

Ken Tanaka

Personal Details

Nationality: Japan

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Phone: +81(70)4096-3336

Language Proficiency: English: Fluent (writing & speaking) TOEFL: 620/677, TOEIC: 925/990

Japanese: Native

Spanish: Elementary

Professional Aims: Aspiring Physician-Scientist with computational data science background aiming to apply skills gained from Clinical experiences to Basic Research.

Medical Education & Training

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|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 2019 | Medical Doctor License | (Tokyo, Japan) |
| | Japan Ministry of Health, Labour and Welfare | |
| 2019 | Chiba University School of Medicine | (Chiba, Japan) |
| | M.D., (Doctor of Medicine) | |
| 2018 | Advanced Medical English Workshop Certificate | (Chiba, Japan) |
| | 12 month Medical English Examination Skills Training Program | |
| 2017, 2018 | United States Air Force Misawa Air Base Hospital | (AFP, USA) |
| | Externship during the summer of 2017 and 2018 | |
| 2017~ | Researcher, Olympus - Chiba AI Research Center | (Chiba, Japan) |
| | Researcher at Olympus Inc – Chiba University Artificial Intelligence Research Collaboration Center. Developing AI Endoscopes to detect early stage gastric cancers by utilizing Deep Learning Technologies. | |

Undergraduate Education

University of London, B.S in Information Systems and Management (London, UK)

University of Tokyo, Certificate in Global Health Leadership Program (Tokyo, Japan)

Professional Qualifications

03/2019 Medical Doctor License

(Japan Ministry of Health, Labour, and Welfare)

03/2018 Advanced Medical English Workshop Certificate

(Chiba University School of Medicine)

12 month Intensive Medical Examination Skills Training Program in English taught by Canadian Physician

02/2017~ Certified English-Japanese Medical Interpreter

(Chiba University Hospital)

Conducting English-Japanese Medical translations for international patients at Chiba University Hospital

09/2017 Board Certified Healthcare Information Technologist

(Japan Association for Medical Informatics)

12/2014 Board Certified Bioinformatics Engineer

(Japanese Society for Bioinformatics)

Work & Research Experiences

12/2017 – Present Olympus Inc – Chiba University AI Research Center

- Researcher

Researcher at Olympus Inc – Chiba University Artificial Intelligence Research Collaboration Center. Developing AI Endoscopes to detect early stage gastric cancers by utilizing Deep Learning Technologies.

02/2017 – Present Chiba University Hospital

- Certified English-Japanese Medical Interpreter

Currently conducting English-Japanese Medical translations at Chiba University Hospital for international patients. Conducted English-Japanese Medical translations for over 20 patients up until now.

08/2017

Japan Geriatrics Society

• **Intensive Training Workshop Completion**

Selected as one of 16 Medical Student throughout Japan to receive intensive training on Geriatrics Medicine. Awarded full funding for accommodations and round-trip airfare.

04/2014 – Present

Independent Malaria Research Project in Hemozoin

• **Independent Researcher**

Independently researching on identifying the “Hemozoin coding genes and proteins” with the aims of inhibiting the Heme-binding reactions not to produce Hemozoin to kill malaria parasites within Red Blood Cells by in-silico computational methods and gene knockdown and knockout technologies such as CRISPR. Specifically, I would like to narrow down the candidate hemozoin coding genes to inhibit the production of Hemozoin to about 100 genes out of entire 5,777 malaria genes by Bioinformatics methods before knocking down and knocking out these candidate genes. So far on December 2017, I screened to about 2,000 genes out of 5,777 genes.

04/2013 – 03/2014

Chiba University School of Medicine (Chiba, Japan) ·

Medical Student Research Assistant

Implemented the Differential Binding Analysis on Genome-Wide ChIP Seq Th1 & Th2 Immune Cells to reveal the Histone Modifications on Allergic Reactions. To be more specific, I utilized R language Bioconductor package to undertake DiffBind Analysis to compare the Histone Modifications of ChIP-Seq Th1 & Th2 Immune Cells to identify the particular Histone Modification factors which cause the Allergic Reactions. Investigated the molecular mechanisms of Histone Modifications of H3K4 methylation, H3K9 Acetylation, H3K27 methylation for both of Th1 & Th2 Immune Cells to identify the molecular factors which underlie Th2 Cell dependent Allergic reactions.

09/2009 – 06/2010 *Harvard Medical School (Boston, USA)*

- Research Student

Investigated the molecular mechanisms that underlie thymic tumor development DNA Ligase IV mutant mice. In order to identify cancer specific relevant genes, developing computer program applications to evaluate differential gene expression of LigIV mutant thymic tumors as compared to normal thymocytes by using conventional gene expression platforms. Furthermore, I was generating the mutant mice iPS cells defective in the non-homologous DNA repair gene DNA Ligase IV, to study the fundamental mechanisms that promote genomic stability and prevent the development of cancer.

07/2010 – 08/2010 *Spanish National Cancer Research Center (Madrid, Spain)*

- Research Intern

Investigated the role of Mir-145 microRNA suppression for Human Pancreatic Cancer Stem Cells A6L. To be more specific, investigated whether Mir-145 suppression would potentiate tumorigenesis based on the enhanced number, size, and proliferation (self-renewal) levels of cancer stem cell enriched tumor spheres, which showed the future therapeutic overexpression of Mir-145 for the pancreatic cancer treatment.

06/2009 – 08/2009 *Harvard Stem Cell Institute (Boston, USA)*

- Research Intern

Researched the mechanisms that underlie thymic tumor development in DNA Ligase IV R278H mice. We expect to uncover the fundamental roles of Lig4 in suppression of genomic instability in human disease.

