

CURRICULUM VITAE

Name and Surname: Mauro Lo Rito

Date of birth: 1st July, 1980

Place of birth: Dolo (Venice; Italy)

Nationality: Italian



Education and work experience

2006: Graduated as Medical Doctor at Faculty of Medicine of Padova University

2006: Italian Medical Licence n° 06412 of Albo dell'Ordine Provinciale dei Medici Chirurghi e degli Odontoiatri di Venezia.

2011: Specialist in Cardiovascular Surgery Diploma cum laude with thesis of Specialty.

Chief Resident on Pediatric Cardiac Surgery at Padova University (2008-2009) under supervision of Prof. Giovanni Stellin.

09/2009 – 12/2010: Elective in Pediatric Cardiac Surgery with Dr. Aldo R. Castaneda in Guatemala (UNICARP Hospital).

2011 - 2011: Junior Consultant in Pediatric and Congenital Cardiac Surgery at the Pediatric Cardiac Surgery Unit of Padova University directed by Prof. Giovanni Stellin.

2nd December 2011: Certificate of Full Registration as a Medical Practitioner with Specialist Registration (Cardio-thoracic surgery) at the General Medical Council of United Kingdom. (GMC reference number: 7203600)

01/2012 – 06/2013: Clinical Fellowship in Pediatric Cardiac Surgery at Birmingham Children Hospital (United Kingdom) under supervision of Mr. William Brawn and Mr. David Barron.

07/2013 - 06/2014: Clinical Fellowship in Pediatric Cardiac Surgery at The Hospital for the Sick Children of Toronto (Canada). Appointed as *Chief Fellow in Pediatric Cardiac Surgery* for the entire duration of the fellowship.

07/2014 - 06/2015: Research Fellowship in Pediatric Cardiac Surgery at The Hospital for the Sick Children of Toronto (Canada). I've worked on four projects to: a) experimental animal model (swine and mouse) of pulmonary vein stenosis and efficacy validation of medical treatment; b) development of surgical part of multidisciplinary team for development of heart valve biomaterial construct (TECHS group) c) swine model of minimally invasive delivery of cell populated bio-scaffold on epicardial surface for myocardium restoration in collaboration with Prof. Milica Radisic (University of Toronto), d) Post cardiac surgery chylothorax clotting composition and response to therapy.

09/2015 up to date: Consultant in Congenital Cardiac Surgery and Research Associate at IRCCS Policlinico San Donato (Italy).

From 2019 up to date: Deputy Statistical Editor for the Journal of Thoracic and Cardiovascular Surgery

Awarded Grant

A) *Project Title:* "New patient-specific functional assessment of the anomalous aortic origin of coronary arteries: stratifying the risk for myocardial ischemia and sudden death."

Granting Agency: Italian Ministry of Health

Funding Call: Ricerca Finalizzata 2019

Research type: Change Promoting

Project Type: Young Researcher (under 40 years)

Clinical Interest and area of expertise:

- Diagnosis and treatment of anomalous aortic origin of coronary arteries
- Minimally invasive surgery in congenital heart disease
- Fontan circulation, long-term outcomes and lymphatic disorder
- Adult with congenital heart disease: pulmonary valve replacement, tricuspid valve surgery, congenitally corrected transposition of the great arteries
- Neonatal Cardiac Surgery

- Continuous clinical outcome assessment to improve quality and performance in congenital cardiac surgery

Current Research Project:

- (AAOCA) pathophysiological mechanism, surgical treatment, outcome and mathematical modelling
- Treatment and outcomes of Transposition of the Great Arteries
- Heart failure in adult congenital heart disease patients and heart transplant.
- Surgical treatment of adult congenital heart disease in particular pulmonary valve and tricuspid valve repair/replacement
- Risk score for estimation of operative risk for ACHD

Published Articles:

