



ALBERTA
TRANSPLANT
INSTITUTE

RESEARCH
DAY

Thursday, May 31st
ECHA L1-490
8:00am - 3:00pm

**William H. Lakey Lecture
in Transplantation**

"Building an Organ in 2018"

Dr. Doris Taylor

Director, Regenerative Medicine Research
Director, Center for Cell and Organ Biotechnology
Texas Heart Institute



ATI Research Day Schedule

8:00 - 8:30 Continental Breakfast
8:30 - 9:00 Opening Remarks
9:00 - 10:15 Plenary Session
10:15 - 11:00 Coffee and Poster Session
11:00 - 12:00 Oral Presentations

12:00 - 12:45 Lunch
12:45 - 1:30 Poster Session
1:30 - 2:30 Oral Presentations
2:30 - 3:00 Announcements and Closing Remarks

Plenary session presented in partnership with the
Department of Surgery,
Division of Urology

Register by May 18th

Visit the ATI website for more details

Alberta Transplant Institute Research Day 2018

Dear Colleagues,

Welcome to the second annual ATI Research Day! Today, we are showcasing some of the excellent research in donation and transplantation being carried out by ATI members and ATI trainees. This year, the William H. Lakey Lecture in Transplantation is being presented as the plenary address, in partnership with the Department of Surgery, Division of Urology. We are honoured to have Dr. Doris Taylor, of the Texas Heart Institute, giving the plenary address "Building an Organ in 2018". We hope you enjoy the day!

Lori West
Director, ATI

Darren Freed
Director of Research, ATI

ATI Research Day Committee: Darren Freed, Nowell Fine, Carlos Cervera, Luis Hidalgo, Jason Acker, Karen Hunter, and Ingrid Larsen



The William H. Lakey Lecture in Transplantation

Presented jointly with the Department of Surgery, Division of Urology

Doris A. Taylor, Ph.D., FAHA, FACC

Doris A. Taylor, Ph.D., FAHA, FACC, has worked in the field of cardiovascular regenerative medicine since its inception and is widely acknowledged as a major thought-leader in the field. Her mechanistic insights and effective approaches to cardiac repair and replacement are well established and include a number of firsts.

She currently serves as director of the Department of Regenerative Medicine Research and the Center for Cell and Organ Biotechnology at Texas Heart Institute, in Houston, Texas. She also heads the Cardiovascular Cell Therapy Research Network (CCTR) Biorepository, the cell and cytokine profiling core lab that serves multiple NIH, National Heart Lung and Blood Institute (NHLBI) networks, medical centers, and research foundations in the U.S. and Canada. She has published extensively, authoring or co-authoring more than 140 scientific publications and co-editing two textbooks.

Dr. Taylor earned a B.S. in biology and physical sciences from Mississippi University for Women in 1977 and a Ph.D. in pharmacology from the University of Texas Southwestern Medical Center in Dallas, Texas in 1987. She holds many honors, including appointments as a Fellow of the American Heart Association and the American College of Cardiology, among others. She has been recognized by the AHA for Top 10 Research Advances. She was awarded an honorary Doctorate Science degree by her alma mater, Mississippi University for Women, in 2015 and the national Distinguished Alumnus Award presented by the American Association of State Colleges and Universities (AASCU) in 2016. She received the international Madrid Award for Excellence in Basic and Preclinical Regenerative Research in June 2017.

She frequently appears as an expert on stem cell therapy and cardiac repair in the media as well as in the scientific arena. Her work has been recognized and featured by 60 Minutes, CNN, The New York Times, The Wall Street Journal, BBC Horizon, BBC News Health, ABC News, NBC News, CBS News, Associated Press, National Public Radio, NOVA Science Now, Science Channel STEM CELL UNIVERSE with Stephen Hawking, Huffington Post (Canada), and numerous other worldwide media outlets.

