60th Anniversary of Artificial Cells. This is to celebrate the 60th anniversary of the invention of Artificial Cells and the contribution of researchers at this centre and numerous groups of researchers around the world.

The first artificial cells were prepared in 1957 at McGill University (Chang, 1957 B.Sc www.medicine.mcgill.ca/artcell/514.pdf, followed by Chang 1964 Science, Chang & Poznanski, 1968 Nature, Chang, 1971 Nature, Chang 1972 Monograph on Artificial Cells http://www.medicine.mcgill.ca/artcell/1972bookCovercr.pdf). He emphasizes that this is not to reproduce biological cells since nature and cell culture can do a much better job. His aim is to use this basic principle to innovate and go outside the box – especially there can be unlimited variations in the content, dimensions and membranes. Since then, extensive efforts by him and researchers in his centre and numerous groups around the world have evolved this principle of artificial cells into Micro-nano systems, Nanobiotechnology, Nanomedicine, Blood Substitutes, Synthetic Biology, Biosorbents, Bioencapsulation, Biotherapeutics, Drug Delivery Systems, cell/stem cell therapy, microbe, enzyme therapy, cancer therapy, nano-robotics etc. Nature Rev Drug Disc: http://www.medicine.mcgill.ca/artcell/2005NatureRev.pdf


This is held in conjunction with the XVI ISBS and V Nanomedicine Conference since all have related interests of artificial cells and of the international society (network) of International Society of Artificial Cells, Blood Substitutes & Biotechnology (ISABB).


References for artificial cells: www.medicine.mcgill.ca/artcell
The biannual ISBS has voted to hold the XVI ISBS in Montreal, Quebec, Canada. Most recent ISBS was 2011 XIII at Harvard, 2013 XIV at Blood Transfusion Institute of China and 2015 XV at Lund Sweden. We welcome experienced pioneers, established researchers, new researchers, students, clinicians, developers, regulators and blood bankers and others. Areas for this meeting O₂ carriers, O₂ therapeutics, CO₂ carriers, antioxidants, vasoactivity, stem cells, cord blood, recombinant source, platelet substitutes, safety and regulatory, transfusion medicine and other related topics.

V ISNS Nanomedicine Conference has voted to hold this in Montreal since artificial cell is the forerunner of nanomedicine www.medicine.mcgill.ca/artcell/hanobk_ch1.pdf Areas for this meeting micro-nano systems, applications in therapeutics, drug delivery, Synthetic Biology diagnostics and other areas with emphasis on present & future perspectives.

ORGANISATION

Local organizer (centre and centre alumni):
TMS Chang, McGill, chair and honorary president (McGill 57’, 61’, 65’),
F. D’Agnillo, FDA/NIH (McGill 97’),
P. Keipert, Consultant & President, Keipert Corp, San Diego, CA, USA (McGill 86’),
S. Prakash, McGill (McGill 96’),
BL Yu, Harvard (McGill 02’)
Artificial Cells & Organs Research Centre and Centre alumni, Departments of Physiology,
Medicine & Biomedical Engineering, Faculty of Medicine, McGill University, Montreal, QC,
Canada www.medicine.mcgill.ca/artcell

International Organizing committee
Budak G, Bülow L, Chang L, Chang TMS, Chen C, Ergan F, D’Agnillo F, Estep T, Greenburg AG,
ZG, Yang CM, Yu BL, Zhou H.

International Scientific Advisory Committee
Chandra R, Chang TMS, Chen C, Chen GC, Cooper C, D’Agnillo F, Dixit V,
Estep T, Feola M, Gould S, Greenburg AG, Gu KF, Han JQ, Hsia C, Huang YB, Intaglietta M,
M, Ma L, Meßmer K, Mozzarelli A, Maysinger D, Neufeld RJ, Palmer A, Piskin E, Poncelet D,
Poznansky M, Prakash S, Privalle C, Pugach I, Rausch C, Riess JG, Sakai H, Shi Z, Simoni J,
Selivanov E, Su ZG, Tsai AG, Wang, ZY, Wei G, Wong B, Wong JT, Xiu RJ, Yang CM, Yu BL,

Center and center alumni Advisory Committee
Blais, MC, Barre P, Bian YZ , Budd N, Cattaneo MV, Chan G, Chow KM, D’Agnillo F, Daka JN,
Mobed-Miremadi M, Neufeld RJ, Nicolau D, Nelseiski P, Ning J, Nishiya T, Piskin AK, Piskin E,
### PROGRAM

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### MONDAY, NOVEMBER 13TH 2017

Registration 8:30 – 9:15

9:15 Assemble in ballroom:

9:30 OPENING ADDRESSES

**Fortier, S (Canada)**
Principal of McGill University
*Welcome address for McGill University*

**Eidelman D (Canada)**
Vice-Principal and Dean of Medicine, McGill University (Canada)
*Welcome address for Faculty of Medicine*

**White, J (Canada)**
Professor & Chair, Department of Physiology, McGill University
*Welcome for Department of Physiology where artificial cells was invented*

**Poznansky M (Canada)**
First PhD (Physiology) graduate of Prof Chang
Emeritus Professor and Emeritus Director, Robart Institute, University of Western Ontario, Canada
*Welcome address for Centre Alumni*

**Quirion, Remi (Canada)**
Chief Scientist of Quebec, in charge of all three Quebec Research Councils
*Welcome address*

**Peng, Jingtao (China)**
Consule General, Chinese Consulate at Montreal
*Welcome address to Overseas Chinese and Chinese delegates*

60th ANNIVERSARY LECTURE

**Chang TMS (Canada)**
Honorary President, of ISBS and of ISNS,
Director, Artificial Cells & Organs Research Centre,
Departments of Physiology, Medicine & Biomedical Engineering,
Faculty of Medicine, McGill University, Canada
*A story of the roles of individuals and researchers around the world in the Invention and Evolution of Artificial Cells to Nanomedicine, Nanobiotherapeutic, blood substitutes, Bioencapsulation, Hemoperfusion, Regenerative Medicine etc*

11:00-11:30 Coffee

11:30-12 PLENARY KEYNOTE LECTURE: (30 mins)

**Peixun Zhang, Na Han, Yuhui Kou, Xiaofeng Yin, Baoguo Jiang (China)**
Peking University People’s Hospital, Beijing, China
*“Peripheral nerve intersectional repair by bi-directional induction and systematic remodeling: biodegradable conduit tubulization from basic research to clinical application”*

(Chang, Editor-in-chief’s comment: “Professor Jiang, dean of medicine of Peking University and his team published a 2017 review in our journal describing how they moved from the laboratory to the treatment of 30 patients with limb paralysis caused by stroke or trauma. They use a biodegradable growth factor releasing conduit to connect a branch of the proximal C7 on the normal side to the opposite distal C7T1 trunk of the paralyzed side. This results in neural connection and the restoration of the function of the paralyzed limbs - a major breakthrough for patients with stroke or trauma. This publication has been voted by the editor-in-chief and associate editors as the best 2017 paper in Artificial Cells, Nanomedicine & Biotechnology, an international journal - Reuter world ranking of journal 4th among 77 Biomedical Engineering journals. The publisher’s inaugurate annual best paper has been awarded to Professor Jiang*)
12:00 - 12:50 pm  PLENARY LECTURES

Jahr JS (U.S.A.) (25 mins)
Professor Emeritus of Anesthesiology David Geffen School of Medicine at UCLA, California, U.S.A.
Hemoglobin glutamer-250 (bovine) in South Africa: consensus usage guidelines .from clinician experts who have treated patients

Prakash, S (Canada) (25 mins)
Professor, Artificial Cells and Organs Research Centre & Department of Biomedical Engineering, McGill University, Artificial Cells Biomedical technologies for human health with emphasis on microbiome and cardiac stents

12:50-1:00 pm ANNOUNCEMENT

1:00 to 2:30 LUNCH (Monday, Tuesday, Wednesday)
On your own to the many nearby restaurants and sightseeing before returning to the nonstop 3 hour afternoon session!

