

Translation

Chugai and Roche Enter a License Agreement for Chugai's Proprietary Innovative Antibody Engineering Technologies

May 23, 2014 (Tokyo) - Chugai Pharmaceutical Co., Ltd. [Main Office: Chuo-ku, Tokyo. Chairman & CEO: Osamu Nagayama (hereafter, "Chugai")] announced today that it has entered into a licensing agreement with F. Hoffmann-La Roche Ltd. [Head Office: Basel, Switzerland. CEO: Severin Schwan (hereafter, "Roche")] regarding Chugai's proprietary innovative antibody engineering technologies.

Under this license agreement, Chugai grants Roche a license to utilize its antibody engineering technologies and Roche is able to generate innovative antibodies applying this proprietary technologies for Roche's candidates. Roche may also request Chugai to create antibodies for targets that Roche selects. Under the license agreement, Chugai will receive an upfront fee, annual usage fee, milestone and royalty payments from Roche.

With this license agreement, Roche comes to be able to develop antibody drugs which aim for first-in-class or best-in-class utilizing Chugai's proprietary innovative antibody engineering technologies. In particular, by using these proprietary technologies, it is expected for Roche to have wider choices to select antigens and to achieve therapeutic effects that were not possible by conventional technologies.

Target antibody technologies for this license agreement

- SMART-Ig (Sequential Monoclonal Antibody Recycling Technology): Technology for creating Recycling antibody
- SMART-Fc (Sequential Monoclonal Antibody Recycling Technology - Fc domain): Technology for creating Sweeping antibody
- ART-Ig (Asymmetric Re-engineering Technology - Immunoglobulin): Technology for facilitating manufacturing of bispecific antibody
- ART-Fc (Asymmetric Re-engineering Technology - Fc domain): ADCC enhancing technology
- TwoB-Ig (Fc γ RIIB selective binding technology - Immunoglobulin): Inhibitory $Fc\gamma RII B$ selective binding technology
- ACT-Ig (Antibody Charge engineering Technology - Immunoglobulin): Antibody half life extending technology

Chugai and Roche will aim to contribute to the benefit of the medical community and human health around the world by providing novel antibody drugs utilizing proprietary technologies.

[Reference]

About target antibody technologies for this license agreement

- SMART-Ig (Sequential Monoclonal Antibody Recycling Technology - Immunoglobulin)
 - Technology to create “Recycling antibody” which extends the activity of antibody by enabling a single antibody bind to the antigen multiple times
 - Enables having wider choice to select antigens and maximizing product value
 - Development compound applying this technology: SA237 (expected indication: neuromyelitis optica (NMO))

- SMART-Fc (Sequential Monoclonal Antibody Recycling Technology - Fc domain)
 - Technology to create “Sweeping antibody” which enables eliminating pathogenetic antigen from plasma
 - Enables having wider choice to select antigens and maximizing product value

- ART-Ig (Asymmetric Re-engineering Technology - Immunoglobulin)
 - Technology which enables facilitating commercial manufacturing of bispecific antibody
 - Enable to create antibody with new mode of action and give wider choice of select antigens
 - Development compound applying this technology: ACE 910 (Hemophilia A)

- ART-Fc (Asymmetric Re-engineering Technology - Fc domain)
 - ADCC enhanced technology applying ART-Ig. Achieved stronger binding affinity to Fc γ RIIIA than conventional technology and induce stronger ADCC enhancement
 - Applicable for oncology drug creation

- TwoB-Ig (Fc γ RIIB selective binding technology - Immunoglobulin)
 - Fc engineering technology to selectively enhance inhibitory Fc γ RIIB binding
 - Applicable for autoimmune disease drug creation

- ACT-Ig (Antibody Charge engineering Technology - Immunoglobulin)
 - Technology which enables to extend half life of antibody
 - Development compounds applying this technology: SA237 (expected indication: neuromyelitis optica (NMO)), ACE 910 (Hemophilia A), CIM331 (Atopic dermatitis)

Please refer to the following webpage for the detail of antibody technologies:

Information Meeting on Antibody Engineering Technologies (2012/12)

<http://www.chugai-pharm.co.jp/html/meeting/english/121218e.html>