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### **Personal Information**

#### Identification

Dr. Pedro Geraldes

Correspondence language: English

Sex: Male

Date of Birth: 5/26

Canadian Residency Status: Canadian Citizen

Country of Citizenship: Canada

### Language Skills

Language	Read	Write	Speak	Understand
English	Yes	Yes	Yes	Yes
French	Yes	Yes	Yes	Yes
Portuguese	Yes	Yes	Yes	Yes

#### **Address**

The primary address is denoted by (\*)

Courier	Primary Affiliation (*)
University of Sherbrooke	University of Shebrooke
Division of endocrinology	Division of endocrinology
3001, 12e Avenue Nord	3001, 12e Avenue Nord
Sherbrooke	Sherbrooke
J1H 5N4	J1H 5N4
Canada, Quebec	Canada, Quebec

### **Telephone**

The primary telephone is denoted by (\*)

Fax	819-5645292	
Laboratory	819-5645290	
Work (*)	819-8206868 extension: 12442	

#### **Email**

The primary email is denoted by (\*)

- 1 7	-7 ( )
Work (*)	Pedro.Geraldes@USherbrooke.ca

#### Website

Personal	http://pages.usherbrooke.ca/pgeraldes/welcome.htm	
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### **User Profile**

Disciplines Trained In: Cell Biology, Molecular Biology

Research Disciplines: Cell Biology, Endocrinology, Physiology

Areas of Research: Diabetes, Metabolic Disorders

Fields of Application: Biomedical Aspects of Human Health, Pathogenesis and Treatment of

Diseases

Research Specialization Keywords: Animal model, Atherosclerosis, Cytokines, Diabetes, Endothelium, Growth factors, Mollecular cell biology, Phosphatase, PKC, Vascular cell biology

### **Education**

#### **Degrees**

2006/4 - 2010/6	Post-doctorate - Research Fellow - Vascular Cell Biology - Joslin Diabetes Center - Completed		
	Supervisors: Dr George L King		
2002/1 - 2006/4	Doctorate - Doctor of Medecine - Biomedical sciences - Université de Montréal Completed		
	Supervisors: Dr Jean-François Tanguay		
2000/1 - 2002/1	Master's Thesis - Master of medecine - Biomedical sciences - Université de Montréal - Completed		
	Supervisors: Dr Jean-françois Tanguay		
1995/9 - 1999/5	Bachelor's - Bachelor of biology - Molecular biology and physiology - Université du Québec à Montréal - Completed		

### Recognitions

2010/1 -	Best presentation - Distinction Montreal Research Diabetes Center Amount: 400		
2009/10 - 2010/6	Advanved Postdoctoral Award - Prize / Award Juvenile Diabetes Research Foundation Amount: 180000 (United States dollar)		
2009/6 -	Young Investigator Travel Grant Award - Distinction American Diabetes Association Amount: 1000		
2007/4 - 2009/3	Postdoctoral Award - Prize / Award Fonds de la recherche en santé du Québec Amount: 90000 (Canadian dollar)		
2004/11 - 2005/11	Prix d'excellence - Distinction Université de Montréal Amount: 4000		

2004/9 - 2005/9	Prix Hans Haley - Distinction Club de Recherche Clinique du Québec Amount: 600		
2004/6 - 2005/6	Prix Jean-Louis Levesques - Distinction Montreal Heart Institute Amount: 1000		
2004/5 - 2006/10	Doctoral Award - Prize / Award Fonds de la recherche en santé du Québec Amount: 50000 (Canadian dollar)		
2003/9 - 2004/9	Prix Hans Haley - Distinction Club de Recherche Clinique du Québec Amount: 100		
2002/11 - 2003/11	Prix d'excellence - Distinction Université de Montréal Amount: 4000		

# **Employment**

## **Academic Work Experience**

2010/7 -	Assistant professor Université de Sherbrooke - Médecine	
2006/4 - 2010/6	Research Fellow Harvard Medical School - Vascular Cell Biology	

### **Affiliations**

The primary affiliation is denoted by (\*)

(*) 2010/7 -	Assistant professor - Médecine - Université de Sherbrooke
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## **Research Funding History**