2:30 pm-5:30 pm PRECLINICAL (except for keynote 20 mins each)
Co-Chairs: Chen C (China) & D’Agnillo F (U.S.A.)

D’Agnillo F (U.S.A.) Keynote lecture 25 mins
Senior Investigator, Laboratory of Biochemistry and Vascular Biology, Division of Hematology, Center for Biologics Evaluation and Research (CBER), Food and Drug Administration, Bethesda, MD, USA
(Alumni of Artificial Cells & Organs Research Centre)
FDA recommendations on the chemistry and manufacturing controls (CMCs) aspects of HBOC development.
(to be confirmed)


Chen C (China)
President, Chinese Society of Blood Substitutes,
Vice President Northwest University, Xian, China
Preclinical investigation of Polymerized Porcine Hemoglobin (pPolyHb)

Chen G, Yaqin Li, Hong Wang, Jiaxin Liu*, Chengmin Yang*(China)
Assistant Professor, Blood Transfusion Institute of Chinese Academy of Medical Sciences
(Alumni of Artificial Cells & Organs Research Centre)

Yaojin Li, Peipei Sang, Weinan Li, Shen Li, Gang Chen, Wentao Zhou, Hong Wang, Jiaxin Liu*, & Chengmin Yang* (China)
Institute of Blood Transfusion, Chinese Academy of Medical Sciences, Chengdu, P.R. China
Polymerized human placenta hemoglobin dissolved in hydroxyethyl starch solution as a novel oxygen-carrying plasma expander

Song, Bjorn K. (USA)
William H. Nugent1, Ramon F. Cestero2, Kevin Ward3, Ronald Jubin4, Abe Abuchowski5, Bjorn K. Song1
1Song Biotechnologies, Baltimore, MD
2. University of Texas Health San Antonio, San Antonio, TX
3. University of Michigan Medical School, Ann Arbor, MI
4. Prolong Pharmaceuticals, South Plainfield, NJ
Efficacy of SANGUINATE™ versus Standard of Care in Three Rat Models of Hemorrhagic Shock

Guo C and TMS Chang (Canada)
Artificial Cells & Organs Research Centre, McGill University, Canada
Immunological study of poly-[Hb-CAT SOD CA]: a nanobiotherapeutic
2:30 pm-5:30 pm  **TRANSFUSION MEDICINE** (except for keynote 20 mins each)
**Co-chairs**: Robillard, Pierre (Canada) & Binglan Yu (U.S.A.)

**Yang CM (China): Keynote lecture 25 mins**
Professor Emeritus and Director Emeritus, Institute of Transfusion medicine, CAMS/PUMC.
Former Director, Chinese Red Cross National Blood Center.
*Recent development of Transfusion Medicine in China*

**Robillard, Pierre (Canada)**
Medical Director, Hema-Quebec, Montreal, Quebec, Canada
*Hemovigilance from an international perspective*

**Christopher P. Stowell, MD, PhD (USA)**
Director, Blood Transfusion Service, Department of Pathology, Massachusetts General Hospital
Associate Professor of Pathology, Associate Director, Harvard Transfusion Medicine Fellowship Program
Harvard Medical School, U.S.A
*The Clinical Impact of Red Blood Cell Storage: What Have the RCTs Told Us?*

**Pellietier, P (Canada)**
Director of Transfusion Medicine Service, McGill University Hospital Centre designated transfusion center
Faculty of Medicine, McGill University, Montreal, Quebec, Canada
*Ethnic differences in red blood cell antigens and how they affect transfusion.*

**Ponka P (Canada)**
*Lady Davis Institute and Department of Physiology, Associate member of Artificial Cells & Organs Research Centre, McGill University*
*Physiology and Pathophysiology of Iron Homeostasis: Implications for Therapy of Iron Overload*

**Yu BL (U.S.A.)**
Assistant Professor, Mass General Hospital, Harvard Medical School (Alumni of Artificial Cells & Organs Research Centre)
*Inhalation of nitric oxide in blood transfusion*

**Blais, MC (Canada)**
Professor, Montreal University (Alumni of Artificial Cells & Organs Research Centre)
*Research on blood groups in animal*

**Scott, M (Canada)**
Senior Scientist - Clinical Professor, Canadian Blood Services and University of British Columbia
*Engineering blood group antigen-cleaving enzymes by directed evolution to modify red blood cells and remove antigenicity*

2:30 pm-5:30 pm  **DRUG DELIVERY/ REGENERATIVE MEDICINE** (except for keynote 20 mins each)
**Co-Chairs**: Chen GQ (China) & E Piskin (Turkey)

**Chen GQ (China) Keynote lecture 25 mins**
Professor of Microbiology and Biomaterials, Department of Biological Sciences and Biotechnology, School of Life Sciences, Tsinghua University Beijing 100084 China
*Drug Targeting Systems Based on PHA Granule Binding Protein PhaP*

**Shum-Tim (Canada)**
Professor of Surgery, Associate member of Artificial Cells & Organs Research Centre, Faculty of Medicine, McGill University
Authors: 1D. Shum-Tim, MD., 2A. Paul, Ph.D., H. 3Al-Kindi, MD., 4S. Prakash, Ph.D.
1Departments of Surgery, and Surgical Research, McGill University Health Center, McGill University, Faculty of Medicine, Montreal, Quebec, Canada. 2Departments of Chemical and Petroleum Engineering, University of Kansas, Lawrence Kan, 3Biomedical Technology and Cell Therapy Research Laboratory, Department of Biomedical Engineering, Faculty of Medicine, McGill University, Montreal, Quebec, Canada.
*Novel Application of Micro-Nanoparticles in the Treatment of Heart Diseases*

**Maysinger D (Canada)**
Professor, Department of Pharmacology and Therapeutic, McGill University
*Anti-inflammatory dendrimers*

**Piskin E (Turkey)**
President, Biomaterial and Bioprocessing Congresses, Hacettepe University and Biyomedetek/NanoBMT, Cyberpark-Bilkent University/ Tekmer-Başkent University, Ankara, Turkey (Alumni of Artificial Cells & Organs Research Centre)
*Engineering of Bone and Cartilage Tissues*
Peripheral nerve system repair with the bi-directional induction and system remodeling from central system and target organs

Jiuxu Deng#, Ming Li#, Jian Weng, Yuhui Kou, Peixun Zhang, Na Han, Xiaofeng Yin*, Baoguo Jiang*
Department of Orthopedics and Trauma, Peking University People's Hospital, Beijing, China.
*Equal contributors and co-first authors.

