

東北大学は、人が集い、学び、創造する、世界に開かれた知の共同体として、「ワールドクラスへの飛躍」と「復興・新生の先導」という2つの目標を達成すべく、建学以来の「研究第一」の伝統、「門戸開放」の理念および「実学尊重」の精神を基に、研究の成果を人類社会が直面する諸課題の解決に役立て、国際社会を先導する指導的グローバル人材の育成を目指しています。これらの目標を実現するべく、東北大学は、重点施策として国際的な頭脳循環のハブとして世界に飛躍することを掲げ、日本初の本格的訪問滞在型研究センターである知の創出センターを2013年に立ち上げ、「知のフォーラム」を推進することとしました。

The Tohoku Forum for Creativity (TFC) is an international visitor research institute which was established in 2013 at Tohoku University to facilitate collaborative research. In order to identify important problems across all of the sciences and humanities, the TFC brings together both junior and senior researchers in a stimulating environment that promotes creative approaches to new and interdisciplinary research areas.

The TFC especially encourages junior researchers, such as graduate students and postdoctoral fellows, to participate in the thematic programs. Through discussions and close contact with distinguished researchers,

including Nobel Laureates and Fields Medallists, junior researchers will be stimulated to develop their own original ideas and to eventually become pioneers in new research areas.

#### 人類社会の共通課題解決に 貢献する「知の共同体」

知のフォーラムでは、人文・社会科学 から自然科学までの全分野を対象にし たテーマプログラムを国際公募し、そ

れにより採択された研究テーマについて3か月程度の集中的議論を行 うために、世界第一級の国際的研究者を東北大学に招聘し、共同研究、国際シン ポジウムの開催などを通じて、先駆的研究領域を創出し、人類社会の共通課題解決に貢 献することを目的としています。また、高度で複雑化された社会での未解決問題に取り組むた めに、様々な研究分野が協働するための横断研究推進の場も提供します。

#### A Fellowship of Knowledge which Contributes to the Solution of the Major Issues Faced by Humanity

- The TFC calls for thematic programs from throughout the world covering all academic domains, from the humanities and social sciences to the natural sciences. The TFC then selects themes for concentrated discussions over a three-month period, for which leading international researchers are invited to Tohoku University to develop new areas of research and to contribute to the solution of the major problems facing humanity,

through joint research and the hosting of international symposiums.

Furthermore, the TFC provides an ideal location for the promotion of interdisciplinary cooperation across a diverse range of research areas in order to tackle the increasingly advanced and complex issues facing society.

#### 人類の未来を築くグローバル人材の育成

TOHOKU FORUM

for CREATIVITY

日本をはじめ、世界中からの若手研究者のプログラム参加を推進し、世界トップクラスの研究者と身近にふれあえる環境を醸成し、知のフォーラムを国際的な研究・人材育成拠点として確立します。

Educating Global Leaders to Build the Future of Humanity - The TFC will establish itself as a center for the cultivation of international research leaders, by promoting the participation of junior researchers from throughout the world in our thematic programs. In this way, the TFC will foster an environment in which young researchers can interact closely with world class researchers.

#### 知の裾野を広げる社会貢献

知のフォーラムに参加する研究者と、一般の方々や未来を担う子供達がともに参加できる学術イベントなどを企画し、 交流の機会を提供します。直に最先端の研究者と触れ合うことで、知の裾野を広げ、更なる国際化と、心豊かな社会 づくりを目指します。

**Contributing to Society by Sharing Academic Advances** - The TFC provides opportunities for intellectual exchange between participating researchers and the general public, including the children who will lead society in the future, through the planning and hosting of public events. This initiative aims to promote the sharing of knowledge, further internationalization, and the development of a prosperous society, by providing opportunities for the public to interact directly with world-leading researchers.

Contact and more information www.tfc.tohoku.ac.jp 5th Anniversary

Supported by



Invited Speakers

### Jennifer A. Doudna

University of California, Howard Hughes Medical Institute

# "CRISPR Systems: Biology and Applications of Gene Editing"

Dr. Doudna, a UC Berkeley professor of molecular and cell biology and of chemistry and a Howard Hughes Medical Institute investigator, combines biochemistry and structural biology to understand the function of catalytic and other non-protein-coding RNAs, or ribonucleic acids. She has shown how these molecules carry out complex activities in cells and are uniquely capable of encoding and controlling the expression of genetic information.

Ongoing projects are focused on delivery of Cas9 protein-RNA complexes into specific tissues, as well as discovery of the mechanisms of target search and binding in live cells. We are also working on other aspects of CRISPR biology, including the pathway for acquisition of new sequences into CRISPR loci, and the structures and mechanisms of other CRISPR targeting complexes, including the RNA-targeting Cmr and Csm complexes.





Yoshizumi Ishino

Kyushu University

"Encounter with a mysterious repeated DNA sequence in 1986"



Mikiko Siomi University of Tokyo

-iDNA bisasasis

"piRNA biogenesis in Drosophila"



**Asako Sugimoto** 

Tohoku University

"Revisiting the "multi-tubulin hypothesis" using CRISPR/Cas9 genome editing"



Masanobu Morita

Tohoku University

"CRISPR/Cas system reveals novel moonlight functions of mitochondrial proteins"

## Sun. 29 July, 2018 13:00-17:30

Venue: Tohoku University Centennial Hall (Kawauchi Hagi Hall)

Tohoku University, Kawauchi Campus | 40 Kawauchi, Aoba-ku, Sendai, Miyagi, Japan 980-8576

Hosted by: Tohoku Forum for Creativity, Tohoku University

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Tokyo Electron Limited

More details on

http://www.tfc.tohoku.ac.jp/5th-anniv/doudna/