#### **Awarded**

2013/10 - 2018/9 Principal Applicant	Role of SHP-1 in poor collateral vessel formation and angiogenic response in diabetes.		
	Co-applicant : Marc-Antoine Despatis;		
	Collaborator : Guillaume Grenier		
	Funding Sources		
	2013/10 - 2018/9	Operating grant Canadian Institutes of Health Research (CIHR) Total Funding: 610570 (Canadian dollar) Funding Competitive?: Yes	
2012/11 - 2017/10	Canadian Research Chair in Diabetes and Vascular Complications.		
Principal	Funding Sources		
Investigator	2012/11 -	Tier 2	
	2017/10	Canadian Research Chair	
		Total Funding: 500000 (Canadian dollar)	
		Funding Competitive?: Yes	

2013/7 - 2016/6 Principal Applicant	Mechanisms of poor collateral vessel formation and angiogenic response in diabetes caused by SHP-1		
	Funding Sources		
	2013/7 - 2016/6	Operating grant	
		Canadian Diabetes Association	
	-	Total Funding: 275000 (Canadian dollar)	
		Funding Competitive?: Yes	
2013/3 - 2014/2	Mechanisms of glycemic memory in diabetic nephropathy		
Principal Applicant	Funding Sources		
	2013/3 - 2014/2 E	Bridge Funding	
	-	Canadian Institutes of Health Research (CIHR) Total Funding: 100000 (Canadian dollar)	
		Funding Competitive?: Yes	

## Completed

2010/7 - 2013/6 Principal	Role of PKC delta in PDGF and VEGF inhibition causing poor collateral vessel formation in diabetes.
Investigator	Funding Sources
	2010/7 - 2013/6
	Canadian Diabetes Association
	Total Funding: 227894 (Canadian dollar)
	Funding Competitive?: Yes
2010/7 - 2012/6 Principal	Role of PKC and SHP-1 in podocyte apoptosis and diabetic nephropathy
	Funding Sources
Investigator	2010/7 - 2012/6 Biomedical Research Grant - KFOC100008
	Kidney Foundation of Canada (KFC)
	Total Funding: 10000 (Canadian dollar)
	Funding Competitive?: Yes

### **Under Review**

2014/3 - 2019/2 Principal	Mechanisms of gly Principal Applicant	cemic memory in diabetic nephropathy
Investigator	Funding Sources	
	2013/10 - 2018/9	Operating grant
		Canadian Institutes of Health Research (CIHR)
		Total Funding: 885496 (Canadian dollar)
		Funding Competitive?: Yes

### **Activities**

# **Supervisory Activities**

# **Student/Postdoctoral** Supervision

Principal	Farah Lizotte - Master's Thesis - U. of Sherbrooke - In Progress
Supervisor	Student Degree Start Date: 2013/5
	Student Degree Expected Date: 2015/4

Principal Supervisor	Durpes Marie-Claude - Post-doctorate - U. of Sherbrooke - In Progress Student Degree Start Date: 2012/3 Student Degree Expected Date: 2016/2 Project Description: Distinct mechanisms for atheroslcerosis in type 1 and type 2 diabetes Present Position: Postdoctoral fellow
Principal Supervisor	Benoit Denhez, - Master's Thesis - U. of Sherbrooke - In Progress Student Degree Start Date: 2012/1 Student Degree Expected Date: 2013/12 Project Description: Role of SHP-1 in poor collateral vessel formation in diabetes Present Position: Graduate student
Principal Supervisor	Martin Pare, - Master's Thesis - U. of Sherbrooke - In Progress Student Degree Start Date: 2012/1 Student Degree Expected Date: 2013/12 Project Description: Role of PKC delta in poor collateral vessel formation in diabetes Present Position: Graduate student
Principal Supervisor	Drapeau Nicolas - Master's Thesis - U. of Sherbrooke - In Progress Student Degree Start Date: 2011/9 Student Degree Expected Date: 2013/6 Project Description: Role of SHP-1 in insulin action in podocytes Present Position: Graduate student
Principal Supervisor	Cyrine Joudi, - Habilitation - U. de Sherbrooke - Completed Student Degree Start Date: 2010/7 Student Degree Received Date: 2011/11 Project Description: Role of PKC delta in poor collateral vessel formation in diabetes