- 1) Antibiotic sandwich patch for ventricular septal defect complicated by endocarditis.
Lo Rito M, Leon-Wyss J, Veras O, Vides I, Najera C, Castañeda AR. *Ann Thorac Surg.* 2011 Jul;92(1):366-8.
- 2) Persistent institutional difficulties in surgery for transposition of the great arteries in Guatemala: analysis with the aristotle basic and comprehensive scores.
Leon-Wyss J, Lo Rito M, Barnoya J, Castañeda AR. *World J Pediatr Congenit Heart Surg.* 2011 Jul 1;2(3):346-50.
- 3) Extracorporeal membrane oxygenation: The simplified weaning bridge.
Vida VL, Lo Rito M, Padalino MA, Stellin G. *J Thorac Cardiovasc Surg.* 2012 Apr;143(4):e27-8
- 4) The role of cardiac surgery in adult patients with congenital heart disease.
Padalino MA, Vida VL, Lo Rito M, Daliento L, Stellin G. *J Cardiovasc Med (Hagerstown).* 2012 May 17
- 5) Pulmonary artery branch stenosis in patients with congenital heart disease.
Vida VL, Rito ML, Zucchetta F, Biffanti R, Padalino MA, Milanese O, Stellin G. *J Card Surg.* 2013 Jul;28(4):439-45.
- 6) Early double switch with Lecompte maneuver for life-threatening airway obstruction.
Lo Rito M, Kudumula V, Desai T, Jones TJ, Barron DJ, Brawn WJ. *Ann Thorac Surg.* 2013 Aug; 96(2):695-7.
- 7) Comparison of the Ross/Ross-Konno aortic root in children before and after the age of 18 months.
Lo Rito M, Davies B, Brawn WJ, Jones TJ, Khan N, Stickley J, Barron DJ. *Eur J Cardiothorac Surg.* 2014 Sep;46(3):450-7

- 8) Magnetic Resonance imaging as a decision-making tool in congenital heart disease surgery. Yoo S.J, Lo Rito M, Seed M, Grosse-Wortmann L. *Operative Techniques in Thoracic and Cardiovascular Surgery* 2014,19(2):152-163
- 9) Long-term fate of the aortic valve after an arterial switch operation. Lo Rito M, Fittipaldi M, Haththotuwa R, Jones TJ, Khan N, Clift P, Brawn WJ, Barron DJ. *J Thorac Cardiovasc Surg.* 2015 Apr;149(4):1089-94.
- 10) Successful pulmonary embolectomy of a saddle pulmonary thromboembolism in a preterm neonate. Kalaniti K, Lo Rito M, Hickey EJ, Sivarajan VB. *Pediatrics.* 2015 May;135(5):e1317-20.
- 11) Repair Type Influences Mode of Pulmonary Vein Stenosis in Total Anomalous Pulmonary Venous Drainage. Lo Rito M, Gazzaz T, Wilder T, Saedi A, Chetan D, Van Arsdell GS, Caldarone CA, Yoo SJ, Honjo O. *Ann Thorac Surg.* 2015 Aug;100(2):654-62.
- 12) Chapter 115: Surgical consideration in pulmonary vein anomalies. Lo Rito M, Honjo O, Caldarone CA. *Sabiston and Spencer Surgery of the Chest*, 9th ed.
- 13) Pulmonary vein stenosis: Severity and location predict survival after surgical repair. Lo Rito M, Gazzaz T, Wilder TJ, Vanderlaan RD, Van Arsdell GS, Honjo O, Yoo SJ, Caldarone CA. *J Thorac Cardiovasc Surg.* 2016 Mar;151 (3):657-66.e1-2. doi: 10.1016/j.jtcvs.2015.08.121.
- 14) Impacts of early cardiac catheterization for children with congenital heart disease supported by extracorporeal membrane oxygenation. Kato A, Lo Rito M, Lee KJ, Haller C, Guerguerian AM, Sivarajan VB, Honjo O. *Catheter Cardiovasc Interv.* 2016 Jul 14. doi: 10.1002/ccd.26632.
- 15) Proliferation and Endothelial to Mesenchymal Transition Contribute to Progressive Lesions in a Surgical Model of Pulmonary Vein Stenosis. Vanderlaan, R.D., Fu, Y.Y., Zhu, J., Montgomery, R., Ide, H., Lo Rito, M., Maynes, J., Coles, J. and Caldarone, C.A., 2016. *Circulation.* 2016 Nov 11;134(suppl_1)A: 18643-A18643.
- 16) Surgical rescue after transcatheter interventional procedures in congenital heart disease patients: an existing problem. Varrica A, Lo Rito M, Generali T, Satriano A, D'Oria V, Conforti E, Pluchinotta F, Chessa M, Butera G, Frigiola A, Carminati M, Giamberti A. *EuroIntervention.* 2017 Feb 20;12(14):1724-1729. doi: 10.4244/EIJ-D-16-00031.
- 17) Acquired coronary artery disease in adult patients with congenital heart disease: a true or a false problem? Giamberti A, Lo Rito M, Conforti E, Varrica A, Carminati M, Frigiola A, Menicanti L, Chessa M. *J Cardiovasc Med (Hagerstown).* 2017 Aug;18(8):605-609. doi: 10.2459/JCM.0000000000000495.
- 18) Late complications of Fontan operation. Frigiola A, Lo Rito M. *G Ital Cardiol (Rome).* 2017 Sep;18(9):625-630. doi: 10.1714/2741.27945.