Comparison of different number autologous sural nerve grafts repair common peroneal nerve defects

Ming Li#, Jiuxu Deng#, Jian Weng, Fei Yu, Yuhui Kou, Na Han, Xiaofeng Yin, Peixun Zhang* & Baoguo Jiang* (China)
Department of Orthopedics and Trauma, Peking University People's Hospital, Beijing, China
Autologous sural nerve repair long common peroneal nerve defect by biodegradable conduit small gap tubulization

TUESDAY, NOVEMBER 14TH 2017

8:30-1:00pm CLINICAL TRIAL RESULTS AND MOVING FORWARD: (except for keynote 20 mins each)


Greenburg AG (U.S.A) Keynote lecture 25 mins
Past president, ISBS Int Sym Blood Substitutes, Emeritus Professor of Surgery, Brown University (U.S.A)
Discussion of clinical trial result of Hemoglobin based oxygen carriers

Mackenzie, Colin MD (U.S.A)
Emeritus Professor, University of Maryland School of Medicine, Baltimore, MD 21201 USA
Lessons Learned from 22 clinical trials of HBOC-201

Chang TMS (Canada)
Honorary President, of ISBS and of ISNS, Director, Artificial Cells & Organs Research Centre, Faculty of Medicine, McGill University, Canada
Individual Roles of (1) Oxygen carriers, (2) Oxygen carries with antioxidant and (3) Oxygen carries with antioxidant and CO2 transport.

Hsia C (U.S.A.)
Carleton Jen-Chang Hsia Ph.D. Chairman and CEO, NanoBlood LLC, Sioux Falls, SD, 57107
SanFlow as a Universal Golden Hour Drug for the Treatment of Hemorrhagic and Ischemic Stroke

Simoni, J (U.S.A)
Professor, Texas University, Texas.
Requirements for HBOC to be highly effective in the treatment of myocardial ischemia

Estep T (U.S.A.)
Chart Biotech Consulting, LLC
Moving HBOCs Forward - Testing Hypotheses in the Clinic

Keipert P (U.S.A.)
Consultant & President, Keipert Corp, San Diego, CA, USA (Alumni of Artificial Cells & Organs Research Centre)
Challenges Facing HBOC Development in Trauma - What have we learned to minimize the risk going forward?

Abuchowski, A (U.S.A.)
CEO, Prolong Pharmaceuticals
SANGUINATE®: A Clinical Update

Bing Wong "Substituting Blood and beyond"

William Richard Light¹, Ashok Malavalli¹, Kim Vandegriff¹, Joseph Tucker¹, Roberto Lopez², Paulo Fontes²
¹VirTech Bio, Inc., Natick, MA, USA ²University of Pittsburgh, Pittsburgh, PA, USA
Development of a new hemoglobin-based oxygen carrier solution (VIR-XV1) for liver allotransplantation in combination with machine perfusion

Zal F (France) Keynote
President, HEMARINA S.A. | Aéropole centre | Biotechnopôle
Use of HEMO2life - an Innovative Oxygen Carrier in Organ Transplantation.

Polard, Valérie & Pierre Alix* (France)
Responsable Préclinique/ Preclinical Development Manager
Aéropole centre – Biotechnopôle, 29600 MORLAIX, FRANCE
Evaluation of a specific oxygen carrier (M101®) added to pig liver cold storage solutions to improve post-transplant graft function.

Biro, G (Canada)
Kim Hae Won (U.S.A.)
Rausch C (U.S.A.) (to be confirmed) The development and the difficulties as well as the opportunities of blood substitutes
Donald A. Belcher¹, Julia Ju², Jin Hyen Baek³, Ayla Yalamanoglu³, Paul W. Buehler³, Daniele M. Gilkes²,⁴, Andre F. Palmer (USA)
1. William G. Lowrie Department of Chemical and Biomolecular Engineering, The Ohio State University, Columbus, OH. 43224, USA
2. Department of Chemical and Biomedical Engineering, The Johns Hopkins University, Baltimore, MD 21218, USA
3. Division of Blood Components and Devices, Laboratory of Biochemistry and Vascular Biology, FDA/CBER, Silver Spring, MD 20993, USA
4. Department of Oncology and Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD 21231, USA
The Quaternary State of Polymerized Human Hemoglobin Regulates Oxygenation of Breast Cancer Solid Tumors: A Theoretical and Experimental Study.

Zhou, Dongfang, Xing Wei, Yubin Huang*
Assistant Professor, State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, ChangChun 130022, People’s Republic of China
A Facile Way to Prepare Functionalized Dextran Nanogels for Conjugation of Hemoglobin

Kinsella M (Canada)
Bioengineering Department, McGill University (Associate member of Artificial Cells & Organs Research Centre)
Engineering Nanomaterials to Diagnose and Track Cancer from the Cellular to the Tissue Level

Vartika Tomar¹, Satya Prakash² and Ramesh Chandra¹
1. Department of Drug Discovery and Metabolism, University of Delhi, Delhi-110007, India
2. Department of Biomedical Engineering, McGill University, Montreal, Canada
Metabolism of Anticancer Agents Noscapine and Analogs

Wang,Y¹,² and TMS Chang¹
1. PhD Research done at Artificial Cells and Organs Research Centre, McGill University, Montreal, Canada
2. Now Research staff, 3rd Hospital of Peking University Medical School (Alumni of Artificial Cells & Organs Research Centre)
Biodegradable Nanocapsules Containing A Nanobiotechnological Complex for the Suppression of A Melanoma Cell Line B16F10

Prabha, Shashi 1, Bahar Ahmed 2, and Dr. Mohd Aqil*¹ (India) (to be confirmed)
1. Dept. of Pharmaceutics, Jamia Hamdard, New Delhi, India
2. Dept. of Pharmaceutical Chemistry, Jamia Hamdard, New Delhi, India.
Preparation and in-vitro characterization of 9-bromonoscapine for preparation of cancer drug delivery nano formulations for use in breast and other cancers

8:30 am-10:30 pm CANCER (20 mins each )
CoChairs: Ramesh Chandra (India) & Palmer, AF (U.S.A)

Chandra R (India) Keynote lecture 25 mins
Professor and Director, Laboratory of Drug Discovery and Metabolism
Department of Chemistry, University of Delhi, Delhi-110007, India
From Laboratory to the bedside

Best, Robert (U.S.A.);
Professor of Biomedical Sciences, associate Dean for Faculty Affairs, University of South Carolina School of Medicine
Technological versus Traditional Approaches to Medicine in an Age of Rapid Change and Declining Resources

Mobed-Miremadi, M (U.S.A)
Santa Clara University, CA, U.S.A. (Alumni of Artificial Cells & Organs Research Centre)
The Legacy of Artificial Cells in Biomedical Engineering Education

Poncelet D (France)
President, International Biocapsulation Group, Professor, ONIRIS, UMRS, CNRS, GEPEA, France
(Alumni Artificial Cells and Organs Research Centre)
Microencapsulation: a human story

