

JORGE TUMA-MUBARAK, M.D.

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Interventional Cardiology and ADVANCED STEM CELL THERAPY

I. EDUCATION & CREDENTIALS

A. MEDICAL

M.D. University National Federico Villarreal, School of Medicine, Lima, Peru 1992

B. Medical Licensure & Certification

- University National Federico Villarreal - Peruvian Physicians Number 26455
- University of San Marcos UNMSM Register cardiology specialty number 12331
- Advanced Life Support "ACLS-Provider" AHA

II. CLINICAL HISTORY

A. PROFESSIONAL EXPERIENCE

- Medical Director-Rejuvenare from 2008 to present.
- Clinical and Interventional Cardiology in San Felipe Clinic. Clinical Cardiologists' and Interventionist Staff Privileges from 1999 up to present.
- Interventional Cardiologist of Ricardo Palma Clinic. Clinical Cardiologists' Interventionist Staff Privileges from 2004 to present.
- Interventional Cardiologist Naval Medical Hospital 1999- 2002
- Interventional Cardiologist Maison de Santé Clinic. Clinical Cardiologists' and Interventionist Staff Privileges from 2004 to 2015.
- Director of the Interventional Cardiology Division of Maison de Santé Clinics.
- Assistant Director of the Center of Diagnosis and Therapy of the Heart CENCOR.
- Director of the Institute of Autotransfusion of Cell Therapy INACEL.
- Adjunct Professor Faculty at Transcater Cardiovascular Therapeutics TCT 2012.
- Adjunct Professor Faculty at Columbia University for 5 consecutive years 07, 08, 09, 10, 11, 12, y 13.
- Director of Cell Therapy Conference of Stem Cell in the Pacific South During 8 consecutive years.

B. POST DOCTORAL

<i>Intern</i>	Hospital Nacional Edgardo Rebagliati Martins	1992 – 1993
<i>Residency</i>	Cardiology – Navy Hospital Medical Center University of San Marcos UNMSM Register cardiology Specialty 12331	
<i>Post doctoral</i>	Clinical Cardiology – University of Miami Jackson Memorial Hospital. Service of Cardiology, Coronary Care Unit, Echocardiography	1993 – 1994
	Service, Cardiology – Navy Hospital Medical Center	1994 – 1997
<i>Fellow</i>	Interventional Cardiology and Cardiac Catheterization, Sao Paulo-Brazil Rotablator, Cutting Balloon, and Intravascular Ultrasound	1997 – 1999
<i>Advanced Professional Training</i>	Clinique Pasteur Toulouse France – Angioplasty and Stent Implant with the radial technique	1999 – 1999
	Intravascular Ultrasound, Curitiba – Brazil	1998
	Washington Hospital Center's Catheterization Lab	2000 – 2002
	Cleveland Clinic Catheterization Lab	2001
	Subspecialty Proficiency in Cardiovascular Stem Cell Therapy – Clinic San Nicolas, Argentina	2005

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AWARDS

Award for excellence in health for contributions to science and medical technology 2012 by World Association for Excellence in Medicine.

First place recipient for the distinguished "Daniel Alcides Carrión Award" for his work on: Principal characteristics of the Arterial Hypertension in the elderly population for the Peruvian Institute of Social Security (IPSS) 1989

Best Abstract for CRT 2008: Cardiovascular Revascularization Therapies. 14 Concurrent Cardiovascular Meetings. Washington. "Heart Failure Improvement By Minimally Invasive Delivery Of Autologous Bone Marrow Mononuclear

SOCIETIES AND REVIEW BOARDS

The Peruvian Society of Cardiology
The Peruvian Society of Interventional Cardiology (SOPHIE)
The Latin-American Society of Interventional Cardiology (SOLACI)
The Latin American Society of Cell Therapy
President of The Peruvian Society of Cell Therapy and Gene 2019-2021

PUBLICATIONS

Cell Transplantation, Vol. 25, pp. 1713–1721, 2016 Retrograde Delivery of Allogeneic Umbilical Cord Lining Subepithelial Cells in Patients With Heart Failure. Rescue (HF) Jorge Tuma,* Antonio Carrasco,† Jorge Castillo,† Carlos Cruz,* Alvaro Carrillo,* Jose Ercilla,* Carlos Yarleque,* Jaime Cunza,* Courtney E. Bartlett,‡ Amalia A. Winters,‡ Francisco J. Silva,‡ and Amit N. Patel‡

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Science Direct, 2015 Cytotherapy. Vol 17, Issue 6, Supplement, June, page S39. Redosing Strategies for Mesenchymal Stem Cell Therapy for Chronic Obstructive Pulmonary Disease. Amit Patel, Jorge Tuma, Francisco Silva.