# **Knowledge and Technology Translation**

2012/12 - 2012/12	University of Sherbrooke - Research Uptake Strategies - Patients
Expert panel	Outcome / Deliverable: To inform and educate patients with diabetes of the risk
	of cardiovascular complications associated with poor glycemic control
	Evidence of Uptake/Impact: Patients seem to be aware of the consequences of
	glycemic control and weight loss management

## **Contributions**

### **Presentations**

2013-04-24	"Inhibition of the Protecting Factors: New Mechanism of Vascular Complications in Diabetes", IRCM Cardiometabolite Disease Seminar Series, Canada, Quebec, MONTREAL Main Audience: Researcher Invited?: Yes
2013-03-12	"Glycemic memory in diabetic nephropathy: the quest to find new mechanisms.", CHUM-MUHC Nephrology Conference, Canada, Quebec, Montreal Main Audience: Researcher Invited?: Yes

2013-02-07	"New Mechanisms for metabolic legacy effect in diabetic nephropathy.", Kidney Research Centre (KRC) Journal Club rounds, Canada, Ontario, Ottawa Main Audience: Researcher Invited?: Yes
2011-01-06	"Diabetes and Vascular Complications: Beyond Oxidative Stress", Endocrinology/Nutrition/Renal Diseases, Canada, Quebec Main Audience: Researcher
2010-06-18	"Hyperglycemia-induced apoptosis – a NF-#B independent pathway", Signalisation Quebec 2010, Canada, Quebec, Offord Main Audience: Researcher
2010-05-17	"Role of PKC in diabetic vascular complications - implication of PDGF resistance", Seminar series - University of Sherbrooke, Canada, Quebec, Sherbrooke Main Audience: Researcher
2009-10-06	"Oxidative/NF-#B Dependent and Independent Pathway to Cause Vascular Cell Apoptosis and Diabetic Complications", CVDM seminar series, United States, Massachusetts, Boston Main Audience: Researcher

## **Interviews and Media Relations**

### **Text Interviews**

2012-11-12 -	New therapeutic target to treat peripheral arterial disease in diabetic patients
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## **Publications**

### **PubMed Articles**

2013-08-01	Lizotte F, Paré M, Denhez B, Leitges M, Guay A, Geraldes P, "PKC# Impaired Vessel Formation and Angiogenic Factor Expression in Diabetic Ischemic Limbs.", Diabetes, 62(8) PubMed ID: 23557702
2013-06-01	Drapeau N , Lizotte F , Denhez B , Guay A , Kennedy CR , Geraldes P, "Expression of SHP-1 induced by hyperglycemia prevents insulin actions in podocytes.", American journal of physiology. Endocrinology and metabolism, 304(11) PubMed ID: 23531619
2012-11-01	Mima A , Hiraoka-Yamomoto J , Li Q , Kitada M , Li C , Geraldes P , Matsumoto M , Mizutani K , Park K , Cahill C , Nishikawa S , Rask-Madsen C , King GL, "Protective effects of GLP-1 on glomerular endothelium and its inhibition by PKC# activation in diabetes.", Diabetes, 61(11) PubMed ID: 22826029
2012-07-01	Kitada M , Geraldes P , Li Q , Matsumoto M , Mizutani K , Qi W , Li C , Leitges M , Rask-Madsen C , King GL, "Glomerular VEGF resistance induced by PKC#/SHP-1 activation and contribution to diabetic nephropathy.", FASEB journal : official publication of the Federation of American Societies for Experimental Biology, 26(7) PubMed ID: 22499584