- 19) Flexible shape-memory scaffold for minimally invasive delivery of functional tissues. Montgomery M, Ahadian S, Davenport Huyer L, Lo Rito M, Civitarese RA, Vanderlaan RD, Wu J, Reis LA, Momen A, Akbari S, Pahnke A, Li RK, Caldarone CA, Radisic M. *Nat Mater.* 2017 Oct;16(10):1038-1046. doi: 10.1038/nmat4956.
- 20) The natural history and surgical outcome of patients with scimitar syndrome: a multi-centre European study. Vida VL, Guariento A, Milanesi O, Gregori D, Stellin G; Scimitar Syndrome Study Group. *Eur Heart J.* 2018 Mar 21;39(12):1002-1011. doi: 10.1093/eurheartj/ehx526.
- 21) Chylothorax and pleural effusion in contemporary extracardiac fenestrated fontan completion. Lo Rito M, Al-Radi OO, Saedi A, Kotani Y, Ben Sivarajan V, Russell JL, Caldarone CA, Van Arsdell GS, Honjo O. *J Thorac Cardiovasc Surg.* 2018 May;155(5):2069-2077.
- 22) Aortic expansion induces lumen narrowing in anomalous coronary arteries: a parametric structural finite element analysis. Formato GM, Lo Rito M, Auricchio F, Frigiola A, Conti M. *J Biomech Eng.* 2018 Jul 23. doi: 10.1115/1.4040941.
- 23) The Challenging Pathway Toward Heart Transplant Listing for Adult Congenital Heart Disease Patients. Lo Rito M, Poretti G, Varrica A, Negura D, Micheletti A, Chessa M, Giamberti A. *Artif Organs.* 2018 Sep;42(9):911-917. doi: 10.1111/aor.13166.
- 24) Surgical ablation of ventricular tachycardia in patients with repaired tetralogy of Fallot. Caldaroni F, Lo Rito M, Chessa M, Varrica A, Micheletti A, Pappone C, Giamberti A. *Eur J Cardiothorac Surg.* 2019 May 1;55(5):845-850. doi: 10.1093/ejcts/ezy407.
- 25) Anomalous aortic origin of coronary arteries: Early results on clinical management from an international multicenter study. Padalino MA, Franchetti N, Sarris GE, Hazekamp M, Carrel T, Frigiola A, Horer J, Roussin R, Cleuziou J, Meyns B, Fragata J, Telles H, Polimenakos AC, Francois K, Veshti A, Salminen J, Rocafort AG, Nosal M, Vedovelli L, Protopapas E, Tumbarello R, Merola A, Pegoraro C, Motta R, Boccuzzo G, Sojak V, Lo Rito M, Caldaroni F, Corrado D, Basso C, Stellin G. *Int J Cardiol.* 2019 Sep 15;291:189-193. doi: 10.1016/j.ijcard.2019.02.007.
- 26) Surgery for anomalous aortic origin of coronary arteries: a multicentre study from the European Congenital Heart Surgeons Association. Padalino MA, Franchetti N, Hazekamp M, Sojak V, Carrel T, Frigiola A, Lo Rito M, Horer J, Roussin R, Cleuziou J, Meyns B, Fragata J, Telles H, Polimenakos AC, Francois K, Veshti A, Salminen J, Rocafort AG, Nosal M, Vedovelli L, Guariento A, Vida VL, Sarris GE, Boccuzzo G, Stellin G. *Eur J Cardiothorac Surg.* 2019 Oct 1;56(4):696-703.
- 27) Results for tricuspid valve surgery in adults with congenital heart disease other than Ebstein's anomaly. Lo Rito M, Grandinetti M, Muzio G, Varrica A, Frigiola A, Micheletti A, Chessa M, Giamberti A. *Eur J Cardiothorac Surg.* 2019 Oct 1;56(4):706-713. doi: 10.1093/ejcts/ezz093.
- 28) Surgical Rescue After Failed Percutaneous Closure of an Aorto-Atrial Tunnel.