Cytotherapy, 2014 Optimized Mesenchymal Stem Cell Therapy for Chronic Obstructive Pulmonary Disease, 16(4):S14–S15 · April 14

Cytotherapy, 2014 Long Term Follow-Up of Coronary Sinus Delivery of Bone Marrow Cells for Congestive Heart Failure, 16(4):S42 · April 2014

Journal of Translational Medicine 2011. Safety and Feasibility of Percutaneous Retrograde Coronary Sinus Delivery of Autologous Bone Marrow Mononuclear Cell Transplantation in Patients with Chronic Refractory Angina. Jorge Tuma, Roberto Fernández-Viña, Antonio Carrasco, Jorge Castillo, Carlos Cruz, Carlos Yarleque, Jaime Cunza, Timothy D. Henry, Amit N Patel. 9:183

Journal of American College of Cardiology. 2011. Coronary Sinus Technique in End Stage Heart Failure. Jorge Tuma, Roberto Fernández-Viña, Antonio Carrasco, Jorge Castillo, Carlos Cruz, Alvaro Carrillo, Luis Inga, Carlos Yarleque, Jaime Cunza, Amit N Patel.

Journal of American College of Cardiology. 2010. Long Term Benefit Of Autologous Bone Marrow Transplantation By Retrograde Technique In Terminal Heart Failure (Liberty Study). J. Tuma, R. Fernández, C. Cruz, A. Carrillo, J. Ercilla, L. Inga, C. Yarleque, J. Cunza, S. Chirinos, J. Guerra, J. Castillo, A. Carrasco, A. Patel (2010).

Improved Liver Function in Patients with Liver Cirrhosis After Autologous Bone Marrow Cell Therapy. J. Tuma-Mubarak¹, R. Fernández-Viña, A. Carrillo, J. Ercilla, L. Inga, C. Yarleque, J. Cunza, S., Chirinos, J. Guerra, J. Rodriguez, J. Castillo, A. Carrasco, A. Patel. (2010).

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American Journal of Cardiology 2009, Safety and Efficacy of Autologous Bone Marrow Mononuclear Cell Transplantation in Parkinson Disease 1 Year Follow Up. The first clinical experience by Endovascular Therapy. Vol 104 September.

Cardiovascular Revascularization Medicine. 2009 Terminal Heart Failure (HF) Improvement by Minimal Invasive Delivery of Autologous Bone Marrow Mononuclear Cells (ABMMC) Transplantation 1 Year Follow Up. Jorge Tuma, Roberto Fernandez Viña, A Carrillo, J Ercilla, L Inga, C Yarleque, J Cunza, S Chirinos, J Castillo, J Guerra, Antonio Carrasco Yalan. (2009)

Cardiovascular Revascularization Medicine, Minimally invasive delivery of autologous bone marrow mononuclear cells transplantation in heart failure and refractory angina: three-year follow-up. 10(4):271-272 · October 2009

Cytotherapy 2008. Safety and Efficacy of Autologous Bone Marrow Mononuclear Cells Transplantation in Parkinson disease. The First Clinical experience by Endovascular Therapy. Vol. 10, Supplement 1.

Cardiovascular Revascularization Medicine. Successful treatment of refractory angina by minimally invasive delivery of autologous bone marrow mononuclear cells: long-term follow-up, *Cardiovascular Revascularization Medicine*, Volume 9, Issue 3, July-September 2008, Pages 202- 203, ISSN 1553-8389, DOI: 10.1016/j.carrev.2008.03.040.

Cardiovascular Revascularization Medicine. Heart failure improvement by minimally invasive delivery of autologous bone marrow mononuclear cells transplantation. Long-term follow-up, *Cardiovascular Revascularization Medicine*, Volume 9, Issue 3, July-September 2008, Pages 203- 204, ISSN 1553-8389, DOI: 10.1016/j.carrev.2008.03.042.

Cytotherapy 2008. Heart Failure (HF) Improvement by Minimally Invasive Delivery of Autologous Bone Marrow Mononuclear Cells (ABMMC) Transplantation. Long Term Follow Up. Vol 10 Supplement 1.

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Cytotherapy 2018. Succesfull Treatment of Refractory Angina (RA) by Minimally Invasive Delivery of Autologous Bone Marrow Cells (ABMMC). Long Term Follow Up. Vol 10 Supplement 1.

Journal of Cardiac Failure. Heart Failure Improvement after Autologous Bone Marrow Mononuclear Cells (ABMMC) Transplantation, *Journal of Cardiac Failure*, Volume 13, Issue 6, Supplement 2, Heart Failure Society of American Annual Meeting Abstracts, August 2007, Pages S134-S135, ISSN 1071-9164, DOI: 10.1016/j.cardfail.2007.06.518.

Science Direct. Cardiovascular Revascularization Medicine Vol. 8 Issue 2, April-June 2007, Pages 153-154. Refractory angina treatment by percutaneous retrograde sinus technique transplantation of unselected mononuclear Autologous bone marrow cells: long-term follow-up.

Science Direct. Cardiovascular Revascularization Medicine Vol. 8 Issue 2, April-June 2007, Pages 143-144. Improvement of Stress LEVF rather Improvement of Stress LEVF rather than rest LEVF after Bone Marrow Cell Transplantation in Heart Failure Patients.