2011-04-01	Ohshiro Y, Kitada M, Matsumoto M, Geraldes P, Li C, Li Q, White GS, Cahill C, Rask-Madsen C, King GL, "Glomerular-specific protein kinase C-#-induced insulin receptor substrate-1 dysfunction and insulin resistance in rat models of diabetes and obesity.", Kidney international, 79(8) PubMed ID: 21228767
2010-05-05	Li Q, Freund B, Feather D, Abramov R, Wu IH, Chen K, Yamamoto-Hiraoka J, Goldenbogen J, Sotiropoulos KB, Clermont A, Geraldes P, Dall'Osso C, Wagers AJ, Huang PL, Rekhter M, Scalia R, Kahn CR, King GL, "Loss of insulin signaling in vascular endothelial cells accelerates atherosclerosis in apolipoprotein E null mice.", Cell metabolism, 11(5) PubMed ID: 20444418
2010-04-30	King GL, "Activation of protein kinase C isoforms and its impact on diabetic complications.", Circulation research, 106(8) PubMed ID: 20431074
2009-11-01	Hiraoka-Yamamoto J , Matsumoto M , Clermont A , Leitges M , Marette A , Aiello LP , Kern TS , King GL, "Activation of PKC-delta and SHP-1 by hyperglycemia causes vascular cell apoptosis and diabetic retinopathy.", Nature medicine, 15(11) PubMed ID: 19881493
2009-08-01	El Khattabi I , Nishimura W , Laybutt DR , Geraldes P , Shah S , King G , Bonner-Weir S , Weir G , Sharma A, "p38 MAPK is a major regulator of MafA protein stability under oxidative stress.", Molecular endocrinology (Baltimore, Md.), 23(8) PubMed ID: 19407223
2008-12-05	Yagi K, Ohshiro Y, He Z, Maeno Y, Yamamoto-Hiraoka J, Rask-Madsen C, Chung SW, Perrella MA, King GL, "Selective regulation of heme oxygenase-1 expression and function by insulin through IRS1/phosphoinositide 3-kinase/Akt-2 pathway.", The Journal of biological chemistry, 283(49) PubMed ID: 18854316
2008-01-01	Geoffroy P, Cloutier I, Sirois MG, Tanguay JF, "Local delivery of 17-beta- estradiol modulates collagen content in coronary porcine arteries after PTCA and stent implantation.", Journal of vascular research, 45(6) PubMed ID: 18451633
2007-12-01	Yamagata M , Rook SL , Sassa Y , Ma RC , Clermont A , Gao B , Aiello LP , Feener EP , King GL, "Glypican 4, a membrane binding protein for bactericidal/permeability-increasing protein signaling pathways in retinal pigment epithelial cells.", Investigative ophthalmology & visual science, 48(12) PubMed ID: 18055828
2007-06-01	Gosselin H , Tanguay JF , Clément R , Calderone A, "Tamoxifen treatment of myocardial infarcted female rats exacerbates scar formation.", Pflügers Archiv : European journal of physiology, 454(3) PubMed ID: 17285298
2006-10-01	Rook SL, Sassa Y, Ma RC, Geraldes P, Goddard L, Clermont A, Gao B, Salti H, Gundel R, White M, Feener EP, Aiello LP, King GL, "Bactericidal/permeability-increasing protein's signaling pathways and its retinal trophic and anti-angiogenic effects.", FASEB journal: official publication of the Federation of American Societies for Experimental Biology, 20(12) PubMed ID: 17012258

2006-08-01	Gagnon S , Hadjadj S , Merhi Y , Sirois MG , Cloutier I , Tanguay JF, "Estradiol blocks the induction of CD40 and CD40L expression on endothelial cells and prevents neutrophil adhesion: an ERalpha-mediated pathway.", Cardiovascular research, 71(3) PubMed ID: 16797503
2004-12-01	Legault F, Geraldes P, Tanguay JF, Lambert C, "Diverse effects of Ace inhibitors and angiotensin II receptor antagonists on prevention of cardiac hypertrophy and collagen distribution in spontaneously hypertensive rats.", International journal of cardiology, 97(3) PubMed ID: 15561321
2003-09-05	Sirois MG , Tanguay JF, "Specific contribution of estrogen receptors on mitogen-activated protein kinase pathways and vascular cell activation.", Circulation research, 93(5) PubMed ID: 12893737
2002-10-01	Sirois MG, Bernatchez PN, Tanguay JF, "Estrogen regulation of endothelial and smooth muscle cell migration and proliferation: role of p38 and p42/44 mitogen-activated protein kinase.", Arteriosclerosis, thrombosis, and vascular biology, 22(10) PubMed ID: 12377734

# **Intellectual Property**

### **Patents**

Completed	Methods of Modulating Metabolic Memory 10276-112W01, United States,
	Massachusetts
	Filing Date: 2007-08-01