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Be sure to enter Fellow's ID number

平成 29 年 月 日

To: President, Japan Society for the Promotion of Science

独立行政法人日本学術振興会理事長 殿

研究活動報告書

Research Report

1. 被招へい研究者 所属・氏名 Name of Fellow, Affiliation Robert Duran / Professor / Pau University
2. 受入研究者 所属・職・氏名 Name of Host, Position, Affiliation 東京大学大学院農学生命科学研究科・教授・大西康夫
3. 研究テーマ Research Theme under the Fellowship Microbial Ecology - Ecology of hydrocarbon-degrading microbial communities in coastal environments
4. 採用期間 Fellowship Period 平成 29 年 9 月 12 日 ~ 平成 29 年 10 月 17 日 From(Japanese Year/Month/Day) To(Japanese Year/Month/Day)
5. 研究実施の状況とその成果 Research implementation and results The main objective of the Bridge project was to initiate contacts with Japanese researchers in order to propose collaborative projects in the next future in microbial ecology of hydrocarbon contaminated marine environments and extreme environments. For these purpose, several laboratories have been visited at different Universities in Japan, including: -Hakko Laboratory, Tokyo University, Professor Yasuo Onhishi -Life Science Research Center, Nihon University, Professor Kenji Ueda -Laboratory of Soil Science, Tokyo University, Professor Keishi Senoo -Cell Biotechnology Laboratory, Tokyo University, Professor Makoto Nishiyama -Laboratory of Environmental Biochemistry, Tokyo University, Professor Hideaki Nojiri -Adductomic laboratory, Yokohama City University, Professor Robert Kanaly -Laboratory of Molecular Microbial Science, Institute for Chemical Research, Kyoto University, Professor Tatsuo Kurihara -Deep Seawater Laboratory, Kochi University, Professor Maki Teramoto -Laboratory for Molecular Microbial Bioengineering, Tsukuba University, Professor Michihiko Kobayashi -Microbial and Genetic Ressources Research Group, Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba University, Professor Yoichi Kamagata -Laboratory of Nobuhiko Nomura, Tsukuba University -Laboratory of Geoenvironmental Remediation, Graduate School of Environmental Studies, Tohoku University (Sendai), Professor Chihiro Inoue At each University visited (Tokyo, Kyoto, Kochi, Yokohama, Tsukuba and Sendai), I presented my research work on "Ecology of microbial communities in hydrocarbon coastal environments"

as well as the activities of my institution, Pau University. Laboratory members, PhD students and Master course students attended to the conferences.

At each laboratory visited, we discussed possible collaboration in exploiting and exploring microbial communities capacities in ecosystems studied in my lab as for example hyper-saline microbial mats, acid mine drainage and coastal ecosystems. We also explored the possibilities of research collaboration in the field of microbial ecology, microbial biotechnology, hydrocarbon degradation, and developing microbial tools for the mitigation of the impact of hydrocarbon compounds in the environment considering both chronic and oil spill pollutions. We also discussed the possibilities of educational collaborations including exchanges of Master course and PhD students for laboratory training periods as well as the possibilities to strengthen the collaboration receiving invited Professor. We examined the possibility to elaborate framework agreements for supporting students' exchanges. Funding opportunities for each type of collaborative activity was examined. For this last purpose I also visited the French Embassy where I met Dr Jean-Christophe Auffray (Counsellor for Science and Technology) and Dr Thibaut Dutruel (Chargé de mission Life Science) for discussion about exchange programmes between Japan and France.

The one month stay in Japan was an excellent opportunity to initiate collaborations such as:

- Isolation of bacterial strains able to degrade nitrogen heterocyclic compounds from microbial mats,
- Developing microbial tools for the mitigation of the impact of hydrocarbon compounds,
- Microbial biotechnology "exploring and exploiting extreme ecosystems",
- Cellular localisation by NanoSyms analysis.

We are planning to submit collaborative projects in bilateral Japan/France programs (Sakura) and French Research National Agency (ANR) in the near future.

6. 受入研究者よりコメントがあれば記載してください。 **Comments from Host**

7. 被招へい研究者よりコメントがあれば記載してください。 **Comments from Fellow**

Several contacts with Japanese researchers and laboratories have been established through the Bridge fellowship. I hope to strengthen the links through collaborative projects supported by bilateral programs for research activities and for exchange of students (PhD and masters students).

注1. 本様式は受入研究者と被招へい研究者が協力して作成してください。

注2. 本様式は受入研究者より、採用期間終了後3か月以内に、電子メールにてご提出ください。

The Host is requested to make this form in cooperation with the Fellow and submit to JSPS by email within 3 months after the end of the fellowship. The form can be written either in English or in Japanese.