

# CURRICULUM VITAE

## 1 NAME:

Masaaki Watanabe

## 2 BIRTH DATA:

15<sup>th</sup> October, 1974

## 3 ADDRESS:

**Residence:** postal code:001-0011, N11W1 1-7-1101, Sapporo, Hokkaido, Japan

**Workplace:** postal code: 060-8638, N15W7, Sapporo, Hokkaido, Japan

Department of Transplant Surgery Faculty of Medicine and Graduate School of Medicine, Hokkaido University

## 4 PHONE AND EMAIL:

**Phone:** +81-80-9615-1015 (mobile)

**Email:** masaaki@w8.dion.ne.jp

## 5 COURSES AND DEGREES

### Clinical training:

Hokkaido University School of Medicine: 1995-2001

The degree of medicine, Hokkaido University, School of medicine, 23<sup>rd</sup> March, 2001

Full Medical License (Japan) #420359: 17<sup>th</sup> May, 2001

### Residency:

2001-2007: Resident at general surgery, Hokkaido University Hospital, Sapporo, Japan

### Fellowship and specialist training:

2007-2012: Clinical and research fellowship at department of transplantation, Hokkaido University Hospital, Sapporo, Japan

2012-2016 Clinical Fellowship and post-doctoral fellowship at Department of transplant surgery, Karolinska University, Sweden

### The degree of Doctor of philosophy:

25<sup>th</sup> September, 2013 Doctor of philosophy, Ph.D., Hokkaido University School of Medicine

Title of the thesis: ASKP1240, a Fully Human Anti-CD40 Monoclonal Antibody, Prolongs Pancreatic Islet Allograft Survival in Nonhuman Primates (*American Journal of Transplantation*. 2013 Aug;13(8):1976-88.)

### Specialist training:

Board certificated transplant physician: 1<sup>st</sup> August, 2012: Japan Society of Transplantation

Board certificated surgeon: 1<sup>st</sup> January, 2019: Japan Surgical Society

Board certificated gastrointestinal surgeon: 1<sup>st</sup> January, 2020: Japan Surgical Society

Board certificated specialist physician of regenerative medicine: 1<sup>st</sup> January, 2021: Japanese Society for Regenerative Medicine

### Academic Research:

2007-2012: Research Fellow of transplantation/islet transplantation at 1<sup>st</sup> Department of Surgery, Hokkaido University School of medicine, Japan

2012-2016: Research Fellow and post-doctoral fellow at Department of transplant surgery, Karolinska University, Sweden

2016-present: Research of transplantation/islet and cell transplantation at Department of Transplant Surgery, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan

## 6 DOCTORAL DEGREE

### The degree of Doctor of philosophy

**Year:** 25<sup>th</sup> September, 2013

**Discipline or subject area:** Transplantation

**Thesis title:** ASKP1240, a Fully Human Anti-CD40 Monoclonal Antibody, Prolongs Pancreatic Islet Allograft Survival in Nonhuman Primates.

**Name of the academic institution:** Hokkaido University School of Medicine  
**Names of the main supervisor:** Professor Satoru Todo  
**Names of co-supervisor:** Professor Kenichiro Yamashita

## **7 POSTDOC APPOINTMENTS**

**Time period:** 2012-2016

**Name of the academic institution:** Department of transplant surgery, Karolinska University, Sweden

**Name of the supervisor:** Professor Bo-Göran Ericzon

## **8 DOCENT-LEVEL COMPETENCE**

**Time period:** 2016 -

**Subject:** tolerance, pancreatic islet transplantation, hepatocyte transplantation

**Name of the academic institution:** Department of Transplant Surgery, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan

## **9 CURRENT POSITION**

**Current employment, title:** Lecturer at Department of Transplant Surgery, Faculty of Medicine and Graduate School of Medicine, Hokkaido University

**Place of work:** postal code: 060-8638, N15W7, Sapporo, Hokkaido, Japan

**Period of the appointment:** 1<sup>st</sup> April, 2018 - 31<sup>st</sup> March, 2025

**Proportions of research, teaching and clinical activity involved in the position:**

**Research:** Researching for tolerance induction after transplantation, and new treatment options for cell transplantation.