Schedule of Events		Room
8:00 - 8:30 am	Continental Breakfast	L1 - 420
8:30 - 9:00 am	Opening Remarks: Dr. Richard Fedorak, Dr. Darren Freed, Dr. Lori West	L1 - 490
9:00 - 10:15 am	Introduction - William H. Lakey Lecture in Transplantation: Dr. Ronald Moore Plenary Address and Discussion: Dr. Doris Taylor "Building an Organ in 2018"	L1 - 490
10:15 - 11:00 am	Poster Session and Refreshments	Hallways
11:00 - 12:00 pm	Presentations	L1 - 490
	Sanaz Hatami - The Functional Decline of Ex Vivo Perfused Heart Is Not Due To Cell Death	
	Ahmed Abdelbasit - Lung Transplantation from Hepatitis C Viremic Donors to Uninfected Recipients	
	John Staples - The role of microsurgical technique in hepatic artery reconstruction in pediatric liver transplantation	
	Esmé Dijke - Low HLA antigen expression on expanded regulatory T cells (Tregs) isolated from human discarded thymus: potential for "off-the-shelf" tolerogenic therapy?	
12:00 - 12:45 pm	Lunch	L1 - 420
12:45 - 1:30 pm	Poster Session	Hallways
1:30 - 2:30 pm	Presentations	L1 - 490
	Max Buchko - Common hospital ingredient perfusate equivalent to standard Krebs-Henseleit buffer with serum albumin derived perfusate in negative pressure ventilation ex vivo lung perfusion	
	Alison Müller - Increased Expression of Pro-Fibrotic Markers in Human Progenitor Cells Caused by Recellularizing Fibrotic Human Extracellular Matrix is Attenuated by Transfection with miR-301a	
	Tiffany Kim - Lymphocyte Proportions Post Thymectomy are Associated with Allergic Disorders in Heart Transplanted Children	
	Sayed Himmat - Adenoviral Adiponectin Gene Therapy to Improve outcomes on Ex vivo Lung Perfusion	
2:30 - 3:00 pm	Closing Remarks and Announcements	L1 - 490

Thank you to our Judges

Dr. Darren Freed	Dr. Lori West	Dr. David Williams	Dr. Lee Anne Tibbles
Dr. James Shapiro	Dr. Patricia Campbell	Dr. Ron Moore	Dr. Jelena Holovati
Dr. Shokrolla Elahi	Dr. Carlos Cervera	Dr. Kieran Halloran	Dr. Simon Urschel

Morning Presentations

Presenter	Authors	Title
Sanaz Hatami	Sanaz Hatami, Xiao Qi, Alois Haromy, Martin Ondrus, Alexandra Kinnear, Sayed Himmat, Christopher W. White, Max Buchko, Allan Wu, Jayan Nagendran, Darren H. Freed	The Functional Decline of Ex Vivo Perfused Heart Is Not Due To Cell Death
Ahmed Abdelbasit	Ahmed Abdelbasit, Alim Hirji, Kieran Halloran, Justin Weinkauff, Ali Kapasi, Dale Lien, Jayan Nagendran, Karen Doucette	Lung Transplantation from Hepatitis C Viremic Donors to Uninfected Recipients
John Staples	John Staples, Peter Kwan, James Shapiro, Norman Kneteman, David Bigam, Adil Ladak	The role of microsurgical technique in hepatic artery reconstruction in pediatric liver transplantation
Esme Dijke	Esme Dijke, Tess Ellis, Jean Pearcey, Ingrid Larsen, Ivan Rebeyka, David Ross, Darren Freed, Mohammed Alaklabi, Megan Levings, Lori West	Low HLA antigen expression on expanded regulatory T cells (Tregs) isolated from human discarded thymus: potential for "off-the-shelf" tolerogenic therapy?

Afternoon Presentations

Presenter	Authors	Title
Max Buchko	Max Buchko, Sayed Himmat, Catherine Stewart, Nader Aboelnazar, Sanaz Hatami, Darren Freed, Jayan Nagendran	Common hospital ingredient perfusate equivalent to standard Krebs-Henseleit buffer with serum albumin derived perfusate in negative pressure ventilation ex vivo lung perfusion
Alison Muller	Alison L Muller, Xiuhua Wang, Darren H. Freed	Increased Expression of Pro-Fibrotic Markers in Human Progenitor Cells Caused by Recellularizing Fibrotic Human Extracellular Matrix is Attenuated by Transfection with miR-301a
Tiffany Kim	Tiffany Kim, Lavinia Ionescu, Nicholas Avdimiretz, Ingrid Larsen, Faye Murdoch, Susan Gilmour, Bruce Motyka, Lori West, Simon Urschel	Lymphocyte Proportions Post Thymectomy are Associated with Allergic Disorders in Heart Transplanted Children
Sayed Himmat	Sayed Himmat, Nobutushi Matsumara, Shingo Takahara, Mohamad Burhani, Nader Aboalnazar, Sanaz Hatami, Max Buchko, Catherine Stewart, Xiao Qi, Yulin Wu, Jody Levasseur, Amy Barr, Xiuhua Wang, Jason Dyck, Darren Freed, Jayan Nagendran	Adenoviral Adiponectin Gene Therapy to Improve outcomes on Ex vivo Lung Perfusion

