



Chiba University embarks on the development of "Preventive Vaccine." Launch of a joint Research Center in University of California, San Diego (UCSD)

In collaboration with University of California, San Diego (UCSD), Chiba University led by President Takeshi Tokuhsa, established a joint Research Center in each institute to develop the next-generation mucosal vaccine against infectious diseases, allergies, or cancers. The centers aim to improve health and quality of life for the world by the development of a "Preventive Vaccine."

■ Development of "Preventive Vaccine against infectious diseases, allergy, and cancers."

The universally prevalent emerging and re-emerging infectious diseases including Ebola, new strains of influenza, or AIDS, or allergies such as asthma, hay fever, and food allergies develop mainly in mucosal tissues in the mouth, digestive organs, respiratory organs, or genitals. Currently, there has been growing interest in studies to understand and control the immune system of mucosal surfaces so that we can prevent and treat these diseases.

Existing injectable vaccines are able to prevent serious conditions, but are not effective enough to defend against infection. **Our project has the potential to generate a "Preventive Vaccine," which can boost immunity of the body to block the transmission of infectious agents at the entrance of these agents, mucous membrane. This will be the world first Next-generation Vaccine.**

■ About a Joint Research Center

In April 2016, Chiba University launched the Mucosal Immunity and Allergy Therapeutics Research Center jointly at the Inohana Campus (Chiba Research Center) and UCSD School of Medicine (San Diego Research Center). UCSD is one of the top universities, which produces many Nobel Prize winners. UCSD stands as an academic powerhouse in the fields of Immunology, Systematic Biology, Metabolomics, and Natural Products Chemistry; it also delivers exceptional achievements in basic Allergology research.

■ Message from the Project Leader

(Nakayama Toshinori, Professor, Graduate School of Medicine)

We are committed to the development of SEEDs—technologies or inventions with the possibility of commercialization—for new treatments for all throughout the international community. To achieve our goal, we emphasize integration with different academic fields, strengthening of industry-university cooperation, and applying our basic research findings in clinical settings across Japan and the United States. We hope our efforts to develop new concepts and technologies will contribute to health promotion and quality-of-life improvement throughout the world.

Since 2008, Chiba University has focused support on the promotion of joint researches and cultivation of young researchers. We appointed six UCSD professors as visiting professors of Chiba University and strengthened the mutual exchange of faculty and students between our institutions. As a next step of our activities, we pooled our institutional resources equally for the establishment of joint research centers. In the next three years, we plan to initiate a Japan-US Joint Graduate Program where graduate students of UCSD and Chiba can exchange visits to each campus in order to study and conduct researches.



The Biomedical Research Building of UCSD accommodates four labs of Graduate School of Medicine, Chiba University

For more details of the project, please contact our local representative:
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Chiba University-UCSD Immunology Initiative

As of 3-31-16

Globalization of Immunology Research and Training
for the Development of
Novel Prevention and Treatment of
Immunological and Infectious Diseases

- ★ Promotion of Leading Science in Mucosal Immunology, Allergy and Vaccine
- ★ Cultivation of the Next Generation of Global Scientists
- ★ Joint Graduate Program in Medical Science



Takeshi Tokuhsa
President,
Chiba University



Toshi Nakayama
Dean, Grad Sch of Med,
Vice President, Chiba U.

Graduate School of Medicine,
Chiba University



David A. Brenner
Vice Chancellor for
UCSD Health Sciences
Dean, Medical School

UCSD
(San Diego)

CU-UCSD Center for Mucosal Immunology, Allergy and Vaccine
(CU-UCSD CMAV)

Inohana Campus,
Chiba University
(3 Newly-established
Research Divisions)



Chiba Research Center

Innovation for
Allergy therapeutics



Hiroshi Nakajima
(Dept. of Allergy &
Clinical Immunol., Chiba U.)



Satoshi Uematsu
(Dept. of Mucosal
Immunol., Chiba U.)