**Teaching:** As a P.I., teaching for Ph.D. program students, and teaching for medical students and training surgeons as a sub-chief of transplant group at Hokkaido University hospital.

**Clinical activity:** As a sub-chief of transplant group at Hokkaido University hospital, involving clinical liver, pancreas, kidney, and pancreatic islet transplantation.

## **10 PRIOR POSITIONS**

**1995-2001:** Hokkaido University School of Medicine

**2001-2007:** Residency and training program at general surgery, Hokkaido University Hospital, Sapporo, Japan

**2007-2012:** Clinical and research fellowship at department of transplant surgery, Hokkaido University Hospital, Sapporo, Japan

**2012-2016:** Research Fellow and post-doctoral fellowship at Department of transplant surgery, Karolinska University, Sweden

**2016-2018:** Research of transplantation, islet, and cell transplantation at Department of Transplant Surgery, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan

## **11 TIME DEDUCTED FROM ACTIVE RESEARCH TIME**

**2012-2016:** Research Fellow and post-doctoral fellowship at Department of transplant surgery, Karolinska University, Sweden.

September 15, 2013. Three weeks of parental leave on my third son's birthday.

## **12 SELECTED ACADEMIC DISTINCTIONS AND OTHER MERITS**

Organ transplantation, cell transplantation, tolerance induction

# SCIENTIFIC PORTFOLIO

## 1 CURRENT SCIENTIFIC ACTIVITY

**Area of research and the title:** transplantation, tolerance, cell transplantation,

- Tolerance induction following liver transplantation
- Tolerance induction following pancreatic islet/cell transplantation
- New treatment strategy for preventing the early cell loss following cell transplantation
- Immunological evaluation for tolerance patients following liver transplantation

**Position associated with your current research team affiliation or the equivalent:**

Lecturer and P.I. at Department of Transplant Surgery, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Japan (<https://surg1.med.hokudai.ac.jp/en.html>)

## 2 SCIENTIFIC PUBLICATIONS

### 2.1 The ten most-cited publications

1. Todo S, Yamashita K, Goto R, Zaitzu M, Nagatsu A, Oura T, **Watanabe M**, et al. A pilot study of operational tolerance with a regulatory T-cell-based cell therapy in living donor liver transplantation. *Hepatology*. 2016 Aug;64(2):632-43. doi: 10.1002/hep.28459. Epub 2016 Mar 10. PMID: 26773713 **number of citations: 141**
2. Oura T, Yamashita K, Suzuki T, Fukumori D, **Watanabe M**, et al. Long-term hepatic allograft acceptance based on CD40 blockade by ASKP1240 in nonhuman primates. *Am J Transplant*. 2012 Jul;12(7):1740-54. doi: 10.1111/j.1600-6143.2012.04014.x. Epub 2012 Mar 15. PMID: 22420525 **number of citations: 46**
3. \***M. Watanabe**, K. Yamashita, T. Suzuki, H, et al. ASKP1240, a Fully Human Anti-CD40 Monoclonal Antibody, Prolongs Pancreatic Islet Allograft Survival in Nonhuman Primates. *Am J Transplant*. 2013 Aug;13(8):1976-88. doi: 10.1111/ajt.12330. Epub 2013 Jul 10. PMID: 23841873 **number of citations: 41**
4. Oura T, Taniguchi M, Shimamura T, Suzuki T, Yamashita K, Uno M, Goto R, **Watanabe M**, et al. Does the permanent portacaval shunt for a small-for-size graft in a living donor liver transplantation do more harm than good? *Am J Transplant*. 2008 Jan;8(1):250-2. doi: 10.1111/j.1600-6143.2007.02045.x. Epub 2007 Dec 18. PMID: 18093277 **number of citations: 36**
5. Jorns C, Nowak G, Nemeth A, Zemack H, Mörk LM, Johansson H, Gramignoli R, **Watanabe M**, et al. De Novo Donor-Specific HLA Antibody Formation in Two Patients With Crigler-Najjar Syndrome Type I Following Human Hepatocyte Transplantation With Partial Hepatectomy Preconditioning. *Am J Transplant*. 2016 Mar;16(3):1021-30. doi: 10.1111/ajt.13487. Epub 2015 Nov 2. PMID: 26523372 **number of citations: 31**
6. Taniguchi M, Shimamura T, Suzuki T, Yamashita K, Oura T, **Watanabe M**, et al. Transient portacaval shunt for a small-for-size graft in living donor liver transplantation. *Liver Transpl*. 2007 Jun;13(6):932-4. doi: 10.1002/lt.21080. PMID: 17538989 **number of citations: 26**
7. Takahashi T, Matsumoto S, Matsushita M, Kamachi H, Tsuruga Y, Kasai H, **Watanabe M**, et al. Donor pretreatment with DHMEQ improves islet transplantation. *J Surg Res*. 2010 Sep;163(1):e23-34. doi: 10.1016/j.jss.2010.04.044. Epub 2010 May 21. PMID: 20638688 **number of citations: 17**
8. Daisuke Kuraya, **Masaaki Watanabe**, et al. The efficacy of DHMEQ, a NF-κB inhibitor, in islet transplantation: I. HMGB1 suppression by DHMEQ prevents early islet graft damage. *Transplantation*. 2013 Sep 15;96(5):445-53. doi: 10.1097/TP.0b013e31829b0744. PMID: 23900151 **number of citations: 16**

