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## BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

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NAME <b>Jerzy W. Kupiec-Weglinski</b>	POSITION TITLE: Professor of Surgery, Pathology and Laboratory Medicine, David Geffen School of Medicine at UCLA		
eRA COMMONS USER NAME kupiecw2			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Medical Academy of Warsaw, Poland	MD	1975	Medicine
Polish Academy of Sciences, Warsaw, Poland	Ph.D.	1979	Transplant Immunobiology

### A. Personal Statement

I have been working in the area of experimental organ transplantation for over 30 years, 18 of which at Harvard. Since 1997, I have been heading basic and translational research activities at the Dumont-UCLA Transplant Center, one of the largest liver transplant programs in the country (>5,000 liver transplants in the past 25 yrs). One of the major endeavors of my research career is the innate - adaptive immunity cross talk in the mechanism of hepatic damage due to ischemia and reperfusion (IR) in transplant recipients, one of the most understudied yet critical problems facing organ transplantation nowadays. Indeed, my Lab has been at the forefront of cutting-edge liver IRI studies for years. We were the first to propose that liver IRI should be considered as a TLR4-dependent innate-immune response. Over 80 publications out of >400 that I have authored/co-authored relate to liver IRI itself. My research for the past 25 years has been continuously funded by NIH, and I am currently holding two RO1 grants in the area of liver IRI. I am a standing member of the TTT NIH Study Section (2010-2014), serve as Associate Editor of Liver Transplantation (since 2010), Current Concept in Organ Transplantation (since 2012) and have been Member of the Board of Directors of American Society of Transplantation (2002-2005).

### B. Positions and Honors

#### Positions:

1979 - 1981	Research Fellow in Surgery, Harvard Medical School, Boston, MA
1982 - 1984	Instructor in Surgery, Harvard Medical School, Boston, MA
1985 - 1987	Assistant Professor of Surgery, Harvard Medical School, Boston, MA
1986 (9 months)	Horatio Symmonds Fellow, Nuffield Dept. of Surgery, John Radcliffe Hospital, Oxford, UK
1987 - 1997	Associate Professor of Surgery, Harvard Medical School, Boston, MA
1997 -	Professor of Surgery, UCLA School of Medicine, Department of Surgery, Los Angeles, CA
1997 -	Director, Dumont-UCLA Transplantation Research Laboratories
2001 -	Professor of Pathology and Laboratory Medicine, Los Angeles, CA
2001 -	Joan S. and Ralph N. Goldwyn Chair in Immunobiology and Transplantation Research
2007 -	Vice-Chairman (Research), Dept. Surgery, David Geffen School of Medicine at UCLA

#### Other Experience and Professional Memberships:

1984 -	Member, The Transplantation Society
1985 -	Member, American Association of Immunologists
1986 -	Member, Editorial Board, <i>Transplantation</i>
1990 -	Member, American Society of Transplant Physicians
1993 -	Member, Editorial Board, <i>Transplant Immunology</i>
1996 -	Member, Editorial Board, <i>Annals of Transplantation</i>
1998 -	Ad-hoc Member, NIH Study Sections (SAT; TTT, Immunobiology; RFAs, Program Projects)

- 1998 - Member, American Society of Transplantation
- 1999- Member, American Society of Transplant Surgeons
- 2002 - 2005 Board of Directors, American Society of Transplantation
- 2003 Co-Chair, Basic Science Section; NIH Consensus Conference on Humoral Rejection
- 2010 - 2014 Standing Member, Transplantation, Tolerance and Tumor Immunology (TTT) NIH Study Section
- 2010 - Associate Editor, *Liver Transplantation*
- 2012 - Associate Editor, *Current Opinion in Organ Transplantation*