Morning Posters

#	Presenter	Authors	Title
1	Christina Crossie	Christina Crossie , Jelena L. Holovati, Graeme Dowling	Validation of cardiac valve allograft decontamination and bioburden reduction
3	Sanaz Hatami	Sanaz Hatami, Xiao Qi, Sayed Himmat, Christopher W. White, Martin Ondrus, Alexandra Kinnear, Max Buchko, Jayan Nagendran, Darren H. Freed	The Alterations in Energy-Yielding Metabolism During Ex Vivo Heart Perfusion
5	Nicole Herbers	Nicole Herbers, Sanaz Hatami, Jayan Nagendran, Michael Mengel, Darren Freed, Benjamin Adam	Identification of a molecular repair response in ex vivo perfused porcine hearts
7	Lavinia Ionescu	Lavinia Ionescu, Tom Blydt-Hansen, Bethany Foster, Seema Mita, Lorraine Hamiwk, Upton Allan, Veronique Phan, Patricia Birk, Catherine Morgan, Simon Urschel	The Impact of Childhood Solid Organ Transplantation on B-cell Maturation
9	Paul Kantor	Paul F. Kantor, Anita Yong, D. Jim Kutsogiannis	The Effect of Public Policy on Heart Donation and Heart Transplantation Efficiency in Alberta, Canada.
11	David Li	David Li, Justin Weinkauff, Dale Lien, Ali Kapasi, Alim Hirji, Jayan Nagendran, Justin Ezekowitz, Kieran Halloran	Elevated Left Ventricular End Diastolic Pressure Increases Risk Of Primary Graft Dysfunction In Lung Transplant Recipients
13	Jiaxin Lin	Jiaxin Lin, Rena L. Pawlick, A.M. James Shapiro, Colin C. Anderson	A Reduced Intensity Conditioning Protocol Induces Transient Chimerism and Transplant Tolerance to Fully Allogeneic Islets in Autoimmune Diabetic NOD Mice
15	Ishita Moghe	Ishita Moghe, Kim Solez	Nephrology/Transplantation Immersion - A Successful Natural Experiment
17	Andrew Masoud	Andrew Masoud, Maikel Farhan , Abul Azad, Jiaxin Lin, Lin Fu Zhu, Gavin Oudit, Colin Anderson, Allan Murray	Characterization of the role of Apelin in injury repair of the Chronic Allograft Vasculopathy in Mouse heart allografts
19	Wayne Ly	Wayne Ly, Patricia Campbell, Luis Hidalgo, Deanna Manna, Lydia Kohut, Anne Halpin	Defining Positive Thresholds in Flow Cytometry Crossmatches: Not so Normal
21	Bruce Motyka	Bruce Motyka, Jordana Fersovich, Brendon Lamarche, Morgan Sosniuk, Ibrahim Adam, Jean Pearcey, Kesheng Tao, Christopher W Cairo, Peter J Cowan, Lori J West	ABO Tolerance Following Treatment of Infant or Adult Mice with MHC-Matched A-Expressing Blood Cells
23	Poh Hwa Ooi	Poh Hwa Ooi, Amber Hager, Kerry Siminoski, Jason Yap, Susan Gilmour, Diana Mager, Darren H. Freed	Cardio-metabolic dysregulation and sarcopenia in children and youth post-Liver transplantation
25	Tara Pidborochynski	Tara Pidborochynski, Anne Halpin, Simon Urschel, Daniel Kim, Holger Buchholz, Lori West, Trish Campbell, Susan Nahirniak, Jennifer Conway	HLA antibody development following Ventricular Assist Device (VAD) implantation in the current era
27	Xiao Qi	Xiao Qi, Sanaz Hatami, Christopher W. White, Sayed Himmat, Nader Aboelnazar, Martin Ondrus, Allen Wu, Alex Kinnear, Jayan Nagendran, Darren H. Freed	Inflammation and Innate Immune Activation During Ex-Vivo Heart Perfusion
29	Morgan Sosniuk	Morgan J Sosniuk, Anne Halpin, Juanita Wizniak, Artur Szkotak, Simon Urschel, Lavinia Ionescu, Lori West	A New Pediatric Normal: An Evaluation of Pediatric T Cell Markers in Healthy Controls
31	Catherine Stewart	Catherine J Stewart, Max T Buchko, Xihua Wang, Adil Ladak, Darren H Freed, Jayan Nagendran	Comparison of Normothermic and Hypothermic Ex-Vivo Extremity Perfusion (EVEP)

