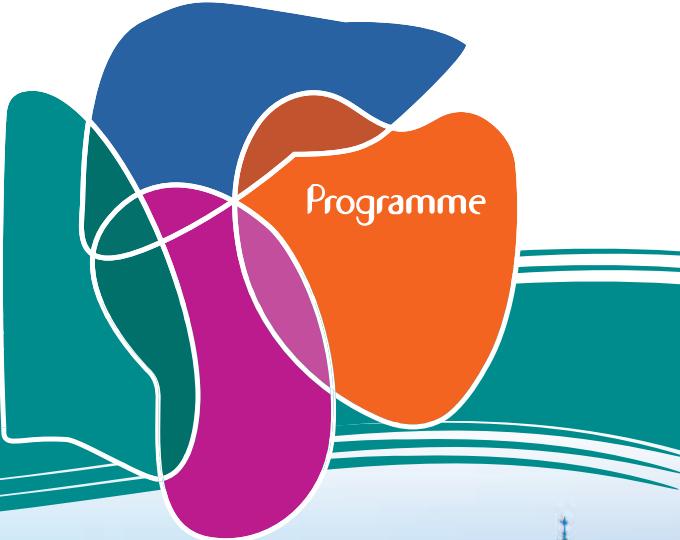




3rd International Meeting on Ischemia Reperfusion Injury in Transplantation

April 21-22
2016

www.imirt.fr



A graphic element consisting of four overlapping circles in teal, blue, orange, and magenta. The word 'Programme' is written in white inside the orange circle. The circles are set against a background of teal and white curved bands.

Programme

Faculté de médecine de Poitiers,
France



Acknowledgements

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3rd International Meeting on Ischemia Reperfusion Injury in Transplantation

April 21-22, 2016 - Faculté de médecine, Poitiers, France



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Transplantation



Scientific committee

Lionel Badet,
Benoît Barrou,
Michel Eugène,
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Stefan G. Tullius,
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Organization committee

Lionel Badet,
Benoît Barrou,
Michel Eugène,
Thierry Hauet,
Diethard Monbaliu



Scientific Programme

Thursday, April 21

9:00 Welcome address

9:00 1st session: Donor management

Chairs: Lionel Badet (Lyon, France), David Talbot (Newcastle, UK)

9:00 Keynote lecture: New evidences in Brain Dead donor management

Invited speaker: Patrick Ferdinand (Leuven, Belgium)

9:30 Reducing non-anastomotic biliary strictures after donation after circulatory death liver transplantation, a matter of time?

N. Gilbo, I. Jochmans, M. Sainz, J. Pirenne, D. Monbaliu (Leuven, Belgium)

9:45 Activation of cytoprotection mechanisms in DBD donor kidneys define kidney function in transplant recipients - A study using clinical samples obtained from the QUOD biobank

L. Van Dullemen, M. Kaisar, Z. Akhtar, L. Lo Faro, H. Huang, H. Leuvenink, B. Kessler, R. Ploeg (Groningen, The Netherlands)

10:00 C5L2 promotes local renal inflammation after donor brain death

N.M. Jager, F. Poppelaars, M.B. Van Werkhoven, Z.J. Veldhuis, P.J. Ottens, W.J. Van Son, H.G.D. Leuvenink, J.L. Hillebrands, M.A.J. Seelen (Groningen, The Netherlands)

10:15 Unexpected donation after circulatory death (uDCCD) - A great potential for new organs?

L. Venema, A. Brat, B. Bens, D. Van Der Vliet, T. Tromp, W. De Jongh, M. Van De Haak-Willems, M. Erasmus, C. Krikke (Groningen, The Netherlands)

10:30 Coffee Break

11:00 2nd session: Temperature and preservation

Chairs: Denis Angoulvant (Tours, France), Ina Jochmans (Leuven, Belgium)

Keynote lectures:

11:00 *Should organs be preserved in normo, subnormo or hypothermia?*

Invited speaker: Gabriel Oniscu (Edinburgh, UK)

11:30 *Thermosensors and cold-mediated pathways: perspectives for organ preservation*

Invited speaker: Gabriel Bidaux (Lyon, France)

12:00 *Ex-vivo normothermic perfusion with the noble gas argon in an experimental model of kidney transplantation*

S. Hosgood, M. Hamed, T. Adams, M. Nicholson (Cambridge, UK)

12:15 *The first reported use of ex-vivo normothermic perfusion for the assessment and transplantation of kidneys deemed untransplantable due to inadequate in-situ perfusion*

S. Hosgood, M. Hamed, K. Saeb-Parsy, M. Nicholson (Cambridge, UK)

12:30 Lunch Break

13:30 3rd session: What can we learn from our neighbors?