Volunteer Experiences

10/2017 – Present *Tokyo Medical Association*

- Volunteer Medical Student Ambassador

Volunteer Medical Student Ambassador at Tokyo Medical Association to provide personal guidance for elementary and middle school students who are interested in Medicine.

Awards & Honors (Research)

01/2017 King Abdullah University of Science and Technology (KAUST)

– **Invited Speaker, International Poster Competition** –

Invited to present my malaria research outcome at KAUST in the Kingdom of Saudi Arabia. Awarded full funding for accommodations and round-trip airfare by KAUST.

12/2011 Stockholm International Youth Science Seminar (SIYSS)

– **Representative of Japan** –

Invited as one of 24 Young Scientists globally to attend the 2011 Nobel Prize Award Ceremony in Sweden as Representative of Japan. Presented my research at Nobel Prize research sessions. Awarded full funding for accommodations and round-trip airfare by Japan Prize Foundation.

04/2011 American Association for Cancer Research

– **Thomas J. Bardos Scholar Award** –

(Academic Distinction Award, Predoctoral Honorary Member)

06/2010 Spanish National Cancer Research Center

– Research Internship Award –

06/2009 Harvard Stem Cell Institute

– Research Internship Award –

Awards & Honors (Developed Big-Data driven Genome Database Platform)

05/2016 Chiba University Technology Entrepreneur Competition

– **Gold Medal Award & 1st Prize Award** –

http://www.vbl.chiba-u.jp/competition/files_winner/Winnernanohanacompe2016.pdf

02/2016 Chiba Bank Business Plan Competition

– **Gold Medal Award & 1st Prize Award** –

http://www.chibabank.co.jp/news/hojin/2016/0217_01/

- 12/2015** **University Venture Grand Prix 2015, Japan National Final**
– Silver Medal Award & Awarded Study Trip to Silicon Valley –
http://entrepedia.jp/en/helpful_informations/537
- 12/2015** **All Japan Student Business Plan Competition**
– Gold Medal Award –
<http://www.gakusei-sc.or.jp/pdf/27bis.pdf>
- 11/2015** **Campus Venture Grand Prix Tokyo 2015**
– Distinction Award –
<https://www.cvg-nikkan.jp/backnumber/tokyo2015/>
- 11/2015** **Venture Cup Chiba 2015**
– Gold Medal Award & 1st Prize Award –
<http://vcc.chiba-portal.info/>
- 11/2015** **Social Makers Camp Osaka 2015**
– Osaka State Governor's Award & Rohto Pharmaceuticals Award –
http://www.socialmakerscamp.com/flash_report_2015/

Oral Research Presentation

- Targeting Malaria's Achilles Heel: Investigations of Hemozoin crystal coding genes on chronological RNA-Seq expression data of Plasmodium falciparum in intraerythrocytic stages. 2017 KAUST International Poster Competition, 17th January 2017 – KAUST, Thuwal, Kingdom of Saudi Arabia.
- Investigations of Hemozoin crystal coding genes on chronological RNA-Seq expression data of Plasmodium falciparum in intraerythrocytic stages. 2015 Young Research Forum for Infectious Disease, 7th September 2015 – Awaji Island, Japan.

- Investigations of Hemozoin crystal coding genes on chronological RNA-Seq expression data of Plasmodium falciparum in intraerythrocytic stages. 2015 Japanese Society of Parasitology Annual Conference, 21st March 2015 – Tokyo, Japan.
- Differential Binding Analysis on Genome-Wide ChIP-Seq Th1 & Th2 Immune Cells revealed the Histone Modifications on Allergic Reactions. 2014 Chiba Basic & Clinical Research Conference, 1st February 2014 – Chiba, Japan.
- Identifications of non-coding RNA relevant to Cancer Recurrence and Metastasis by DNA Microarray Technologies and elucidations of their molecular mechanisms. Nobel Prize Reception, Stockholm International Youth Science Seminar 2011, 7th December 2011 – Stockholm, Sweden
- Elucidating the mechanisms that underlie thymic tumor development in DNA Ligase IV R278H mice. 2009 Harvard Stem Cell Institute Symposium, 19th August 2009 – Boston, USA
- Role of Mir-145 suppression for Human Pancreatic Cancer Stem Cell A6L. Spanish National Cancer Research Center, 26th August 2010 – Madrid, Spain

TV/Newspapers

02/2016 Chiba Nippo "Genome Database Developed by Medical Student Revolutionizing Healthcare Research". February 18, 2016.

01/2016 Nikkan Kogyo Shimbun "Young Medtech Entrepreneur develop Genome Database". January 15, 2016.

12/2015 Ministry of Economy, Trade, and Industry "Young Entrepreneur of the Year 2015, Medical Student Entrepreneur Ken Tanaka". December 19, 2015.

11/2015 Chiba Nippo "Medical Student Genome Database won Gold Award". November 18, 2015.

10/2015 *Osaka Nichi Nichi Shimbun*. "Young Social Entrepreneurs". November 3, 2015.

12/2011 *Japan Prize Foundation*. "24 Young Scientists at Nobel Prize Ceremony".
December 11, 2011.

03/2011 *EurekaAlert! The Global Source for Science News*. "AACR awards AACR-Thomas J.
Bardos Science Education Award for Undergraduate Students". March 25, 2011.

Professional Affiliations

09/2010 – Present *American Association for Cancer Research*
• Thomas J. Bardos Scholar (Predoctoral Honorary Member)

04/2013 – Present *Japan Association for Medical Informatics*
• Board Certified Healthcare Information Technologist

04/2013 – Present *Japanese Society for Bioinformatics*
• Board Certified Bioinformatics Engineer