Nimesh, S (India)
UGC Assistant Professor, Department of Biotechnology, School of Life Sciences, Central University of Rajasthan, India
Nanotechnology for the treatment of Hypercholesterolemia and related cardiovascular diseases

Lomis, Nikita ¹,², Francis Gaudreault³, Meenakshi Malhotra⁴, Susan Westfall¹, Dominique Shum-Tim⁵ and Satya Prakash (Canada)
1. Biomedical Technology and Cell Therapy Research Laboratory, Department of Biomedical Engineering, 2. Division of Experimental Medicine, 3. Human Health Therapeutics, National Research Council Canada, 4. Department of Radiology, Stanford University School of Medicine, Stanford, CA, USA, 5. Division of Cardiac Surgery and Surgical Research, Royal Victoria Hospital, Development of a novel nanoparticle based therapy for cardiovascular diseases

Westfall S, Lomis N, Iqbal U, Prakash, S
Biomedical Technology and Cell Therapy Research Laboratory, Dept. of Biomedical Engineering, Artificial Cells and Organs Research Centre, McGill University.
Ferulic acid is a cross-talk mediator between L. fermentum NCIMB 5221 and the host metabolic, anti-oxidant and immune systems
**11:00am to 1:00 pm  (1) AROUND THE WORLD   (2) PFC  
(20 mins each )  
Co-Chairs: Liu JX (China,) & Speiss,B (U.S.A)**

**Bülow L (Sweden)**  
Past president, 2015 ISBS Int Sym Blood Substitutes,  
Professor and Chair, Dept of Pure and Applied Biochemistry, Lund University, Sweden  
*Present status of research on blood substitutes in Europe*

**Liu JX (China)**  
Secretariat, Chinese Society of Blood Substitutes,  
Professor and Interim Director, Blood Transfusion Institute of Chinese Academy of Medical Sciences  
*Present status of research on blood substitutes in China*

**Hiromi Sakai¹, Koichi Kobayashi²**  
¹Department of Chemistry, Nara Medical University, Kashihara, Japan; ²Keio University, Tokyo, Japan;  
*Present Status of Blood Substitute Research in Japan*

**Speiss, Bruce D (U.S.A)**  
Professor and Associate Chair (Research) Department of Anesthesiology University of Florida College of Medicine. Gainesville, FL  
*Perfluorocarbon Emulsions as Respiratory Gas Diffusion Enhancers- A Path towards Medical Breakthroughs.*

**Latson, Gary W. M.D.(U.S.A)**  
Director Neurosurgical Anesthesiology, Scott and White Memorial Hospital, Baylor Scott and White Healthcare  
Adjunct Associate Professor, Anesthesiology, Texas A&M University  
*Perftoran (Vidaphor), an intravenous perfluorocarbon emulsion from Russia: Introduction to Western Medicine.*

**Latson, Gary W. M.D.(U.S.A)**  
Director Neurosurgical Anesthesiology, Scott and White Memorial Hospital, Baylor Scott and White Healthcare  
Adjunct Associate Professor, Anesthesiology, Texas A&M University  
*Intravenous Perfluorocarbon Emulsions as a treatment for vascular gas embolism and decompression sickness.*

**Ferenz, Katja (Germany)**  
Universitätsklinikum Essen (AöR), Institut für Physiologische Chemie, Hufelandstraße 55  
*Functionality of albumin-derived perfluorocarbon-based artificial oxygen carriers in the Langendorff-heart”*

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**11:00 am -1:00 pm  METABOLIC : DIABETES, MICROBES (except for keynote 20 mins each )  

**R.J. Neufeld¹, (Keynote lecture 25 mins) C. Pinto Reis¹², B. Sarmento¹³, C. Woitiski¹², F. Veiga², A. Ribeiro², D. Ferreira³, C. Damgé⁴**  
¹Queen's University, Kingston, Ontario, Canada  
²University of Coimbra, Portugal  
³University of Porto, Portugal  
⁴Université Louis Pasteur, France  
*BIMATERIAL CHOICES IN DESIGN OF COMPLEX NANOPARTICULATE CARRIERS FOR ORAL DELIVERY OF INSULIN*  
*Pancreatic beta cell bioencapsulation by emulsification and internal gelation”*

**Zou, Hequn (China)**  
Vice-president, Chinese Society of Apheresis  
Director, Institute of Nephrology and Urology, Southern Medical University  
*Nanomedicine in the early diagnosis of diabetes*

**Shi Z (U.S.A.),**  
Vice President, Clinical Development, REMD Biotherapeutics Corp, California. (Alumni of Artificial Cells & Organs Research Centre)  
*A Fully Human Glucagon Receptor (GCGR) Antibody Reduces Daily Insulin Requirements and Improves Glycemic Control in People with Type 1 Diabetes*

**Scott, M (Canada)**  
Senior Scientist - Clinical Professor, Canadian Blood Services and University of British Columbia  
*Modulating the Immune System via Bioreactor Produced miRNA-Based Therapeutics*

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**2:30pm-5:30pm  OXIDATIVE/HEME MEDIATED TOXICITY (except for keynote 20 mins each )  
Co-Chairs: Alayash A (U.S.A.) & Simoni, J (U.S.A)**
Mechanisms of Toxicity and Modulation of Hemoglobin-based Oxygen Carriers (HBOCs)

Stefano Bruno (Italy)
Authors: Esra’a Ali Mohammad Alomari, Stefano Bruno, Luca Ronda, Gianluca Paredi, Riccardo Piano, Stefano Bettati, Davide Olivani, Francesca Fumagalli, Deborah Novelli, Giuseppe Ristagno, Roberto Latini, Chris Cooper, Brandon Reeder, Andrea Mozzarelli
1 DEPARTMENT OF FOOD AND DRUG, UNIVERSITY OF PARMA, PARMA, ITALY; 2 DEPARTMENT OF MEDICINE AND SURGERY, UNIVERSITY OF PARMA, PARMA; 3 ISTITUTO DI RICERCHE FARMACOLOGICHE ‘MARIA NERI’, MILAN, ITALY; 4 SCHOOL OF BIOLOGICAL SCIENCES, UNIVERSITY OF ESSEX, COLCHESTER, UNITED KINGDOM
High- and low-affinity PEGylated hemoglobin-based oxygen carriers: differential oxidative stress in a Guinea pigs transfusion model

D’Agnillo F (U.S.A.)
Senior Investigator, Laboratory of Biochemistry and Vascular Biology, Division of Hematology, Center for Biologics Evaluation and Research (CBER), Food and Drug Administration, Bethesda, MD, USA
(Alumni of Artificial Cells & Organs Research Centre)
Reversible renal glomerulr dysfunction in guinea pigs infused with polymerized cell-free hemoglobin

Michael Brad Strader, PhD, Tigist Kassa, PhD, Sirsendu Jana, PhD, Fantao Meng, PhD, Wayne Hicks, PhD, John S. Olson, and Abdu I. Alayash, PhD
1 DBCD/OBRR/CBER/FDA
2 BioScience Department, Rice University, Houston, TX
Characterization of oxidative toxicity in mutant Hemoglobins and Hemoglobin Based Oxygen Carrier (HBOCs) candidates using high resolution accurate mass (HRAM) mass spectrometry

