

MARTIN DONATO, MD, PhD.

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PRESENT POSITION:

Instructor Staff of Department of Pathology, Faculty of Medicine, University of Buenos Aires

Researcher Staff, Cardiovascular Physiopathology Institute, Faculty of Medicine, University of Buenos Aires, Argentina (www.fmed.uba.ar/infica)

Researcher of the National Council of Scientific and Technique Researchs

WORK ADDRESS AND EMAIL

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EDUCATION

"Manuel Belgrano" National Secondary School, Buenos Aires, Argentina. **Bachelor, 1988**

University of Buenos Aires, Faculty of Medicine. Buenos Aires, Argentina. **Physician, 1998**

POST-GRADUATE TRAINING

University of Buenos Aires, Faculty of Medicine. Buenos Aires, Argentina.

Doctoral Thesis.

Title: Effects of adenosine on postischemic ventricular dysfunction (myocardial stunning) in isolated rabbit hearts.

Director: Prof. Ricardo J. Gelpi

Degree: **Medical Doctor, 2002**

POST-DOCTORAL TRAINING

Post-doctoral fellowship. Project: Role of conexión-43 on mitochondrial physiology and ischemic preconditioning and postconditioning signals. Laboratory of Experimental Cardiology, Hospital Vall d'Hebron, Barcelona, Spain. January 2010 – June 2010.

Director: Dr. David Garcia Dorado

COURSES REALIZED

Cardiovascular Pharmacology Program, Faculty of Medicine, University of Buenos Aires.

Director: Prof. Dr. Rodolfo P. Rothlin. October 1999 – March 2000.

Training Program in animal care and use (96 hs)

Faculty of Veterinary, University of Buenos Aires; 2006

Director: Prof. Dr. Carlos Lightower

Comparative medicine resources institutional animal care and use committee. New Jersey Medical School. University of Medicine and Dentistry of New Jersey. New Jersey. USA; 2010.

Director: Dr. Bruce A. Scharf

HONORS AND AWARDS

1999: "Dr. José E. Usubiaga Award". Argentine Federation of Anesthesiology. Title: Effects of isoflurane and sevoflurane on postischemic ventricular dysfunction (myocardial stunning) in isolated rabbit hearts

Authors: Julio C. Marini, Martín Donato

2002: "Patricio Cossio and Argentine Society of Clinical Research Award". Title: Effects of isometric exercise on ventricular function in patients with aortic stenosis. Authors: Donato M, Gabay J, Pasqua A, Sabarros J, Sabán M, Gelpi RJ, Grinfeld L.

2003: "Dr. Mauricio Rosembaum" Award to the best article published in Argentinian Cardiology Journal. Title: The activation of PKC during reperfusion attenuated myocardial stiffness on myocardial stunning. Authors: D'Annunzio V, Sabán M, Donato M.

2010: Young Investigator Award. Science and Technique Secretary, Faculty of Medicine, University of Buenos Aires. April 2010

2010: Oscar Orias Award to the best abstract of echocardiography presented at the Argentinian Congress of Cardiology. Title: Study of the ventricular function and correlation with morphometry in patients with severe symptomatic aortic stenosis. Authors: Hita A, Donato M, Baratta S, Chejtman D, Turri D, Agüero O, Telayna JM, Constantini R, Matoso M, Grinfeld L, Morales C, Gelpi RJ, Navia J.

COMPETITIVE FUNDING

Staff Investigator in 10 competitive projects from University of Buenos Aires and National Agency of Scientific and Technique Promotion.

PROFESSIONAL SOCIETIES

Member, International Society for Heart Research, 1986

Member, Argentine Society of Cardiology, 1995.

Member, Argentine Society of Clinical Research, 1982.

Member, International Academy of Cardiovascular Sciences, Sección Sudamericana. 2005

PEER REVIEWER

* Cardiology Argentine Journal

* International Journal of Cardiology

* Journal of Pharmacology and Experimental Therapeutics

* BMJ Cardiovascular disorders

STUDENTS TRAINED

Doctoral Thesis Mentoring

* Effects of acetylcholine and vagal stimulation on experimental myocardial infarction in rabbits. Bruno Buchholz, Doctoral Fellowship. Institute of Cardiovascular Pathophysiology, University of Buenos Aires (2006-)

* Cardioprotection mechanisms of ischemic postconditioning on postischemic ventricular dysfunction and myocardial infarction. Bioch. Nadezda Ann Alexandra Siachoque Montaña. Doctoral Fellowship. Institute of Cardiovascular Pathophysiology, University of Buenos Aires (2009-)

Physician Research Mentoring

* Co-Mentoring with Dr. Ricardo J. Gelpi Verónica D'Annunzio. Doctoral Fellowship. Institute of Cardiovascular Physiopathology (2004-2007)

Medical Student Research Mentoring

Verónica D'Annunzio (1998-2002), Javier Sabarrós (2002-2003), Melina Sabán (2000-2004), Leandro Slipczuk (2003-2004), Jimena Medel (2003-2006), María Cristina Lorenzo Carrión (2004 hasta 2010) y María Guadalupe Romero (2007-2008); Ana Quiroga (2006-2011).

