Japan

HAN-P-11

Hiroshi Abe

Professor, Nagoya University
Email: abe.hiroshi.p4@f.mail.nagoya-u.ac.jp

Website	https://biochemistry.chem.nagoya-u.ac.jp/index-e/
Social Media Channel	www.linkedin.com/in/hiroshi-abe-8541a820
Research Field(s)	RNA, therapeutics, vaccine, cancer

Academic Career

2001, Ph.D in Pharmacy, Hokkaido University, Japan; 2001-2002, Postdoctoral Fellow, Prof. Joanne Stubbe, Massachusetts Institute Technology, USA; 2002-2005, Postdoctoral Fellow, Prof. Eric Kool, Stanford University, USA; 2005-2013, Researcher, RIKEN, Japan; 2013-2015, Associate Professor, Hokkaido University, Japan; 2015- Present, Professor, Nagoya University University, Japan

Selected Publications

1. Fukuch, K., et. al. Internal cap-initiated translation provides efficient protein production from circular mRNA, Nat. Biotech. accepted.

2. Nomura, K., et. al. Synthesis of 2'-formamidonucleoside phosphoramidites for suppressing the seed-based off-target effects of siRNAs. Nucleic Acids Research , 2024, 52 , 10754–10774.

3. Ototake, M., et. al. Development of hydrophobic tag purifying monophosphorylated RNA for chemical synthesis of capped mRNA and enzymatic synthesis of circular mRNA. Nucleic Acids Research , 2024, 52 , 12141–12157

4. Inagaki, M., et. al. Cap analogs with a hydrophobic photocleavable tag enable facile purification of fully capped mRNA with various cap structures. Nature Communications | (2023)14:2657

Why My Lab?

In our laboratory, we are conducting research on the development of nucleic acid medicine. To this end, we use molecular biology and organic synthetic chemistry to synthesize mRNA and siRNA, which are candidates for use in medicine. In our laboratory, we have a chemical synthesis laboratory, as well as facilities for cell and animal experiments.