9. **Masaaki Watanabe**, Torbjörn Lundgren, Yu Saito, et al. A non-hematopoietic erythropoietin analogue, ARA 290, inhibits macrophage activation and prevents damage to transplanted islets. *Transplantation*. 2016 Mar;100(3):554-62. doi: 10.1097/TP.0000000000001026. PMID: 26683514 **number of citations: 11**
10. **Masaaki Watanabe**, Kenichiro Yamashita, Hirofumi Kamachi, et al. The efficacy of DHMEQ, a NF-κB inhibitor, in islet transplantation: II. Induction DHMEQ treatment ameliorates subsequent allo-immune responses, and permits a long-term islet allograft acceptance. *Transplantation*. 2013 Sep 15;96(5):454-62. doi: 10.1097/TP.0b013e31829b077f. PMID: 23860082 **number of citations: 9**

## 2.2 The ten most important publications

### Pancreatic islet transplantation; new strategies for long-term acceptance after transplantation

1. Daisuke Kuraya, **Masaaki Watanabe**, Yasuyuki Koshizuka, et al. The efficacy of DHMEQ, a NF-κB inhibitor, in islet transplantation: I. HMGB1 suppression by DHMEQ prevents early islet graft damage. *Transplantation*. 2013 Sep 15;96(5):445-53. doi: 10.1097/TP.0b013e31829b0744. PMID: 23900151 **number of citations: 16 Transplantation. Impact factor = 4.546**
2. **Masaaki Watanabe**, Torbjörn Lundgren, Yu Saito, et al. A non-hematopoietic erythropoietin analogue, ARA 290, inhibits macrophage activation and prevents damage to transplanted islets. *Transplantation*. 2016 Mar;100(3):554-62. doi: 10.1097/TP.0000000000001026. PMID: 26683514 **number of citations: 11 Transplantation. Impact factor = 4.546**
3. T. Yoshida, K. Yamashita, **M. Watanabe**, et al. The Impact of c-Fos/Activator Protein-1 Inhibition on Allogeneic Pancreatic Islet Transplantation. *Am J Transplant*. 2015 Oct;15(10):2565-75. doi: 10.1111/ajt.13338. Epub 2015 May 26. PMID: 26012352 **number of citations: 4 Am J Transplant. Impact factor = 7.338**
4. Ming Yao, **Masaaki Watanabe**, Sune Sun, et al. Improvement of Islet Allograft Function Using Cibinetide, an Innate Repair Receptor Ligand. *Transplantation*. 2020 Oct;104(10):2048-2058. doi: 10.1097/TP.0000000000003284. PMID: 32345869 **number of citations: 1 Transplantation. Impact factor = 4.546**
5. **Masaaki Watanabe**, Kenichiro Yamashita, Hirofumi Kamachi, et al. The efficacy of DHMEQ, a NF-κB inhibitor, in islet transplantation: II. Induction DHMEQ treatment ameliorates subsequent allo-immune responses, and permits a long-term islet allograft acceptance. *Transplantation*. 2013 Sep 15;96(5):454-62. doi: 10.1097/TP.0b013e31829b077f. PMID: 23860082 **number of citations: 9 Transplantation. Impact factor = 4.546**
6. \***M. Watanabe**, K. Yamashita, T. Suzuki, et al. ASKP1240, a Fully Human Anti-CD40 Monoclonal Antibody, Prolongs Pancreatic Islet Allograft Survival in Nonhuman Primates. *Am J Transplant*. 2013 Aug;13(8):1976-88. doi: 10.1111/ajt.12330. Epub 2013 Jul 10. PMID: 23841873 **number of citations: 41 Am J Transplant. Impact factor= 7.338**