Chairs: Marie Essig (Limoges, France), Gabriel Oniscu (Edinburgh, UK)

Keynote lectures:

Cardioprotective strategies outside transplantation

13:30 *Heart protection at the crossroad: what perspectives?*

Invited speaker: Michel Ovize (Lyon, France)

14:00 *Vasculoprotection at the heart of cardioprotection*

Invited speaker: Stéphane Germain (Paris, France)

14:30 *What can we learn from bibernators?*

Invited speaker: Yann Voituron (Lyon, France)

15:00 *Uterus tolerance to long-time cold ischemic storage after auto-transplantation in ewe*

J. Tricard, S. Ponsonnard, Y. Tholance, L. Mestroux, D. Lachatre, C. Couquet, C. Yardin, F. Terro, P. Marquet, A. Piccardo, T. Gauthier (Limoges, France)

15:15 Break

15:45 4th session: Immunology

Chairs: Jean-Marc Gombert (Poitiers, France), Antoine Thierry (Poitiers, France)

- 15:45 **Keynote lecture:** *Interactions between endothelial cells and polyclonal anti-thymocyte globulins*

Invited speaker: Andres Beiras Fernandez (Frankfurt, Germany)

- 16:15 *Deficiency of IL-33 receptor (ST2) attenuates kidney ischemia-reperfusion injury in euglycemic but not in streptozotocin-induced diabetic mice*

M. Sehnine, M. Fehrat, J.M. Gombert, J.M. Goujon, T. Hauet, A. Herbelin, S. Hadjadj (Poitiers, France)

- 16:30 *IL-33 is required for kidney ischemia-reperfusion-induced injury in mice*

M. Ferhat, S. Giraud, A. Robin, J.M. Goujon, T. Hauet, J.M. Gombert, A. Thierry, A. Herbelin (Poitiers, France)

- 16:45 *Circulating cytokine levels and outcome following human orthotopic liver transplantation (OLT)*

F. Robertson, V. Male, G. Wright, B. Fuller, B. Davidson (London, UK)

- 17:00 *C5L2 in renal ischemia-reperfusion injury*

F. Poppelaars, M. Molenaars-Van Werkhoven, J. Kotimaa, Z. Veldhuis, A. Ausema, J. Damman, H. Leuvenink, R. Daha, W. Van Son, C. Van Kooten, R. Van Os, J. Hillebrands, M. Seelen (Leiden, The Netherlands)

-
- 17:15 **Poster session** -Wine and cheese

> 18:15 3 series

Chairs 1: Sarah Drouin (Paris, France), Diethard Monbaliu (Leuven, Belgium)

Chairs 2: Frédéric Favreau (Poitiers, France),
Kaatje Lenaerts (Maastricht, The Netherlands)

Chairs 3: Sébastien Giraud (Poitiers, France), Nicolas Meurisse (Liège, Belgium)

P1 - *Electron spin resonance is a powerful tool to detect oxidative and nitrosative stress during ischemia-reperfusion*

J. Gielis, J. Briedé, P. Cos, P. Van Schil (Antwerp, Belgium)

P2 - *Stimulation of P2Y11 purinergic receptor reduces rejection lesions and increases survival time of heart allograft in a mouse model*

T. Bourguignon, C. Klipfel-Lhommet, F. Ivanès, S. Chadet, L. Benoist, C. Lefort, R. Guibon, G. Fromont, C. Jayle, M. Aupart, D. Angoulvant (Poitiers, France)

P4 - *Metabolic effects of pharmacological stimulation of the hypoxia inducible factor pathway during machine perfusion of porcine kidneys*

A. Hollis, J. Nath, S. Ebbs, S. Canbilen, T. Smith, A. Ready, C. Ludwig (Birmingham, UK)

P5 - *Cytoprotective action of soluble heme oxygenase-1-cell penetrating peptide (sHO-1-CPP) observed in in vitro hepatic ischemia-reperfusion injury (IRI) models*

A. Venkatachalam, A. Ray, J. Maclean, Q. Hu, I. Alwayn (Halifax, Canada)

P7 - *Objective of 20 hours of liver preservation: development of a porcine experimental model*