Afternoon Posters

#	Presenter	Authors	Title
2	Roger Bascom	Roger Bascom, KeSheng Tao, Lori West	Tipping the "Immune Balance" Towards Tolerance by Specific and Systematic Depletion of Donor and Host Effector Cells
4	Esme Dijke	Esme Dijke, Anne Halpin, Patricia Campbell, Luis Hidalgo	Detection of HLA class II antigens using monoclonal antibodies: mixing apples with oranges?
6	Anne Halpin	Anne Halpin, Janet Zhou, Jean Pearcey, Todd L. Lowary, Christopher W. Cairo, Gour Daskhan, Bruce Motyka, Stephanie Maier, Lori J. West	One Step Closer to a Bead-Based ABO-Antibody Detection Assay
8	Lavinia Ionescu	Lavinia Ionescu, Tom Blydt-Hansen, Beth Foster, Seema Mital, Upton Allen, Sabine Ivison, Lorraine Hamiwka, Jason Yap, Veronique Phan, Patricia Birk, Lori West, Megan Levings, Simon Urschel	Immune Phenotyping in a Pediatric Multicenter Transplant Study: Suitability of a Preformulated Dry Antibody Panel System
10	Rachel Jeong	Rachel H. Jeong, Robert R. Quinn, Krista L. Lentine, Anita Lloyd, Pietro Ravani, Brenda Hemmelgarn, Amit X. Garg, Branko Braam, Kevin Wen, Anita Wong, Sita Gourishankar, Ngan N. Lam	Calcineurin Inhibitors, Macrolides, and the Risk of Adverse Drug Events in Kidney Transplant Recipients
12	Leah Marquez-Curtis	Leah A. Marquez-Curtis, Locksley E. McGann, Janet A. W. Elliott	Cryopreservation of corneal endothelial cells for future transplant applications
14	Ishita Moghe	Ishita Moghe, Kim Solez	Predicting the future scope and impact of human cell atlas technologies (individual cell RNA sequencing) on renal pathology and urinalysis
16	Jordan Nostedt	Jordan Nostedt, Daniel Skubleny, A.M. James Shapiro, Sandra Campbell, Darren Freed, David Bigam	Normothermic ex-vivo machine perfusion for liver grafts recovered from donors after circulatory death: a systematic review and meta-analysis
18	Sabrina Pattar	Sabrina Pattar, Mohammad Aleinati, Debra Isaac, Nowell Fine, Steven C. Greenway	Development of a novel non-invasive assay based on cell free-DNA to detect allograft injury after heart transplantation
24	Yilun Wu	Yilun Wu, Darren Freed	Dextran-based and albumin-based perfusates in normothermic ex vivo kidney perfusion
20	Andrew Rasmussen	Andrew Rasmussen, Ronald B. Moore, Trevor Schuler, Gerald Todd, Kevin Wen,	Kidney Transplantation and progression of peripheral arterial disease in the ipsilateral lower extremity
22	Michael Taylor	Michael R Taylor, Hannah Rahim, Amina Mohamud, Kyle L Flannigan, Ian A Lewis, Simon A Hirota, Steven C Greenway	Vancomycin prevents and reverses mycophenolate mofetil (MMF)-induced weight loss and gastrointestinal inflammation in the mouse
26	Kaytlin Wu	Kaytlin Wu, Luis Hidalgo, Esme Dijke, Anne Halpin	Development of a Cytotoxicity Flow Cytometry Crossmatch Assay For The Detection of Complement Activating HLA Antibodies
28	Michael Zaugg	Sanaz Hatami, Phing-How Lou, Eliana Lucchinetti, Xiao Qi, Darren H. Freed, Michael Zaugg	Enhanced Protection of Donation after Circulatory Death (DCD) Hearts by Pharmacological Postconditioning with Intralipid® in a Porcine Model
30	Minal Borkar-Tripathi	Minal Borkar-Tripathi, Vikas Srivastava, Ryan Cunnington, Tejeswin Sharma, Steven Greenway, Lee Anne Tibbles	Epigenetic inhibitors as potential anti-viral treatment against BK polyoma virus associated nephropathy: an elucidation of mechanism