### Tolerance induction after liver transplantation; for wide application of the cell therapy

7. Todo S, Yamashita K, Goto R, Zaito M, Nagatsu A, Oura T, **Watanabe M**, et al. A pilot study of operational tolerance with a regulatory T-cell-based cell therapy in living donor liver transplantation. *Hepatology*. 2016 Aug;64(2):632-43. doi: 10.1002/hep.28459. Epub 2016 Mar 10. PMID: 26773713 **number of citations: 141 Hepatology. Impact factor = 14.679**
8. **Masaaki Watanabe**, Makiko Kumagai-Braesch, Ming Han Yao, et al. Ex-vivo generation of donor antigen-specific immunomodulatory cells: a comparison study of anti-CD80/86 mAbs and CTLA4-Ig costimulatory blockade. *Cell Transplant*. 2018 Nov;27(11):1692-1704. doi: 10.1177/0963689718794642. Epub 2018 Sep 27. PMID: 30261751 **number of citations: 0 Cell Transplant. Impact factor = 3.341**

## **Hepatocyte transplantation; as a new generation cell transplantation**

9. Jorns C, Nowak G, Nemeth A, Zemack H, Mörk LM, Johansson H, Gramignoli R, **Watanabe M**, et al. De Novo Donor-Specific HLA Antibody Formation in Two Patients With Crigler-Najjar Syndrome Type I Following Human Hepatocyte Transplantation With Partial Hepatectomy Preconditioning. *Am J Transplant.* 2016 Mar;16(3):1021-30. doi: 10.1111/ajt.13487. Epub 2015 Nov 2. PMID: 26523372 **number of citations: 31 Am J Transplant. Impact factor = 7.338**
10. **Masaaki Watanabe**, Louise Hagbard, Helene Johansson, et al. Maintenance of hepatic functions in primary human hepatocytes cultured on xeno-free and chemical defined human recombinant laminins. *PLoS One.* 2016 Sep 6;11(9):e0161383. doi: 10.1371/journal.pone.0161383. PMID: 27598296 **number of citations: 6 PLoS One. Impact factor = 2.74**

## **3 INTERNATIONAL SCIENTIFIC CONGRESSES**

### **3.1 Invited speaker or chair**

#### **Invited speaker:**

**A-PHPBA September 4<sup>th</sup> – 7<sup>th</sup> , 2019, Seoul, Korea**

“Operational tolerance with a donor antigen specific immunomodulatory cell therapy in living donor liver transplantation”

**Masaaki Watanabe**, Ryoichi Goto, Kenichiro Yamashita, Satoru Todo, Tsuyoshi Shimamura, and Akinobu Taketomi

#### **Chair person:**

**A-PHPBA September 4<sup>th</sup> -7<sup>th</sup> , 2019, Seoul, Korea**

Chair person, session pp20, September 6<sup>th</sup>

## **3 SCIENTIFIC DISTINCTIONS**

1. **Young investigator award, American Transplant Congress, 30<sup>th</sup> May, 2009**  
“Combined treatment with a nuclear factor (NF)- $\kappa$ B inhibitor, DHMEQ, and tacrolimus permits a long-term allogeneic islet engraftment in mice”
2. **Young investigator award, American Transplant Congress, 2011**  
“Long-term acceptance of islet allografts by ASKP1240 (4D11), a fully human anti-CD40 monoclonal antibody in cynomolgus monkeys”
3. **Mentor and mentee award, Transplantation Science Symposium, 11<sup>th</sup> November, 2015**  
“Ex vivo generation of alloantigen-specific T regulatory cells using selective T-cell co-stimulation blockade”