Nicholas L. Robbins,
1 RESTOR™ Program, 59th Medical Wing, JBSA Lackland AFB, TX, University of Texas Health Sciences Center at San Antonio, San Antonio, TX,
Discussant

Yang, Bo, Li Wang, Chao Chen, Hongli Zhu (China) (abstract only)
1. College of Life Science, Northwest University, Xi’an 710069, P. R. China
2. National Engineering Research Center for Miniaturized Detection Systems, Northwest University, Xi’an 710069, P. R. China
pPolyHb protects myocardial H9C2 cell against ischemia-reperfusion injury by regulation of Pink1-Parkin mitochondrial autophagy pathway

Li, Weinan, Wanqing Li, Wentao Zhou, Yaojin Li, Shen Li, Hong Wang, Jiaxin Liu (China) (abstract only)
Institute of Blood Transfusion, Chinese Academy of Medical Science, Chengdu, P.R. China
Preliminary Study of Oxidative Stress Caused by Polymerized Hemoglobin and Intervention in Rats

2:30-5:30 pm
(except for keynote 20 mins each)
(Co-chairs: Zou, Hequon (China) & Barre, P (Canada)

Barre, P (Canada)
Associate Professor-McGill University, Medical Director-Chronic Kidney Disease Clinic, Montreal General Hospital- Division of Nephrology, L4 521, Associate member, Artificial Cells & Organs Research Centre
TBA related to treatment of renal failure

Wang, Shenqi (China) Keynote lecture 25 mins
Marie Curie Fellow (MC-IIIF) Ph.D
Professor, School of Life Science & Technology, Huazhong University of Science and Technology, Wuhan, P.R. China
The Challenge of Adsorbent for Hemoperfusion in China

Zou, Hequon (China), Keynote lecture 25 mins
Vice-president, Chinese Society of Apheresis, Director, Institute of Nephrology and Urology, Southern Medical University
Adsorbent based plasmapheresis for autoimmune/inflammation diseases

Lulu Han, Jingyu Li, and Lingyun Jia (China)
School of Life science and Biotechnology, Dalian University of Technology, Dalian 116023, P. R. China
Removal of indoxyl sulfate by water-soluble poly-cyclodextrins in dialysis

Jun Ren*, Lingyun Jia (China) renjun@dlut.edu.cn
School of Life Science and Biotechnology Dalian University of Technology, Dalian, China 116024
Preparation of hydrophobic charge induction adsorbent for selective removal of antibody from human plasma
Lingyun Jia*, Jun Ren, Xiaobo Bao (China)
Liaoning Key Laboratory of Molecular Recognition and Imaging, School of Life science and Biotechnology, Dalian University of Technology, Dalian, China 116024

Removal of Beta-2-microglobulin from Human serum using Single Domain Antibody as Ligand

Yu, Huibin and Professor Shenqi Wang (China), School of Life Science and Technology, Huazhong University of Science and Technology, Wuhan 430074, China.

Preparation of Zn\^{2+} loaded chitosan beads based adsorbent for the removal of human testosterone in plasma

Chen, Jian 1, Guanghui Cheng1, Yamin Chai1 and Lailiang Ou*1 (China)
1Key Laboratory of Bioactive Materials, Ministry of Education, College of Life Sciences, Nankai University, Tianjin 300071, China.
Preparation of nano-CaCO3/polystyrene nanocomposite beads for efficient bilirubin removal

Li, Xing 1, Sheng Wang 1, Lailiang Ou 2, Yaoting Yu 2, Shenqi Wang 1 (China) (to be confirmed)
1Huazhong University of Science and Technology, Wuhan, China. 2Nankai University, Tianjin, China
A Novel Polystyrene Beads Adsorbents Containing Mesopores and Linear Decapeptide Segments as Ligands for the Removal of β2-Microglobulin from Human Plasma

WEDNESDAY, NOVEMBER 15\textsuperscript{TH} 2017

8:30-10:30 am PROTEIN ENGINEERING (except for keynote 20 mins each)

Co-Chairs: Bülow L (Sweden) & Reeder, Brandon (U.K.)

Bülow L (Sweden) Keynote lecture 25 mins
Past president, 2015 ISBS Int Sym Blood Substitutes, Professor and Chair, Dept of Pure and Applied Biochemistry, Lund University, Sweden
Protein Engineering for Hemoglobin Based Oxygen Carriers

Reeder, Brandon (U.K.) Keynote lecture 25 mins
Protein Engineering for Hemoglobin Based Oxygen Carriers

Sun, Jian 1, Bin Cao 2, Qinggui Meng 2 (China)
1Department of Molecular and Cellular Pharmacology, School of Pharmaceutical Science and Technology, Tianjin University, Tianjin 300072, P R China; 2Shandong Wan’an pharmaceutical co., LTD., Dongying, Shandong 25700, China
Recombinant hemoglobin as oxygen carrier by gene engineering: a review

Néilda Leiva Eriksson 1 (1) and Leif Bülow 1 (1)
(1) Department of Pure and Applied Biochemistry, Lund University, Box 188, 221 00 Lund, Sweden
A green alternative for the development of HBOCs

Karin Kettisen* & Leif Bülow (Sweden)
Pure and Applied Biochemistry, Lund University
Impact of cysteine residues in recombinant fetal hemoglobin

Carlsson, Magnus 1, Selvaraju Kanagarajan 1, Sandeep Chakane 2, Karin Kettisen 2, Khuanpiroon Ratanasopa 2,3, Leif Bülow 2, Li-hua Zhu 1 (Sweden)
1Department of Plant Breeding, Swedish University of Agricultural Sciences, Alnarp, Sweden 2Department of Pure and Applied Biochemistry, Lund University, Lund, Sweden 3Örebro Life Science Centre, School of Science & Technology, Örebro University, Örebro, Sweden
Human fetal hemoglobin expression, purification and characterization in Nicotiana benthamiana

Shen, Yuesheng 1, Geng Niu 1, Yuwei Bai 1, Chao Chen 1, Hongli Zhu 1 (to be confirmed)
1College of Life Science, Northwest University, Xi’an, P. R. China
2National Engineering Research Center for Miniaturized Detection Systems, Northwest University, Xi’an, P. R. China
Preliminary study on pharmacokinetics of Polymerized Porcine Hemoglobin (pPolyHb)

Yuhao Lu, Meng Du, Ziyuan Wang* (China) (to be confirmed)
School of life Science, Xuzhou Normal Universit, Xuzhou, P.R. China
Enhancement of recombinant hemoglobin production in P. pastoris containing the HRG-4 heme transpot system

8:30-10:30 am NANOCAPSULES AND NANOPARTICLES (except for keynote 20 mins each)

Co-Chairs: Sakai H (Japan) & H. Bäumler (Germany)

Sakai H (Japan) Keynote lecture 25 mins
Translational Research of Hb-vesicles (Artificial Red Cells) for a Transfusion Alternative and O₂/CO Therapeutics