JOURNAL ARTICLES

Peer Reviewed Publications

* Donato M, Morales C, Bagnarelli A, Scapín O, Gelpi R J. Adenosina exógena y disfunción postisquémica en el corazón aislado de conejo. Medicina (B Aires), 59 (4):339-347; 1999. ISSN 0025-7680

* Donato M, Morales C, D'Annunzio V, Scapín O, Gelpi RJ. La activación de los receptores A1 durante la reperfusión atenúa el atontamiento de miocardio de conejo. Medicina (B Aires) 61(4): 424-430; 2001. ISSN 0025-7680

* Donato M, Gabay J, Pascua A, Sabán M, Sabarrós J, Gelpi RJ, Grinfeld L. Efectos del ejercicio isométrico sobre la función diastólica en pacientes con estenosis aórtica severa. Medicina (B Aires) 63: 33-36; 2003. ISSN 0025-7680

* Donato M, Gelpi RJ. Adenosine and cardioprotection during reperfusion. An overview. Mol Cell Biochem, 251:153-159; 2003. ISSN 0300-8177

* González GE, Mangas F, Depetris Chauvin A, Monroy S, Donato M, Morales C, Gelpi RJ. Comportamiento diastólico durante la fase de hipercontracción post-isquémica en el miocardio atontado de conejo. Medicina (B Aires) 63: 403-409; 2003. ISSN 0025-7680

* D'Annunzio V, Donato M, Sabán M, Sanguinetti S, Wikinsky R, Gelpi RJ. Hypercholesterolemia attenuates postischemic ventricular dysfunction in the isolated rabbit heart. Mol Cell Biochem. 273 (1-2): 137-43; 2005. ISSN 0300-8177

- * Gabay J, Donato M, Pascua A, Gelpi RJ, Grinfeld L. Effects of isometric exercise on ventricular function in patients with severe aortic stenosis with and without coronary disease *Int J Cardiol*, 104 (1): 52-58; 2005. ISSN 0167-5273
- * González G, Rodríguez M, Donato M, Palleiro J, D'Annunzio V, Morales C, Gelpi RJ. Effects of low calcium reperfusion and adenosine on diastolic behavior during the transitory systolic overshoot of the stunned myocardium in the rabbit. *Can J Physiol Pharmacol* 84(2): 265-272; 2006. ISSN 1205-7541
- * Pascua A, Donato M, Borrego C, Gabay J, Berrocal D, Gelpi RJ, Grinfeld L. Evaluación de la función diastólica durante y post-ejercicio isométrico en pacientes con hipertensión arterial. *Medicina (B Aires)* 66: 433-438; 2006. ISSN 0025-7680
- * Donato M, D'Annunzio V, Berg G, Muzzio ML, Miksztowicz V, Wikinsky R, Gelpi RJ. Ischemic postconditioning decreased infarct size in normal and hypercholesterolemic rabbit hearts by activation of A1 receptors. *J Cardiovasc Pharmacol* 49(5): 287-92; 2007. ISSN 0160-2446
- * D'Annunzio V, Donato M, Erni L, Miksztowicz V, Buchholz B, Lorenzo Carrión C, Schreier L, Wikinski R, Gelpi RJ, Berg G, Basso N. Rosuvastatin given during reperfusion decreases infarct size and inhibits MMP-2 activity in normo and hypercholesterolemic rabbits. *J Cardiovasc Pharmacol* 53(2): 137-44; 2009. ISSN 0160-2446
- * Gelpi RJ, Gao S, Zhai P, Yan L, Hong C, Danridge L, Maejima Y, Donato M, Yokota M, Molkenin JD, Vatner D, Vatner SF, Sadoshima J. Genetic inhibition of calcineurin induces diastolic dysfunction in mice with chronic pressure overload. *Am J Physiol* 297(5): H1814-9; 2009. ISSN 0002-9513
- * Donato M, D'Annunzio V, Buchholz B, Miksztowicz V, Lorenzo carrión C, Valdez Laura B, Zaobornyj T, Schreier L, Wikinski R, Boveris A, Berg G, Gelpi RJ. Role of of matrix metalloproteinase-2 in the cardioprotective effect of ischemic postconditioning. *Exp Physiol*. 95(2): 274-81; 2010. ISSN 0958-0670
- * Valdez LB, Zaobornyj T, Bombicino S, Iglesias DE, Boveris A, Donato M, D'Annunzio V, Buchholz B, Gelpi RJ. Complex I syndrome in myocardial stunning and the effect of adenosine. *Free Radic Biol Med*. (In press; 2011)
- * D'Annunzio V, Donato M, Fellet A, Buchholz B, Antico Arciuch VG, Carreras MC, Valdez LB, Zaobornyj T, Morales C, Boveris A, Poderoso JJ, Balaszczuk AM, Gelpi RJ. Diastolic function during hemorrhagic shock in rabbits. *Mol Cell Bioch* (In press; 2011) ISSN 0300-8177