E. Savier, J. Danion, T. Kerforne, W. Hebrard, G. Rossignol, F. Marques, P. Couturier, M. Pinsard, T. Hauet (Poitiers, France)

P8 - *Type 4 dipeptidyl-peptidase (DPP-4) expression is decreased at both mRNA and protein levels following renal ischemia/reperfusion in rat and man*

P. Rowart, P. Erpicum, J.O. Defraigne, J.M. Krzesinski, F. Jouret (Liege, Belgium)

P9 - *Cell ATP and viability alterations induced by ischemia-reperfusion in the renal cortex: an agent-based computer model*

V. Aubert, F. Guillaud, T. Hauet, P. Hannaert (Poitiers, France)

P10 - *Hyperlipidemia induced by high-fat diet promotes renal vascular remodeling in a porcine renal autotransplantation model*

S. Maiga, T. Khalifeh, F. Guy, J.M. Goujon, M. Dierick, F. Favreau, T. Hauet (Poitiers, France)

P11 - *Renal preservation with SCOT 15® solution could reduce the incidence of acute rejection in renal transplantation*

S. Drouin, J. Tourret, N. Arzouk, S. Ourahma, J. Parra, B. Barrou (Paris, France)

P12 - *Bronchoalveolar lavage fluid (BALF) analysis with high resolution NMR spectroscopy in a preclinical model of lung allograft transplantation*

D. Bon, M. Glorion, N. Boildieu, F. Seguin, T. Hauet (Poitiers, France)

P13 - *Influence of cold ischemia time on oxidative stress and innate immunity activation*

S. Giraud, E. Salamé, B. Barrou, L. Badet, A. Thierry, J. Cau, J. Danion, T. Hauet (Poitiers, France)

P14 - *The normothermic regional perfusion: a time for assessment and conditioning of organ*

G. Allain, T. Kerforne, S. Giraud, J. Danion, D. Bon, B. Barrou, C. Jayle, T. Hauet
(Poitiers, France)

P15 - *Identification of proteins interacting with cytoplasmic high-mobility group box 1 (HMGB1) during the hepatocellular response to ischemia reperfusion injury*

T. Zhang, O. Dirsch, UTA. Dahmen (Jena, Germany)

P16 - *Role of VEGF on renal graft integrity when added during machine preservation*

P.O. Delpech, B. Barrou, L. Badet, S. Giraud, X. Matillon, A. Kasil, A. Thierry, T. Hauet,
J. Cau, N.S. Pollitt (Paris, France)

P17 - *Quality assessment of discarded human kidneys: A comparison of hypothermic machine perfusion and ex-vivo normothermic perfusion techniques*

S. Hosgood, M. Nicholson (Cambridge, UK)

P18 - *Prolonged cold ischemia time enhances renal perfusion impairment and local infarction after kidney transplantation in mice*

S. Rong, R. Chen, A. Thorenz, M. Mengel, M. Meier, B. Hensen, M. Gutberlet, D. Hartung,
H. Haller, K. Hueper, F. Gueler (Hannover, Germany)

P19 - *Free heme aggravates renal ischemia reperfusion injury (IRI) and contributes to acute kidney injury (AKI)*

F. Gueler, L. Wang, R. Chen, A. Thorenz, H. Haller, K. Madyaningrana, V. Vijayan,
M. Brownstein, J. Braeser, B. Akerstrom, M. Gram, M. Gutberlet, K. Hueper, S. Immenschuh
(Hannover, Germany)

P20 - *Early anti-hypertensive therapy can be deleterious in early renal ischemia reperfusion injury*

R. Greite, R. Chen, S. Rong, A. Thorenz, J. Braeser, B. Hensen, N. Schebb, M. Meier,
B. Hammock, S. Lee, D. Panigrahy, H. Haller, K. Hueper, F. Gueler (Hannover, Germany)

P21 - *Transplantation of graft from older donors: does age still matter ?*

N. Gilbo, I. Jochmans, M. Sainz, J. Pirenne, D. Monbaliu (Leuven, Belgium)

P22 - *Changes in mitochondrial electron transport chain complex expression in ischaemia and reperfusion*

A. Griffiths, V. Boczonadi, R. Horvath, F. Afridi, D. Talbot (Newcastle-upon-Tyne, UK)

P23 - *Inflammatory monocytes are the main producers of TNF α , a key cytokine in hepatic IR injury*

