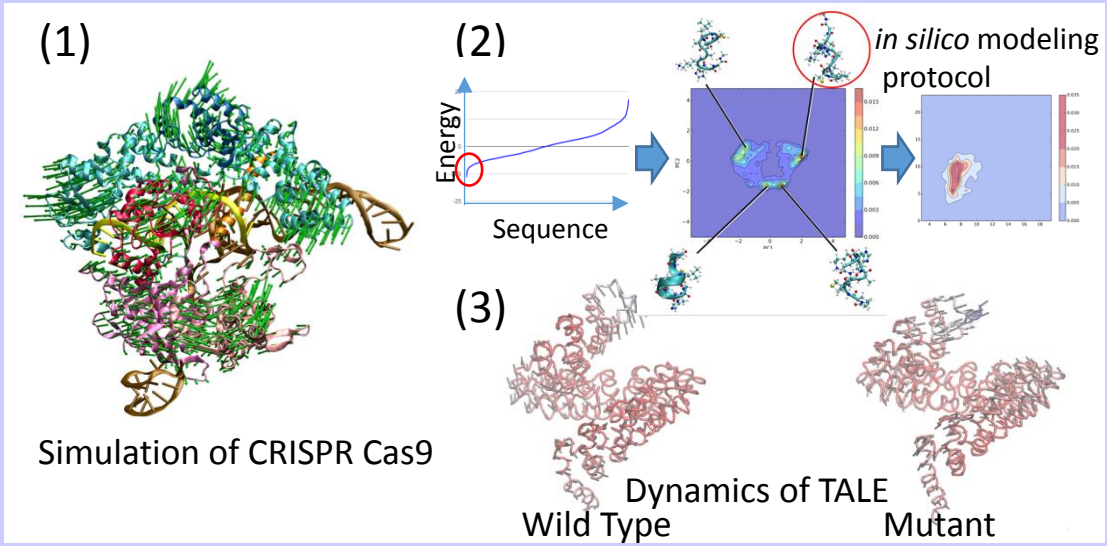
Research Area

1. Molecular Dynamics Simulation of the Genome Editing System.
2. Development of the *in silico* modeling protocol for improved Genome Editing Protein.
3. Modeling of improved Genome Editing System.



Recent Activities

- N. Miyashita, "Bio-molecular simulation using TSUBAME Super Computer system", GTC Japan (nVidia Co.) (2014/7 (Tokyo))
- K. Ikeda, N. Miyashita, "Development of Stable and high activity TALEN", Biosupercomputing, Winter school 2015 (2015/1/31 Tahara-city, Aichi)
- Naoyuki Miyashita et al., "REIN: Replica-Exchange Interface for simulating Protein Dynamics and Function", International Journal of Quantum Chemistry 115(5), 325-332, (2015)
- N. Miyashita, "Molecular dynamics simulation of genome editing proteins toward the in-silico design", 3rd Project Report Meeting of the HPCI System Including K computer (2016/10/21Tokyo)
- Research Grant: co-researcher: "Improvement of genome editing protein by the structure analysis and molecular dynamics (MD) simulations, Y. Okada (RIKEN),", Next gen. technique for AFF, SIP.
- Consigned Research Fund: Reentrustment (RIKEN) of "Development of novel genome editing system by molecular-evolutional engineering and MD, K. Osakabe (TokushimaU)", NEDO SmartCell Project.