- Caldaroni F, Lo Rito M, Saracino A, Varrica A, Giugno L, Giamberti A, Frigiola A. *World J Pediatr Congenit Heart Surg.* 2019 Apr 21;21:2150135118802802. doi: 10.1177/2150135118802802.
- 29) Commentary: Are microRNAs the new wave of biomarkers in congenital heart surgery?
Lo Rito M. *J Thorac Cardiovasc Surg.* 2020 Apr;159(4):1543. doi: 10.1016/j.jtcvs.2019.04.058. Epub 2019 Apr 30.
- 30) Survival Improvement in Tetralogy of Fallot With Absent Pulmonary Valve: A Nouvelle Cuisine Message.
D'Oria V, Lo Rito M. *Semin Thorac Cardiovasc Surg.* 2019 Winter;31(4):850-851. doi: 10.1053/j.semtcvs.2019.07.001.
- 31) Commentary: "Where the telescope ends, the microscope begins. Which of the two has the grander view?"-What we should be using to look at vasoplegia?
Lo Rito M. *J Thorac Cardiovasc Surg.* 2019 Jun;157(6):2441
- 32) Outcomes and quality of life after Ross reintervention: would you make the same choice again?
Varrica A, Caldaroni F, Saitto G, Satriano A, Lo Rito M, Chiarello C, Ranucci M, Frigiola A, Giamberti A. *Ann Thorac Surg.* 2019 Nov 23. pii: S0003-4975(19)31735-7. doi: 10.1016/j.athoracsur.2019.10.007.
- 33) Surgical Management of Aorto-Ventricular Tunnel. A Multicenter Study.
Protopapas EM, Anderson RH, Backer CL, Fragata J, Hakim N, Vida VL, Sarris GE; European Congenital Heart Surgeons Association-World Society for Pediatric and Congenital Heart Surgery (ECHSA-WSPCHS) Study Group, Barron DJ, Berggren H, Hazekamp MG, Ilyin V, Kornoukhov OJ, Kostolny M, Lazarov S, Lo Rito M, Monge MC, Mykychak Y, Nosal M, Prêtre R, Polimenakos AC, Sojak V, Stellin G, Veshti A, Yemets I. *Semin Thorac Cardiovasc Surg.* 2020 Feb 10. pii: S1043-0679(20)30019-8. doi: 10.1053/j.semtcvs.2020.01.011.
- 34) Commentary: Arterial Switch Operation When Perfection Is Not the Finish Line But the Beginning of the Journey.
Dozio A, Lo Rito M. *Semin Thorac Cardiovasc Surg.* 2020 Feb 24. pii: S1043-0679(20)30035-6. doi: 10.1053/j.semtcvs.2020.02.020.
- 35) Commentary: The dam, the river, and the riverbank-Should we look at pulmonary vein obstruction from a different perspective?
Lo Rito M. *J Thorac Cardiovasc Surg.* 2020 Feb 19. pii: S0022-5223(20)30451-7. doi: 10.1016/j.jtcvs.2020.02.045.
- 36) Anomalous aortic origin of coronary artery biomechanical modeling: Toward clinical application.
Lo Rito M, Romarowski RM, Rosato A, Pica S, Secchi F, Giamberti A, Auricchio F, Frigiola A, Conti M. *J Thorac Cardiovasc Surg.* 2020 Aug 24:S0022-5223(20)32430-2. doi: 10.1016/j.jtcvs.2020.06.150.
- 37) A case report of a coronary artery fistula to coronary sinus with giant aneurysm: risk does not end with repair. Poretti G, Lo Rito M, Varrica A, Frigiola A. *Eur Heart J Case Rep.* 2020 Oct 27;4(6):1-6. doi: 10.1093/ehjcr/ytaa297.