F. Robertson, V. Male, A. Cuff, L. Magill, G. Wright, B. Fuller, B. Davidson (London, UK)

P24 - *The effect of remote ischaemic preconditioning prior to hepatic ischaemia reperfusion injury on CD4+ T cell cytokine production*

F. Robertson, V. Male, A. Cuff, L. Magill, G. Wright, B. Fuller, B. Davidson (London, UK)

P25 - *Acceleration of renal fibrogenesis following acute kidney injury: insights from the transcriptome of proximal tubules isolated ex vivo*

A. Bataille, P. Galichon, N. Chelghoum, B. Mohand-Oumoussa, M.J. Ziliotis, I. Sadia, N. Simon, D. Legouis, E. Rondeau, A. Hertig (Paris, France)

P26 - *Quality of donor lung grafts: A comparative study between fast and slow brain death induction models in rats*

M. Hottenrott, J. Van Zanden, R. Rebollo, D. Hoeksma, J. Bubberman, J. Burgerhof, A. Breedijk, B. Yard, M. Erasmus, H. Leuvenink (Groningen, The Netherlands)

P27 - *Treatment with lithium reduce ischemia-reperfusion injury in aged and steatotic liver in rats*

C. Kan, A. Liu, O. Dirsch, U. Dahmen (Jena, Germany)

P28 - *Potassium as a potential biomarker in renal ex vivo normothermic perfusion*

R. Greite, S.A. Hosgood, M.L. Nicholson (Hannover, Germany)

P29 - *Increased inflammation triggered by hyperoxaluria exacerbates renal ischemia and reperfusion injury*

R. Correia Silva, M. Correa-Costa, R. Ferreira Felizardo, C. Favero Aguiar, M. Burgos-Silva, H. Sanders Pinheiro, M. Ioshie Hiyane, M.A. Cenedeze, M.A. Dos Reis, N.O. Saraiva Camara, A. Pacheco-Silva (Sao Paulo, Brazil)

P30 - *Cost effectiveness of machine perfusion use after long cold ischemic time in a kidney transplantation program*

A.C. Carvalho de Matos, S. Morgado, M. Borreli Jr, L. Requiao-Moura, M. Nogueira Jr, D.T. Malheiro, M. Souza Durao Jr, A. Pacheco-Silva (São Paulo, Brazil)

P31 - *Analysis of dose-effect of HEMARINA-M101 in a porcine autotransplanted and perfused kidney model*

A. Amiri, R. Thuillier, L. Badet, P. Couturier, W. Hebrard, J. Kaminski, T. Hauet (Poitiers, France)

Friday, April 22

8:30 5th session: IRI and cells

Chairs: Frédéric Favreau (Poitiers, France), Diethard Monbaliu (Leuven, Belgium)

- 8:30 **Keynote lecture:** *Mesenchymal stromal cell therapy in ischemia/reperfusion injury: review of the experimental and clinical evidence*
Invited speaker: François Jouret (Liège, Belgium)

- 9:00 *Administration of third-party mesenchymal stromal cells at the time of kidney transplantation: interim safety analysis at one-year follow-up*
L. Weekers, P. Erpicum, O. Detry, C. Bonvoisin, A. Briquet, C. Lechanteur, E. Baudoux, F. Jouret, Y. Beguin (Liège, Belgium)

- 9:15 *Characterization of mesenchymal stem cells from porcine adipose tissue and their effects on kidney graft recovery in a preclinical porcine model of renal auto-transplantation mimicking the non-heart-beating-donor conditions*
A. Kasil, X. Matillon, C. Auxenfans, T. Hauet, F. Favreau, W. Hebrard, P. Couturier, L. Badet (Lyon, France)

- 9:30 *Contribution of $\gamma\delta$ T-cell subsets and IL-17A activation to renal ischemia reperfusion injury in mice*
A. Thorenz, S. Rong, N. Voelker, R. Chen, J. Braesen, H. Haller, C. Klemann, F. Gueler (Hannover, Germany)

- 9:45 *Endothelial microparticles released by activated protein C exert a cytoprotective effect on beta cells : interest in islet pancreatic transplantation*
G. Kreutter, M. Abbas, M. Kassem, A. El Habhab, F. Zobairi, L. Kessler, F. Toti, G. Ubeaud-Sequier (Strasbourg, France)

10:00 Coffee Break

10:30 6th session: New aspects of cell metabolism during IRI

Chairs: Cyril Moers (Groningen, The Netherlands),
Raphaël Thuillier (Poitiers, France)

- 10:30** **Keynote lecture:** *Metabolic changes in ischemic kidneys and metabolomics*