H. Bäumler (Germany)
Institute of Transfusion Medicine, Charité-Universitätsmedizin Berlin, Germany
Hemoglobin-Based Oxygen Carriers HbMP-700 can deliver more than oxygen

Tomoko Kure, Hiromi Sakai (Japan)
Department of Chemistry, Nara Medical University, Kashihara 634-8521, Japan
Transmembrane Difference in Colloid Osmotic Pressure Affects the Lipid Membrane Fluidity of Liposomes Encapsulating a Concentrated Hb Solution

Doctor, Allan (U.S.A.)
Professor of Pediatrics and Biochemistry, Washington University School of Medicine
Pediatric Critical Care Medicine, Saint Louis Children’s Hospital, St. Louis, Missouri
Erythromer (EM), a Nanoscale Bio-Synthetic Artificial Red Cell: proof of concept and in vivo efficacy results

University of Colorado, Boulder
Production of Artificial Cell Membranes Bearing New Characteristics or Behaviors Using “Click” Chemistries

Tajparast F and Mladen I. Glavinović (Canada)
Departments of Civil Engineering and Applied Mechanics and Physiology, McGill University, Montreal, PQ, Canada
Forces acting on objects in nanopores with irregularities

Zhang, ZB (United Kingdom)
Past President, President of Symposium on biocompatible capsules (UK)
Professor and Deputy Director of the China Institute, University of Birmingham, Birmingham
Understanding the mechanical properties of cells, microspheres and microcapsules

Huang, Y (Wang, Yupeng ,Yubin Huang*) (China)
Professor, State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, ChangChun 130022, People’s Republic of China
Hemosome formed by protein–polymer conjugate assembly as oxygen carrier

11:00am-1:00pm  MICROCIRCULATION  (except for keynote 20 mins each )
Cochairs: Intaglietta, M (U.S.A.) and Friedman, Joel M (U.S.A.)

Intaglietta, M (U.S.A.) Keynote lecture 25 mins
Professor, University of California at San Diego
Authors: Amy G. Tsai, Pedro Cabrales, Joel M. Friedman, Daniel M. Tartakovsky, and Marcos Intaglietta
POST-TRANSFUSION INCREASE OF HEMATOCRIT PER SE DOES NOT IMPROVE CIRCULATORY OXYGEN DELIVERY DUE TO INCREASED BLOOD VISCOSITY

Pedro Cabrales (U.S.A)
POLYETHYLENE GLYCOL CAMOUFLAGED EARTHWORM HEMOGLOBIN

Torres Filho, Ivo MD, PhD (U.S.A.)
Research Physiologist, US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX
In vivo Enhancement of Flow and Oxygen Transport in Microvessels: The Nanomedicine Approach During Ischemia

Seetharama A. Acharya, Savita Bhutoria, Dongxia Li, M. Prabhakaran, Amy G. Tsai, Marcos Intaglietta, and Craig Branch (U.S.A)
PATTERN OF PEGYLATION OF HB IMPACTS THE EFFICACY TISSUE OXYGENATION BY PEG HB: EAF P3K6 HB IS AN ANTI-ANEMIA THERAPEUTIC OPTIMIZED FOR OXYGEN TRANSFER CATALYTIC ACTIVITY.

Pedro Cabrales, Joel M. Friedman and Marcos Intaglietta (U.S.A)
ROLE OF CYTOKINES IN PROMOTING OXYGEN DELIVERY AFTER BLOOD TRANSFUSION. Amy G. Tsai

Joel M. Friedman (U.S.A)
ENHANCING SAFETY AND THERAPEUTIC EFFICACY OF BOTH HBOCS AND RBC BASED TRANSFUSIONS THROUGH THE SYSTEMIC NANOPARTICLE-BASED DELIVERY OF NO BIOACTIVITY

11:00am-1:00pm  PROCESSES INCLUDING EXTRACTION AND PURIFICATION (20 mins each )
Cochairs: Gu KF (U.S.A.) Cattaneo M (U.S.A.)

Elmer, J (U.S.A.)
Prolonging the Shelf Life of Lumbricus terrestris Erythrocruorin for Use as a Novel Blood Substitute

Ka Zhang (1), Tongchang Zhou (1), Lei Ye (1), Leif Bülow (1), (Sweden)
(1) Division of Pure and Applied Biochemistry, Lund University, Lund, Sweden
Purification of recombinant human hemoglobin from crude cellular extracts using molecularly imprinted polymers

Guo C & TMS Chang (Canada)
1 Ph.D. Research done at Artificial Cells and Organs Research Centre, McGill University, Montreal, Canada
Extraction of Superoxide Dismutase, Catalase and Carbonic Anhydrase from red blood cell hemolysate for the preparation of Poly-[Hb-CAT SOD CA]: a nanobiotherapeutic with enhanced rbc functions;

Gu KF (U.S.A.) Alumni of Artificial Cells & Organs Research Centre
Novel Feeding Strategy Development for Enzyme/Protein Production

Cattaneo M (U.S.A.)
President, BioVolutions Laboratories Inc., Cambridge, Massachusetts, (Alumni of Artificial Cells & Organs Research Centre)
Continuous Manufacturing of Monoclonal Antibodies

2:30pm-5:30pm
NOVEL MOLECULAR & CHEMICAL APPROACHES (20 mins each )
CoChairs: Kluger R (Canada) and Acharya SA (U.S.A.)

Kluger R (Canada)
Professor of Chemistry, U of Toronto
Authors: Ronald Kluger and Aizhou Wang
HBOCs from Hb-Hb Coupling Deliver Oxygen and Avoid Nitric Oxide

Acharya SA (U.S.A.)
Redesign of EAF PEG Hb to function as a targeted oxygen transfer catalyst under anemia to improve tissue oxygenation of the hypoxic areas: Application in Sickle Cell Anemia.

Palmer A (U.S.A.)
Professor and Chair, Dept of Chemical Engineering and Biomolecular Engineering, Ohio State University.
Engineering polymerized hemoglobin size regulates side-effects

Li Ma1 and Carleton Jen-Chang Hsia2 U.S.A.)
Georgia Department of Physics, Georgia Southern University, Statesboro, GA1 and NanoBlood LLC, Sioux Falls, SD2,
SanFlow with Crystalloid as Blood Substitute

Komatsu, Teruyuki (Japan)
Department of Applied Chemistry, Faculty of Science and 1-13-27 Kasuga Bunkyo-ku, Tokyo 112-8551, Japan
Hemoglobin-Albumin Cluster “HemoAct™” as an Artificial O2-Carrier

Takashi Matsuura, Keizo Yamamoto, Hiromi Sakai (Japan)
Department of Chemistry, Nara Medical University, Kashihara 634-8521, Japan
Reactivity of Cys b93 of native and b-crosslinked Hbs

Craig A Branch1,2, Min-Hui Cui1, Sangeetha Thangaswamy, PhD3, and Seetharama Acharya2,3 (U.S.A.)
1Gruss Magnetic Resonance Imaging Center/Dept of Radiology, 2 Department of Physiology and Biophysics, 3 Albert Einstein College of Medicine, Bronx, NY; 3 Division of Hematology, Dept. Medicine, Albert Einstein College of Medicine, Bronx, NY
Semisynthetic Plasma Expanders, EAF PEG Alb and EAF PEG Hb, differentially affect oxygen deficit in animal models of sickle cell disease

