DATE: Day____Month____Year 2024

SUMMARY of
FY2023 RESEARCH RESULTS REPORT
For International Collaborative Research with IPR, Osaka University

Research Title		**Structural and functional research on the survival-essential factors from bacterial pathogens for the development of novel antibiotics which induce suicide effect (phase III)**
Applicant	**Name**	**Bong-Jin Lee**
	Affiliation	**Seoul National University**
	Present Title	**Professor**
Research Collaborator (Host PI)		**Atsushi Nakagawa**

Summary

We prepared the protein crystals and sent it to SPring-8. The beamline staffs of the Institute for Protein Research collected the diffraction data at the wavelength of 1.0 Å and the appropriate distance based on the sample sheet was sent with the protein crystal sample. Then, the beamline staffs of the Institute for Protein Research processed each diffraction data with AutoProc and XDS and stored the data to the portable HDD.

For a set being capable of molecular replacement, we tried to solve a structure using a structural template which was prepared by AlphaFold2 with Phenix or CCP4i program suites.

Data were processed using XDS. Structural determination was tried using various programs including CCP4, CNS, and Phenix with either manual or automated method.

Experimental Results

phd-doc complex
- Diffracted successfully to ~2.7 Å.
- Phasing was successful

phd (apo)
- Diffracted successfully to ~2.0 Å.
- Phasing was successful

phd + DNA
- Diffracted successfully to ~1.7 Å.
- Phasing was successful

YoeB + compound
- Diffracted successfully to ~2.0 Å.
- Phasing was successful

***Deadline: May 10, 2024**
***Please submit it to E-mail: tanpakuken-kyoten@office.osaka-u.ac.jp.**
***Please describe this summary within 1 sheet. Please DON'T add some sheets.**
***This summary will be published on the web.**