#### **Honors and Awards:**

- 2002 Honorary Degree (*Doctor Honoris Causa*) from Warsaw Medical University, Poland
- 2002-2005 Board of Directors, American Society of Transplantation
- 2005 Foreign Member, Polish Academy of Sciences, Poland
- 2006 AST/Astellas Established Investigator Award in Basic Transplantation Research
- 2006 Mentor/Rising Star Novartis Award, International Liver Transplantation Society (Los Angeles, CA)
- 2007 Mentor/Rising Star Novartis Award, International Liver Transplantation Society (Rio de Janeiro, Brasil)
- 2009 Mentor/Rising Star Novartis Award, International Liver Transplantation Society (New York, NY)
- 2010 Mentor/Rising Star Novartis Award, International Liver Transplantation Society (Hong Kong, China)
- 2011 Mentor/Rising Star Novartis Award, International Liver Transplantation Society (Valencia, Spain)

#### **C. Selected Peer-reviewed Publications on Liver IRI only (selected from >400)**

1. Ke B, Shen XD, Gao F, Busuttil RW, Kupiec-Weglinski JW: Interleukin 13 gene transfer in liver ischemia and reperfusion injury: Role of Stat6 and TLR4 pathways in cytoprotection. **Human Gene Therapy 2004; 15:691-8.**
2. Zhai Y, Shen XD, O'Connell, R, Gao F, Lassman C, Busuttil RW, Cheng G, Kupiec-Weglinski JW: TLR4 activation mediates liver ischemia/reperfusion inflammatory response via IRF3-dependent, MyD88-independent pathway. **Journal of Immunology 2004; 173:7115-9 (Cutting Edge).**
3. Shen XD, Ke B, Zhai Y, Gao F, Busuttil RW, Cheng G, Kupiec-Weglinski JW: Toll-like receptor and heme oxygenase-1 signaling in hepatic ischemia/reperfusion injury. **American Journal of Transplantation 2005; 5:1793-800.**
4. Tsuchihashi S, Fondevila C, Shaw GD, Lorenz M, Marquette K, Shen XD, Ke G, Busuttil RW, Kupiec-Weglinski JW: Molecular characterization of rat leukocyte P-selectin glycoprotein ligand-1 and effect of its blockade: protection from ischemia-reperfusion injury in liver transplantation. **Journal of Immunology 2006; 176:616-24.**
5. Zhai Y, Shen HD, Hancock WW, Gao F, Qiao B, Lassman C, Belperio JA, Strieter RM, Busuttil RW, Kupiec-Weglinski JW: CXCR3+ CD4+ T cells mediate innate immune function in the pathophysiology of liver ischemia/ reperfusion injury. **Journal of Immunology 2006; 176:6313-22.**
6. Shen XD, Ke B, Zhai Y, Tsuchihashi S, Gao F, S. Duarte, A. Coito, Busuttil RW, Allison AC, Kupiec-Weglinski JW: Diannexin, a novel Annexin V homodimer, protects rat liver transplants against cold ischemia-reperfusion injury. **American Journal of Transplantation 2007; 7:2463-71.**
7. Zhai Y, Qiao B, Gao F, Shen X, Vardanian A, Busuttil RW, Kupiec-Weglinski JW: Type 1, but not Type II, interferon is critical in liver injury induced after ischemia and reperfusion. **Hepatology 2008; 47:199-206.**