Articles in submission for publication

- * Buchholz B, Rodriguez M, Ivalde F, Höcht C, Buitrago E, Perez V, Donato M, Gelpi RJ. Preischemic efferent vagal stimulation increased the size of myocardial infarction in rabbits. (Submitted to *Int J Cardiol*; 2011)
- * Donato M, Buchholz B, Rodríguez M, Inserte J, García-Dorado D, Gelpi RJ. Role of the parasympathetic nervous system in cardioprotection by remote ischemic preconditioning. (Submitted to *J Physiol*; 2011)

Books and chapters in books

Rodríguez M, Morales C., Donato M., González G., Scapin O., Gelpi R.J. Collagen distribution and systolic stress in end stage failure in idiopathic dilated and ischemic cardiomyopathy in humans. Proceedings "XIII World Congress of Cardiology", Brasil. Ed: Monduzzi Editore, International Proceedings Division, 137-142, 1998.

* Donato M, Gelpi RJ. Adenosine and cardioprotection during reperfusion. An overview. En: Kirshenbaum L, Dixon I, Singal P. Biochemistry of hypertrophy and heart failure. Edit. Kluwer publisher, Holanda; pag: 153-159; 2003.

* Donato M, D'Annunzio V, Gelpi RJ. Mecchanism of myocardial protection in coronary heart disease anismos. In: Moreira Gomes Otoni. Cardiovascular Physiology. Editorial Coração Ltda, Brasil. Pag. 431-458; 2005

* Lorenzo Carrión C, Rodríguez JM, Donato M. Cardiac catheterism. En: Rigalli A, Di Loreto V. Experimental Surgical Models in the Laboratory Rat. CRC Press. Taylor and Francis Group. Boca Raton, FL. USA. Pág: 77-81; 2009 ISBN: 978-1-4200-9326-1

* Gelpi RJ, Donato M. Pathophysiology of heart failure. Pag. 223-235. In: Cardiovascular Pathophysiology. Rational basis for treatment. Editors Gelpi RJ y Donato M. Editorial Corpus, 2010. ISBN 978-950-9030-02-2.

* Gelpi RJ, Donato M. Cardiovascular Pathophysiology. Rational basis for treatment. Editors Gelpi RJ y Donato M. Editorial Corpus, 2010. ISBN 978-950-9030-02-2.

Abstracts and preliminary communications (Last 3 years)

* Buchholz B, Erni L, D'Annunzio V, Donato M, Berg G, Wikinski R, Gelpi RJ, Basso N. Effects of rosuvastatin on infarct size in normo and hypercholesterolemic animals. XXXIV Argentinian Congress of Cardiology. Buenos Aires, Argentina. 16-19 Agosto de 2007. Rev Arg Cardiol 76 (3); 2007

* D'Annunzio V, Erni L, Miksztowicz V, Buchholz B, Donato M, Berg G, Wikinski R, Schreier L, Gelpi RJ, Basso N. Effects of rosuvastatin on infarct size and MMP-2 activity in normo and hypercholesterolemic animals. LII Annual Meeting of Argentinian Society of Clinical Research (SAIC). 21-24 de Noviembre de 2007. Medicina (B Aires) 67(Supl3): 184; 2007

* D'Annunzio V, Donato M, Buchholz B, Erni L, Miksztowicz V, Berg G, Schreier L, Basso N, Gelpi RJ. Effects of acute rosuvastatin administration on myocardial ischemia/reperfusion injury and MMP-2 activation in normo and hypercholesterolemic rabbit hearts. XVI World Congress of Cardiology. Buenos Aires, Argentina. 18 al 21 de Mayo de 2008