Gang Chen, Tingting Wu, Can Huang, Hanfeng Zheng, Yaojin Li, Hong Wang, Jiaxin Liu*, Chengmin Yang* (China) (Abstract book only)
Institute of Blood Transfusion, Chinese Academy of Medical Science, Chengdu City, Sichuan Province, P. R. China
The reduction of human cord blood methemoglobin by vitamin C

ANNOUNCEMENT for 2019 ISBS
Professor Yang and Professor Sakai

2:30-5:30 pm NANOMEDICINE/ DIAGNOSTIC (except for keynote 20 mins each )
Co-Chairs: Budak, G (Turkey) & Daka JN (Canada)
**Daka JN (Canada)**
Government Research Scientist, Radiation Protection Bureau, Health Canada, Ottawa, CANADA
(Alumni of Artificial Cells & Organs Research Centre)

*A Simple Plate Reader Method for Determination of Taurine in Human Urine Samples as a Potential Radiation Biomarker in Extreme Radiological/Nuclear Exposure Situations.*

**Piskin AK (Turkey)**
Professor, Hacettepe University, Ankara (Turkey) (Alumni of Artificial Cells & Organs Research Centre)


*Hacettepe University, Faculty of Medicine, Medical Biochemistry Department
**Hacettepe University, Faculty of Science, Biochemistry Department

Ankara, Turkey

Quartz Crystal Microbalance (QCM) based biosensors for detecting breast cancer cells via their membrane receptors

**Moghtader, Farzaneh1,2, Orhan Erdem Haberal2,3, Aysel Tomak4, Hadi M. Zareie5, Erhan Piskin1,2**

1Hacettepe University, Nanotechnology and Nanomedicine Division and Chemical Engineering Department, Beytepe, Ankara, Turkey

2NanoBMT, Betsykent/Cyberpark-Bikent – KOSGEB/Tekmer-Baskent, Ankara, Turkey

3Baskent University, Biomedical Engineering Department, Bilkent, Ankara, Turkey

4Izmir Institute of Technology, Department of Material Science and Engineering, 35430, Urla, Izmir, Turkey

5University of Technology, School of Physics and Advanced Materials, Microstructural Analysis Unit, Sydney, Ultimo NSW 2007, Australia

Bacterial Detection by SERS Using Nanoparticles and Bacteriophages

**Kinsella M (Canada)**
Bioengineering Department, McGill University (Associate member of Artificial Cells & Organs Research Centre)

*TBA on nanomedicine

**Chen, Jie, Wenyan Han, Jian Chen,† Weichao Wang, Wenhui Zong, Guanghui Cheng,Yaoting Yu, Lailiang Ou* (China)**

*Key Laboratory of Bioactive Materials, Ministry of Education, College of Life Sciences, Nankai University, Tianjin 300071, China

Computer-Aided Design of Small-Molecular Peptide Ligands of Adsorbent Targeting Tumor-Necrosis Factor-α (TNF-α)

**Ursula Stochaj1,4 (Canada)**

Authors:Dana Abou Samhadaneh1, Khalid A. Alqarni1, Ossama Moujaber1, Dusica Maysinger2, Ursula Stochaj1,4

1Department of Physiology, McGill University, Montreal, Canada

2Department of Pharmacology and Therapeutics, McGill University, Montreal, Canada

GOLD NANOPARTICLES IMPAIR NUCLEAR FUNCTION AND PROTEOSTASIS IN CANCER CELLS

**Dipanjan Pan* 1, 5, 6, 7, 8 (U.S.A.)**

Authors: Mao Ye,†, 1 Santosh Misra,†, 1 Arun K. De,†, 2 Fatemeh Ostadhossein,1 Kuldeep Singh,4 Laurie Rund,2 Lawrence Schook,2 and Dipanjan Pan* 1, 5, 6, 7, 8

1 Department of Bioengineering, University of Illinois at Urbana-Champaign, USA. 2 Department of Animal Sciences, University of Illinois, Champaign-Urbana, Illinois, USA. 3Agricultural Animal Care and Use Program, University of Illinois at Urbana-Champaign, Illinois, USA. 4Veterinary Diagnostic Laboratory, University of Illinois, Champaign-Urbana, Illinois, USA. 5Beckman Institute of Advanced Science and Technology, University of Illinois at Urbana Champaign, Illinois, USA. 6Mills Breast Cancer Institute, Carle Foundation Hospital, 502 N. Busey, Urbana, Illinois, USA. 7Department of Materials Science and Engineering, University of Illinois-Urbana Champaign, Illinois, USA. 8Carle-Illinois College of Medicine, Urbana, Illinois, USA. †Contributed equally. *Corresponding author:

Nano-enabled Orphan Nuclear Receptor Activation Regulates Metabolism, Transport and Programmed Cell Death Pathways in Soft Tissue Sarcoma of Xenograft Mice and Transgenic Oncopigs

**Juncker D (Canada)**

Professor of Biomedical Engineering, Micro and Nanobioengineering Laboratory McGill University

Authors: Grant Ongo, Sa Xiao, Susan Westfall, Andy Ng, Satya Prakash & David Juncker

Cell microarrays tissue constructs, and artificial gastrointestinal tract in a box.

**Sang, Peipei, Yaojiin Li, Gang Chen, Shen Li, Wentao Zhou, Hong Wang, Chengmin Yang* Jiaxin Liu (abstract only)**

Institute of Blood Transfusion, Chinese Academy of Medical sciences & Peking Union Medical College, Chengdu, P.R. China.

Effects of polymerized human placenta hemoglobin combined with hydroxyethyl starch on tissue organs in hemorrhagic shock rats

**Zhao, Mengye1, Chengbin Yan1, Ying Xiao1, Chao Chen1,2, Hongli Zhu1,2 (to be confirmed)**

1.College of Life Science, Northwest University, Xi’an 710069, P. R. China

2.National Engineering Research Center for Miniaturized Detection Systems, Northwest University, Xi’an 710069, P. R. China

The effect of Polymerized Porcine Hemoglobin (pPolyHb) on hemodynamic stability and oxygen delivery in a rat model of perioperative blood transfusion
VENUE

This meeting will be held in a downtown Montreal hotel where we have reserved a block of rooms on a first come basis. The city has just renovated the surrounding area as a special tourist district. These include the Palais des congress (Montreal Convention Centre) that connects to the modern underground city of shops and metro; Place Des Art with arts exhibits, musicals and concerts. The Notre Dame Cathedral, the historical part of the city and some of Montreal’s international cuisines are within walking distances.

ABSTRACT SUBMISSION;
Deadline over but 1 to 2 rare exceptions may be given to extremely novel discoveries and inventions. Half page 12 fonts single spacing (Word format only) as email attachment to artcell.med@mcgill.ca with “2017 abstract” under “Subject” of email.