- 38) Early Impact of the COVID-19 Pandemic on Congenital Heart Surgery Programs Across the World: Assessment by a Global Multi-Societal Consortium. Protopapas EM, Lo Rito M, Vida VL, Sarris GE, Tchervenkov CI, Maruszewski BJ, Tobota Z, Zheleva B, Zhang H, Jacobs JP, Dearani JA, Stephens EH, Tweddell JS, Sandoval NF, Bacha EA, Austin EH, Sakamoto K, Talwar S, Kurosawa H, Halees ZYA, Jatene MB, Iyer KS, Lee C, Sharma R, Hirata Y, Edwin F, Cervantes JL, O'Brien J, St Louis J, Kirklin JK; COVID-19 International Congenital Heart Surgery Taskforce. *World J Pediatr Congenit Heart Surg.* 2020 Nov;11(6):689-696. doi: 10.1177/2150135120949462.
- 39) Primary Arterial Switch Operation for Late Presentation of Transposition of the Great Arteries With Intact Ventricular Septum. Lo Rito M, Raso I, Saracino A, Basile DP, Varrica A, Reali M, Carminati M, Frigiola A, Giamberti A. *Semin Thorac Cardiovasc Surg.* 2020 Nov 26:S1043-0679(20)30425-1. doi: 10.1053/j.semtcvs.2020.11.030.
- 40) Commentary: "Murder on the Orient Express of pandemic: COVID was found guilty, but was it the murderer?". Poretti G, Lo Rito M. *J Thorac Cardiovasc Surg.* 2021 Feb;161(2):e104-e105. doi: 10.1016/j.jtcvs.2020.06.050.

Scientific Society membership:

EACTS: European Association for Cardio-Thoracic Surgery

ECHSA: European Congenital Heart Surgeons Association

SICCH: Società Italiana di Chirurgia Cardiaca – Member of the Congenital Surgery Directorate

ESC: European Society of Cardiology – Member of the Working Group on Grown-up Congenital Heart Disease

Scientific and professional social media

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<http://www.scopus.com/inward/authorDetails.url?authorID=41961270500&partnerID=MN8TOAS>

Humanitarian activities

November 2008, November 2011, November 2012: Pediatric Cardiac Surgery humanitarian mission in Asmara (Eritrea) with Prof. G.Stellin.

2008-2009: In charge of data entry and management for the European Pediatric Cardiac Surgery database (Eacts) of Padova Pediatric Cardiac Surgery Unit.

2016 and 2017: Humanitarian Mission in Camerun at the Shisong Cardiac Center.

Spoken languages

Italian, English (high level spoken and written –Toefl test 104/120), Spanish (spoken and written)