Toshi Nakayama
(Dept. of Immunology,
Chiba U.)

UCSD Campus,
Chiba University
(7 labs in 2021)



San Diego Research Center



UCSD



Peter Ernst
(Dept. of Pathology,
UCSD)



LJI



Hiroshi Kiyono
(Chiba U. &
U. Tokyo)



Mitchell Kronenberg
(President & Chief
Scientific Officer, LJI)

IBD Center
One Health
Germ Free Facility
Systems Biology
Microbiome

Joint Basic and TR Researches in Japan

Genetically Modified Mouse
Germ-free Mouse

Metagenome
Control of Intestinal
Infection

Testing & Diagnostic
Technics
Development

Research on Infectious
Disease & Immunity

Cultivation of Enterobacterium
Pro- & Pre-Biotics

IBD IBD Therapy

Institute for Medical Science,
The University of Tokyo (IMSUT)

Chiba University-UCSD Immunology Initiative



Toshinori Nakayama
Dean,
Graduate School of Medicine.
Chiba Univ



David A. Brenner
Vice Chancellor for
UCSD Health Sciences
Dean,
Medical School



Chiba Research Center

Director's office



Director
Hiroshi
Nakajima



Co-director
Satoshi
Uematsu

Project manager 1
URA 2
Secretary 1

Graduate Sch. of Med & Univ. Hosp.

Mucosal Immunology



Prof. Uematsu



Prof. Kiyono

Res Associate 1
Tec. 1
Sec. 1

Allergy



Prof.
Nakayama



Prof.
Ohara



Ass. Prof.
Kimura



Ass. Prof.
Mark Bix

Res Associate 1
Tec. 1
Sec. 1

Clinical Study



Prof.
Okamoto



Prof.
Shimojyo



Prof. Nakajima

Res Associate 1
Tec. 1
Sec. 1

San Diego Research Center

Director's office



Director
Hiroshi Kiyono



Co-Director
Peter Ernst

Project manager 1
URA 2
Secretary 1

UCSD Mucosal Immunology 2016-

Chiba-U/UCSD joint lab.



Prof. Kiyono

Prof. 1
Post Doc.
Tec 2

Young PI

Assistant Prof. 1
Tec 1
Post Doc.

Young PI

Assistant Prof. 1
Tec 1
Post Doc.

Young PI

Assistant Prof. 1
Tec 1
Post Doc.

LJI Allergy 2019-

Young PI

Assistant Prof. 1
Tec 1
Post Doc.

Young PI

Assistant Prof. 1
Tec 1
Post Doc.

Young PI

Assistant Prof. 1
Tec 1
Post Doc.

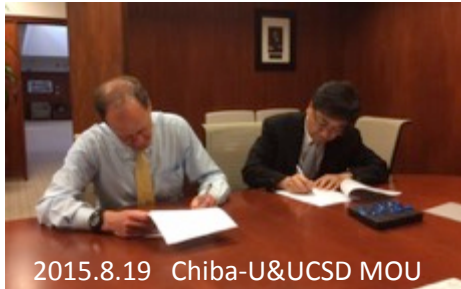
Chiba University-UCSD Immunology Initiative

MOU

August 19th, 2015

AGREEMENT/CONTRACT

March 14th, 2016



Plan:

- ★ Kiyono's lab. & 3 junior faculty PI labs in UCSD (2016-)
- ★ Cross-appointment faculty (2016-)
- ★ Development of a new graduate program in Immunology (2017-)
- ★ Support for 1-3 new graduate students (MD towards PhD) per year in UCSD (2019-)
- ★ A coordinated effort for fund raising towards an endowed program (2016-)
- ★ 3 junior faculty member PI labs in LJI (2019-)

Back: Profs Hiroshi Kiyono, Peter Ernst, and Kan Suzuki
Front: Dean David Brenner, Dean Toshi Nakayama