REGISTRATION FOR MEETING:
Participation will have to be based on space availability. We shall send those accepted, the with details on how to register and how to reserve hotel. To apply, please email the following information to artcell.med@mcgill.ca with “2017 registration” in the Subject section of the email. (Please copy and paste directly into the body of email and input the information)
Full names:
Nationality:
E-mail address:
Address: Street, City, Province or state, postal code, Country
Present position and Name of Organization:
Areas of your interest Please indicate one or both
(1) Blood substitutes & oxygen therapeutics
(2) Other areas of Nanomedicine and artificial cells

HOTEL ACCOMMODATION:

We have reserved a block of rooms on a first come basis. Hotels in this area are booked up quickly because of the many celebrations and meetings for the 150th Anniversary of Canadian Federation and 375th for Montreal. It is important to register for the meeting and reserve the hotel as soon as possible. Details of reservation will be sent to those accepted for meeting registration as above. In Canadian dollars ($1 Canadian = U.S. $0.80 variable with time).
Single/double rooms: After September 15 2017 Cdn $180
Triple/quadruple rooms After September 15 2017 $200/$220
Room Reservation is directly with the hotel using credit card.

Ce congrès se déroule en parallèle avec les congrès ISBS XVI et Nanomédecine V puisque ces 3 organisations ont comme centre d’intérêt commun les cellules artificielles ainsi que la Société Internationale sur les Cellules Artificielles, les Substituts Sanguins et la Biotechnologie (www.medicine.mcgill.ca/artcell/isabi.pdf)

**Journal officiel de la Société:** “Artificial Cells, Nanomedicine & Biotechnology”, un journal international, Publication Taylor & Francis. [http://www.tandfonline.com/loi/ianb20#.VctewUt969Q](http://www.tandfonline.com/loi/ianb20#.VctewUt969Q)

Les intervenants pourront soumettre leurs manuscrits pour publication après évaluation par les pairs.
La société Internationale sur les Substituts sanguins (ISBS) s’est prononcée pour que le congrès ISBS XVI se tienne à Montréal, Québec, Canada. Les précédents congrès se sont tenus à Harvard (ISBS XIII en 2011), à l’Institut de Transfusion Sanguine de Chine (ISBS XIV en 2013) et à Lund en Suède (ISBS XV en 2015). Nous accueillons des pionniers expérimentés, des chercheurs confirmés, de jeunes chercheurs, médecins, concepteurs, organismes de réglementation, banques de sang et autres. Domaines de ce congrès
Transporteurs d’O₂ et de CO₂, oxygénothérapies, antioxydants, vasoactivité, cellules souches, sang de cordon ombilical, source recombinante, sécurité et réglementation, médecine transfusionnelle et autres domaines connexes.

Le Congrès Mondial de Nanomédecine V (ISNS) s’est prononcé pour que ce congrès se tienne à Montréal puisque les cellules artificielles sont là l’origine de la nanomédecine. Domaines de ce congrès
Micro-nano systèmes, applications thérapeutiques, administration de médicaments, diagnostics et autres domaines en mettant l'accent sur le passé, le présent & les perspectives futures.

LIEU DES CONGRES
Les 3 conférences auront lieu dans un hôtel du centre-ville de Montréal où ont été réservés des salles de réunion et un certain nombre de chambres, qui seront attribuées sur la base du premier arrivé, premier servi. La ville de Montréal vient de rénover les alentours pour en faire un quartier touristique. Le Palais des Congrès de Montréal est connecté avec le célèbre réseau souterrain de magasins et le métro de Montréal. La place des Arts propose des expositions artistiques et des concerts. La Basilique Notre Dame, le quartier historique de la ville et les restaurants de cuisine internationale sont à distance de marche.

EBAUCHE DU PROGRAMME PRELIMINAIRE
Lundi 13 novembre
Matinée : Cérémonie d’ouverture et 60ième anniversaire des Cellules Artificielles
Après-midi : Sessions scientifiques
Mardi 14 novembre
Matinée : Sessions scientifiques
Après-midi : Sessions scientifiques
Mercredi 15 novembre
Matinée : Sessions scientifiques
Après-midi : Sessions scientifiques

ORGANISATION
Organisateurs locaux :
TMS Chang 61° ’Chair’, F.D’Agnillo 97° (FDA/NIH), P. Keipert 86° (Sangart), S. Prakash 96° (McGill),
BL Yu 02° (Harvard)
Centre de Recherches sur les Cellules & Organes Artificiels &Association des Anciens Elèves du Centre, Départements de Physiologie, Médecine & Génie Biomédical, Faculté de Médecine, Université McGill, Montréal, QC, Canada. www.medicine.mcgill.ca/artcell

Comité d’organisation International
Comité Consultatif Scientifique International

Comité Consultatif du Centre et de l’Association des Anciens Elèves du Centre

SOUMISSION DES RESUMES
Il est possible de soumettre un résumé dès maintenant. Une décision sera prise dans le mois suivant sa réception et une mise à jour du résumé sera possible jusqu’à la date limite de soumission. Les résumés d’1/2 page, police 12, interligne 1 (format Word uniquement) doivent être soumis sous forme de fichier joint à un courriel à artcell.med@mcgill.ca indiquant en “Objet” du courriel “2017 abstract”.

PRE-INSCRIPtion (en $ US)
1. Inscription anticipée (avant le 15 juillet 2017):
   Académique: $350
   Industriel: $450
   Centre et Anciens Elèves du Centre : $300
   Etudiants et postdocs: $250
2. Frais d’inscription (16 juillet – 16octobre 2017):
   Académique: $400
   Industriel: $500
   Centre et Anciens Elèves du Centre : $350
   Etudiants et postdocs: $300
3. Inscription tardive (après le 16 octobre et sur place) :
   Académique: $450
   Industriel: $500
   Centre et Anciens Elèves du Centre : $350
   Etudiants et postdocs: $300

HOTEL (en $ CA)
Le congrès aura lieu dans un hôtel du centre-ville de Montréal où ont été réservés des salles de réunion et un certain nombre de chambres, sur la base du premier arrivé, premier servi.
Chambre simple/double: $150/jour avant le 15 septembre 2017 (après: $180)
Chambre triple/quadruple $170-190/jour avant le 15 septembre 2017 ( aprè s: $200-$220)
(1$ CA environ 0,80 $ US, variable).
Les réservations de chambres se font directement auprès de l’hôtel avec une carte de crédit.

PRE-INSCRIPtion
Cette étape est nécessaire pour les autres participants pour s’assurer de la disponibilité de places. Cette étape nous permettra de vous envoyer les formulaires d’inscription avec les détails concernant inscription et réservation d’hôtel.
Pour une pré-inscription, envoyer s’il vous plaît un courriel à artcell.med@mcgill.ca indiquant en  “Objet” du courriel “2017 preregistration”.
(Merci de copier et coller dans le corps du courriel puis saisir l’information)
Nom et prénoms: Nationalité: Adresse de courriel: Adresse: rue, ville, province ou état, code postal, paysFonction actuelle: Nom de l’organisme: Domaines d’intérêt (Indiquer une ou les deux)
Sousstituts sanguins et oxycénothérapies Autres domaines de nanomédecine et cellules
ORATEURS (liste préliminaire, en cours d’élaboration) Voir pages 4-15