* D'Annunzio V, Donato M, Buchholz B, Miksztowicz V, Berg G, Schreier L, Gelpi RJ. Cardioprotection by ischemic postconditioning: role of MMP-2. XVI World Congress of Cardiology. Buenos Aires, Argentina. 18 al 21 de Mayo de 2008

* D'Annunzio V, Buchholz B, Quiroga A, Lorenzo Carrión C, Donato M, Gelpi RJ. The effect of ischemic postconditioning is mediated by α -adrenergic receptor in isolated rat hearts. XVII

Reunión Anual de la Sección Latino Americana de la International Society for Heart Research (ISHR). Buenos Aires; 23 al 25 de Mayo de 2009

* Buchholz, Bruno; Rodriguez, Manuel; Ivalde, Flavio; Donato, Martin; Gelpi, Ricardo J. Efferent vagal stimulation increased myocardial infarct size in rabbits through the activation of muscarinic receptors. LIV Annual Meeting of Argentinian Society of Clinical Research (SAIC). Mar del Plata, Argentina. 18 al 21 de Noviembre de 2009. *Medicina (B Aires)*,69(supl. I):150, 2009.

* Bombicino S, Iglesias D, Zaobornyj T, Donato M, D'Annunzio V, Gelpi RJ, Boveris A, Valdez L. Mitochondrial function in ischemia/reperfusion on isolated rabbit hearts. LIV Annual Meeting of Argentinian Society of Clinical Research (SAIC), Mar del Plata, Argentina. 18 al 21 de Noviembre de 2009. *Medicina (B Aires)*,69(supl. I):57-58, 2009.

Matorra LF, Rey Deutsch A, Donato M, Casanova V, Cicale E, Lightowler C, Pidal G, Morales C, Basso N, Gelpi RJ. Effects of AT1 full receptor overexpression and mutated on early mortality on transgenic mice. LIV Annual Meeting of Argentinian Society of Clinical Research (SAIC), Mar del Plata, Argentina. 18 al 21 de Noviembre de 2009. *Medicina (B Aires)*,69(supl. I):57, 2009.

* Valdez LB, Zaobornyj T, Bombicino SS, Iglesias DE, Donato M, D'Annunzio V, Gelpi RJ, Boveris A. Complex I síndrome in isolated rabbit heart subjected to ischemia-reperfusion. Scientific Meeting of Oxygen Club of California (OCC), USA, 17-20 de Marzo de 2010.

* Matorra LF, Rey Deutsch A, Donato M, Casanova V, Cicale E, Lightowler C, Pidal G, Morales C, Basso N, Gelpi RJ. Effects of cardiac overexpression of the AT1 angiotensin II receptor on the mortality in transgenic mice. XXXII European Congress of Cardiology. Stockholm, Sweden; 28 de Agosto al 1 de Septiembre de 2010. *European Heart*; en prensa

* Hita A, Donato M, Baratta S, Chejtman D, Matoso M, Gelpi RJ, Morales C, Navia J. Study of the ventricular function and correlation with morphometry in patients with severe symptomatic aortic stenosis. XXVI Argentinian Congress of Cardiology. Buenos Aires, Argentina. 7-9 Octubre de 2010. *Rev Arg Cardiol* 78 (2): 106; 2010

* Siachoque N, Buchholz B, D'Annunzio V, Quiroga A, Donato M, Gelpi RJ. Alpha-adrenergic receptors participated in the ischemic postconditioning mechanisms on isolated rat hearts. XXVI Argentinian Congress of Cardiology. Buenos Aires, Argentina. 7-9 Octubre de 2010. *Rev Arg Cardiol* 78 (2): 111; 2010

* Buchholz B, Rodriguez M, Ivalde F, Siachoque N, Alvarez Yuseff F, Donato M, Gelpi RJ. Preischemic efferent vagal stimulation increased myocardial infarct size through the activation of muscarinic receptors in rabbits. XXVI Argentinian Congress of Cardiology. Buenos Aires, Argentina. 7-9 Octubre de 2010. *Rev Arg Cardiol* 78 (2): 111; 2010

* Donato M, Buchholz B, Gelpi RJ. Role of the Autonomic Nervous System in Cardioprotection by Remote Ischemic Preconditioning. American Heart Association Scientific Session 2011. Orlando, USA, 13 de Noviembre al 16 de Noviembre de 2011. *Circulation*, 2011 (In press).