8. Zhai Y, Shen HD, Gao F, Zhao A, Freitas MC, Lassman C, Luster AD, Busuttil RW, Kupiec-Weglinski JW: CXCL10 regulates liver innate immune response against ischemia and reperfusion injury. **Hepatology 2008; 47:207-14.**
9. Ke B, Shen XD, Gao F, Qiao B, Ji H, Busuttil RW, Volk HD, Kupiec-Weglinski JW: Small interfering RNA targeting heme oxygenase-1 (HO-1) reinforces liver apoptosis induced by ischemia-reperfusion injury in mice: HO-1 is necessary for cytoprotection. **Human Gene Therapy 2009;20:1133-42.**
10. Ke B, Shen XD, Gao F, Ji H, Qiao B, Zhai Y, Farmer DG, Busuttil RW, Kupiec-Weglinski JW: Adoptive transfer of ex vivo HO-1 modified bone marrow-derived macrophages prevents liver ischemia and reperfusion injury. **Molecular Therapy 2010;18:1019-25**
11. Uchida Y, Ke B, Freitas MC, Ji H, Zhao D, Benjamin ER, Najafian N, Yagita H, Akiba H, Busuttil RW, Kupiec-Weglinski JW: The emerging role of T cell immunoglobulin mucine-1 in the mechanism of liver ischemia and reperfusion injury in the mouse. **Hepatology 2010;51:1363-72**
12. Ji H, Shen X, Gao F, Ke B, Freitas MC, Uchida Y, Busuttil RW, Zhai Y, Kupiec-Weglinski JW: Programmed death-1/B7-H1 negative costimulation protects mouse liver against ischemia and reperfusion injury. **Hepatology 2010; 52:1380-9.**
13. Uchida Y, Ke B, Freitas MC, Yagita H, Akiba H, Busuttil RW, Najafian N, Kupiec-Weglinski JW: T-Cell Immunoglobulin Mucin-3 dictates severity of liver ischemia/reperfusion injury in mice in a TLR4-dependent manner. **Gastroenterology 2010; 139:2195-206.**
14. Kamo N, Shen XD, Ke B, Busuttil RW, Kupiec-Weglinski JW: Sotrastaurin, a Protein Kinase C inhibitor, ameliorates ischemia and reperfusion injury in rat liver transplantation. **American Journal of Transplantation 2011; 11:2499-507.**
15. Ke B, Shen XD, Ji H, Kamo N, Gao F, Freitas MC, Busuttil RW, Kupiec-Weglinski JW: HO-1 - STAT3 axis in mouse liver ischemia/reperfusion injury: Regulation of TLR4 innate responses through PI3K/PTEN signaling. **Journal of Hepatology 2012; 56:359-66.**

#### **D. Research Support (Last 3 years)**

##### Active:

Agency: NIH

Type: R01 (DK 63560-06-10)

Period: March 1, 2009 – February 28, 2014

“HO-1 and TLR4 in Liver Ischemia/Reperfusion Injury in Transplant Recipients”

Principal Investigator: Jerzy W. Kupiec-Weglinski, MD, PhD

The major goal of this project is to study innate and adaptive mechanisms of hepatocellular damage due to cold ischemia in mouse liver transplant recipients.

Agency: NIH

Type: DK062357-06S1 NIH/NIDDK (ARRA Revision)

Period: September 30, 2009 – August 31, 2011

“HO1 & TLR4 in Liver Ischemia/Reperfusion Injury in Transplant Recipients”

Multiple PI: Kupiec-Weglinski & Zhai

The goal of this revision is to study adaptive mechanisms of hepatocellular damage due to ischemia/reperfusion in mouse liver transplant recipients.

Agency: NIH

Type: R01 (AI 42223-05-09)

Period: July 1, 2004 – June 30, 2009

“CD4+ Treg in Maintenance of Transplantation Tolerance”

Principal Investigator: Jerzy W. Kupiec-Weglinski, MD, PhD

The major goal of this project is to define mechanisms contributing to Treg generation in transplant models.

AEB071

Novartis Pharmaceuticals Corporation

“Prevention of Liver Ischemia/Reperfusion Injury by AEB, a PKC Inhibitor

Period: December 17, 2008 – December 31, 2009

Principal Investigator: Jerzy W. Kupiec-Weglinski, MD, PhD

The major goal of this project is to examine the efficacy and putative cytoprotective function of AEB in well-defined rat liver models of cold ischemia followed by ex-vivo reperfusion or orthotopic liver transplantation.

Agency: NIH

Type: R01 (AI 23847-18A2)

Period: September 12, 2009 – August 31, 2010

“Costimulatory Pathways in Sensitized Graft Recipients”

Principal Investigator: Jerzy W. Kupiec-Weglinski, MD, PhD

The major goal of this project is to test the role of CD154-CD40 interactions in host sensitization

Completed:

Agency: NIH

Type: R01 (DK 63560-01-05)

Period: April 1, 2003 – March 31, 2008

“Heme Oxygenase-1 in Hepatic Ischemia/Reperfusion Injury”

Principal Investigator: Jerzy W. Kupiec-Weglinski, MD, PhD

The major goal of this project is to design new treatments against ischemia/reperfusion injury in liver transplants.