Chiba University-UCSD Immunology Initiative

AGREEMENT/CONTRACT

March 14th, 2016



Academic Collaboration Agreement Between University of California at San Diego, School of Medicine and Graduate School of Medicine, Chiba University

This Academic Collaboration Agreement of Understanding is entered into this fourteenth day of March, 2016, ("Effective Date") by and between the Regents of the University of California, on behalf of the University of California and its San Diego School of Medicine, located in La Jolla, California, USA ("UCSD"), and Graduate School of Medicine, Chiba University, located in Chiba, Japan ("CHIBA"), (together "Parties", or each a "Party") with respect to the following:

Whereas, the Parties entered into a Memorandum of Agreement ("MOA") dated August 19, 2015 which sets out the proposed areas of "Academic Collaborations" between the Parties;

Whereas, the Parties now wish to enter into this Agreement in order to definitively set out the terms and conditions on which they will collaborate in the areas of research and education collaborations in the field of mucosal immunology, allergy and vaccine development and the basis on which such collaborations will be established will be provided by the Parties and this Agreement is intended to supersede the portions of the MOA relating to such academic collaborations between the Parties;

Whereas, a major goal of the agreement is the establishment of a partnership between CHIBA and UCSD for the creation, operation and maintenance of the academic collaboration program (e.g., CU-UCSD Immunology Initiative (CU-UCSD II), CU-UCSD Center for Mucosal Immunology, Allergy and Vaccine (CU-UCSD CMAV) and other related activities);

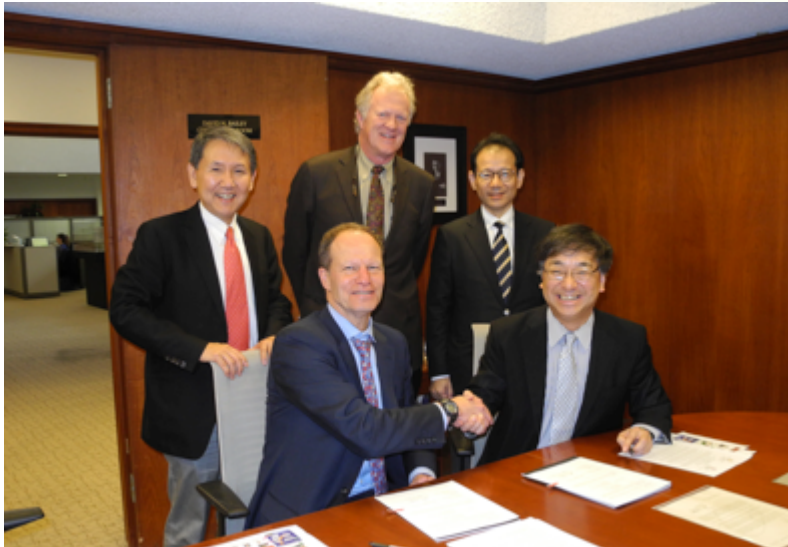
Whereas, the Parties expect that such collaboration will include research in multi-disciplinary immunology research with clinical applications (herein, "Joint Research");

Whereas, the Parties aspire to jointly establish an academic center focused on research in mucosal immunology, allergy and vaccine development (specifically CU-UCSD Center for Mucosal Immunology, Allergy and Vaccine (CU-UCSD CMAV) (herein, "the Center") and agree that additional separate specific written Agreements hereunder to clarify and define the nature, extent and terms for faculty appointments, joint research, characterization of resulting intellectual property, participation of fellows and funding requirements;

NOW THEREFORE IT IS AGREED:

1. Research
 - 1.1 The Collaborative Research Program. Throughout the term of this Agreement, the CHIBA and UCSD shall cooperate continuously and closely with each other in the active conduct of the Joint Research;

210-5208 UCSD/Chiba/ FMA/ Smpg/ etc. 1



Back: Profs Hiroshi Kiyono, Peter Ernst, and Kan Suzuki
Front: Dean David Brenner, Dean Toshi Nakayama