Invited speaker: Benedikt Kessler (Oxford, UK)

- 11:00** *Determination of oxidative and nitrosative stress during lung ischemia reperfusion injury*

J. Gielis, J. Briedé, P. Cos, P. Van Schil (Antwerp, Belgium)

- 11:15** *Increased cold ischemia time leads to a higher vascular remodeling in a porcine kidney autotransplantation model: a preliminary micro-computed tomography study*

S. Maiga, F. Favreau, F. Guy, JM. Goujon, M. Dierick, T. Hauet (Poitiers, France)

- 11:30** *Leukocyte-derived microparticles favor endothelial senescence: Impact for pancreatic islet engraftment*

A. El Habhab, M. Abbas, M. Kassem, G. Kreutter, S. Khemais-Benkhiat, F. Zobairi, V. Schini-Kerth, F. Toti, L. Kessler (Illkirch, France)

- 11:45** *Drug development in ischemia reperfusion injury in mouse models - Advantage of non-invasive longitudinal magnetic resonance imaging*

F. Gueler, S. Rong, R. Chen, A. Thorenz, H. Abou-Rebyeh, J. Braesens, H. Lang, M. Gutberlet, D. Hartung, H. Haller, B. Hartleben, K. Hueper (Hannover, Germany)

-
- 12:00** **Lunch Break**
-

13:00 7th session: Ischemia reperfusion injuries we never talk about

Chairs: Sarah Hosgood (Cambridge, UK), Nicolas Meurisse (Liège, Belgium)

13:00 Keynote lecture: *Intestinal ischemia reperfusion injury*

Invited speaker: Kaatje Lenaerts (Maastricht, The Netherlands)

13:30 *Evaluation of Paneth cell alterations after intestinal transplantation and during graft rejection*

M. Kip, I. Hundscheid, L. Ceulemans, H. Hartog, R. Brown, E. Canovai, O. Corcos, F. Joly, G. Hertogh, G. Gupte, C. Dejong, S. Olde Damink, D. Mirza, J. Pirenne, K. Lenaerts (Maastricht, The Netherlands)

13:45 *Pretreatment of heart allografts with the cytotoxic anti-thrombin inhibitor Thrombalexin prolongs transplant survival*

Q. Peng, A. Nowocin, L. Smyth, R.A. Smith, A. Dorling, R. Lechler, G. Lombardi (London, UK)

14:00 *Total liquid ventilation mitigates multi-organ failure and preserves kidney function through ultra-fast cooling after aortic cross clamping*

N. Mongardon, M. Kohlhauer, F. Lidouren, B. Costes, C. Barau, S. Giraud, T. Hauet, P. Micheau, A. Cariou, G. Dhonneur, A. Berdeaux, B. Ghaleh, R. Tissier (Paris, France)

14:15 *Antioxidative nanoparticle for organ transplantation*

Y. Nagasaki, A. Takashima, B. Shashi, R. Thuillier, T. Hauet (Tsukuba, Japan)

14:30 Break

14:45 8th session: Organ ex vivo repair and machine perfusion

Chairs: Alexandre Hertig (Paris, France), Ephrem Salamé (Poitiers, France)

14:45 Keynote lecture: Underlying mechanisms and protective effects of HOPE in liver machine perfusion preservation

Invited speaker: Philipp Dutkowski (Zurich, Switzerland)

15:15 The transportable oxygenated machine perfusion Airdrive®, an innovative approach to safely expand the donor pool for liver transplantation

P. Compagnon, H. Hentati, E. Lesveque, M. Disabato, J. Calderaro, J. Cohen, I. Ben Mosbah, D. Azoulay (Paris, France)

15:30 Trimetazidine is protective during kidney preservation with machine perfusion

R. Codas, A. Kasil, J. Cau, A. Thierry, T. Hauet, L. Badet (Lyon, France)

15:45 Technique for ex vivo lung perfusion (EVLP) of lungs from brain-dead donor rats and the effect of prednisolone

J. Van Zanden, H. Leuvenink, E. Verschuur, D. De Jong, S. Veldhuis, P. Ottens, M. Erasmus, M. Hottenrott (Groningen, The Netherlands)

16:00 Highlights of the meeting

Ina Jochmans (Leuven, Belgium)

Closing Remarks

Thierry Hauet (Poitiers, France), Gabriel Oniscu (Edinburgh, UK)

16:30 End of the meeting

Exhibitors' list

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