Cytotherapy 2007. Autologous Mononuclear Bone Marrow Cell Transplantation in Type 1 and Type 2 Insulin Dependent Diabetes Mellitus.

Journal of American College of Cardiology. TCT 2007. Heart Failure Improvement after Autologous Bone Marrow Mononuclear Cell Transplantation.

Journal of American College of Cardiology. TCT 2006. Direct Pancreas Implant by Super Selective Catheterization of Spleen Artery of Autologous Bone Marrow Cells to Perform Type 2 Diabetes Patients.

J. TUMA-MUBARAK, M.D.

PRESENTATIONS, LECTURES, FACULTY

International Simposium “Etnomedicine and the Comtemporaneum Medicine : Stem Cell : Reality or Fiction. 2019

San Marcos National University, Dean of America, Center for Investigation of Natural Resources CIRNA-UNMSM International Conference in Preventive Medicine and Regenerative. Main Auditorium of Peruvian College of Physicians. Stem Cell: Past, Present and Future. 2015

Conference on Cell Therapy for Cardiovascular Disease. Retrograde Application Of Bone Marrow Cell in Refractory Angina, 2014 Columbia University. CRF

10th Symposium on stem cell therapy and cardiovascular innovations. Stem cell delivery. Advantages of the retrograde approach. Madrid Jun 2013.

Hematology Congress 2013. III International Symposium and Regenerative Medicine Cellular Therapy. Cell Therapy in Parkinson Disease. Cell Therapy in Terminal Heart Failure. La Habana May 2013.

The Eighth International Conference on Cell Therapy for Cardiovascular Disease Parkinson's Disease Retrograde Techniques New York Columbia, January 2013, Faculty.

Eight-Year Experience with Retrograde Infusion: Widespread Delivery and Applicability The Sixth International Conference on Cell Therapy for Cardiovascular Disease New York January 2011, Faculty.

Clinical Application for Age Management Medicine, Terminal Heart Failure Improvement by Minimal Delivery of Autologous Bone Marrow Mononuclear Cells 2009 Las Vegas Nov 5-8

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Cardiovascular Research Foundation 2009. Fifth Annual International Conference on Cell Therapy of Cardiovascular Diseases 2009. New York, Faculty.

Safety and Efficacy of Autologous Bone Marrow Mononuclear Cell (ABMMC) Transplantation in Advanced Parkinson Disease (PD). 1 Year Follow Up Fakultni Nemocnici Ostrava Prague 2009

ISCT 2008: International Society for Cellular Therapy. Annual Meeting. Miami Oral Presentation: "Safety and Efficacy of Autologous Bone Marrow Mononuclear Cell transplantation in Parkinson Disease. The first Clinical Experience by Endovascular Therapy"

CRT 2008: Cardiovascular Revascularization Therapies. 14 Concurrent Cardiovascular Meetings. Washington. "Best Abstracts" for CRT 2008: "Heart Failure Improvement By Minimally Invasive Delivery Of Autologous Bone Marrow Mononuclear Cells (ABMMC) Transplantation. Long Term Follow-up"

Cardiovascular Research Foundation 2008. Fourth Annual International Conference on Cell Therapy of Cardiovascular disease 2008. New York, Faculty.

SOCIME 2007: Society of Cardiology Interventionists of Mexico, Annual Meeting 2007. Port Vallarta, Faculty.

TCT 2007: Transcatheter Cardiovascular Therapeutics 2007. Washington. Oral presentation: "Heart Failure Improvement after Autologous Bone Marrow Mononuclear Cells Transplantation."

SOLACI 2007: the XIIIth Congress of the Latin-American Society of Cardiology Interventionists. Buenos Aires. "Best Abstracts " Oral Presentation: " Heart Failure Improvement after Autologous Bone Marrow Mononuclear Cells Transplantation "

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ISCT 2007: International Society for Cellular Therapy. Annual Meeting. Sidney " Autologous bone marrow mononuclear cell (ABMMC) transplantation in type 1 and type 2 insulin-dependent diabetes mellitus patients. International Society of Cellular Therapy Meeting; 2007 June 24-27; Sydney.

Cardiovascular Research Foundation 2007. Third Annual International Conference on Cell Therapy of Cardiovascular Diseases 2007. New York, Faculty.

SOLACI 2006: the XIIIth Congress of the Latin-American Society of Interventional Cardiology Interventionists. Oral presentation: "Refractory Angina Treatment by Percutaneous Retrograde Sinus Technique Transplantation of Unselected Autologous Mononuclear Bone Marrow Cells One year Follow-Up."

ISCT 2006: International Society for Cellular Therapy meeting, Berlin 2006 "Refractory Angina (RA) Treatment by Percutaneous Retrograde Sinus Technique (PRST) Transplantation of Unselected Autologous Mononuclear Bone Marrow Cells (ABMMC). Report of TECELCOR-PERU"

XII Solaci XXVIII Brazilian Society of Interventional Cardiology. Refractory angina treatment by percutaneuos retrograde sinus technique transplantation of unselected autologuos bone marrow mononuclear cells: report of terapia celular coronaria. 2006 Porto Alegre.