

THAIS RUSSOMANO MD PhD

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CURRENT POSITIONS HELD

- (1) Founder/Coordinator of Microgravity Centre, PUCRS, Brazil
- (2) Telemedicine & eHealth activities Coordinator, PUCRS, Brazil
- (3) Full Professor of the School of Medicine, PUCRS, Brazil.
- (4) Professor, Master's Degree in Electrical Engineering/Biomedical Engineering, PUCRS, Brazil
- (5) Senior Lecturer, CHAPS, Faculty of Life Sciences & Medicine, King's College London
- (6) Senior Advisor, HuSCO, Human Spaceflight Capitalization Office, London, UK
- (7) Co-Founder, Director & Chief Medical Officer, U.S. based, International Space Medicine Consortium Inc.
- (8) Guest lecturer, Alto University Finland, Space and Design
- (9) Guest lecturer, Deggendorf Institute of Technology, MSc in Medical Informatics
- (10) Member of the iB Hubs Global Mentor Community
- (11) Brazilian representative for the ISO/TC 20/SC 14/WG 6, Space systems and operations (Manned space flight)
- (12) Member of the Mars One Mission Advisory Board

SUMMARY

- 25+ years experience in Aerospace Medicine, Human Physiology, Biomedical Engineering, Telemedicine & eHealth
- Special interest & active participation in research/committees into Manned Space Flight and Space Tourism
- Development of Microgravity/Hypogravity & Hypergravity simulation research projects
- Development of an international MicroG network of Space focused research teams
- Educational Space lectures for the Brazilian Space Agency, Universities, Schools and the public
- eHealth & Telemedicine research & development, project coordination including Amazon Indian missions
- Biomedical research & development, project coordination, management & liaison
- Peer reviewer for 5 scientific journals in the areas of Telemedicine and Aerospace sciences
- Invited participant, Rockefeller Foundation sponsored National eHealth Policies conference, Bellagio 2008
- Co-founder/Co-Coordinator of the Student Committee of the International Society for Telemedicine & eHealth
- Multidisciplinary teaching at both undergraduate & postgraduate level
- Extensive supervision of MSc thesis & BSc final projects at PUCRS & King's College London
- Coordinator of international student exchanges
- Conceptual development of grant proposals
- Human study protocols
- Preparation of manuscripts & technical reports, data analysis and presentation
- Participation in 200+ scientific events in 30+ countries with 300+ scientific papers presented
- Numerous publications in peer reviewed journals and Chapters in Books
- Publication of 6 books in the areas of Astronomy, Space Life Sciences, & Aerospace Biomedical Engineering
- Holder of 7 patents: Products and processes related to Space Life Sciences and Aerospace Biomedical Engineering

Research areas include: telemedicine and eHealth projects; microgravity, hypogravity and hypergravity simulations; parabolic flight campaigns with the European Space Agency; hyperbaric and hypobaric chamber studies; tests in human centrifuges, Barany's chair, flight simulators, lower body positive pressure and negative pressure boxes, among others.

EDUCATIONAL BACKGROUND & MEDICAL PRACTICE EXPERIENCE

- 2006 - 2007 Post-Doctoral in Space Life Science, King's College London, England, UK
- 1994 - 1998 PhD in Respiratory Space Physiology, King's College London, England, UK
- 1995 Blood Sampling and Analysis Course, Occupational and Environmental Department, School of Medicine, University of Aberdeen, Scotland, UK
- 1992 NASA Flight Surgeon Training Course, Lyndon B. Johnson Space Centre, Houston, Texas, USA
- 1991 Ground School, Wright State University, Dayton, Ohio, USA and approval in the Federal Aviation Administration Exam for Private Pilots (Score 76/100)
- 1991 - 1995 MD in Emergency Rooms, Intensive Care Units and Ambulance Services, in the Porto Alegre region
- 1989 - 1991 Master's Degree Program in Aerospace Medicine (GPA = 3.94/4.0), Wright State University, Ohio, USA
- 1985 - 1989 Internal Medicine Residency Program, Clinical Hospital of Porto Alegre, RS, Brazil. Chief Resident (1988) and Senior Resident (1989) in Internal Medicine
- 1985 Epidemiology Course - Summer Course, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, MD, U.S.A
- 1980 - 1985 School of Medicine of the Federal University of Pelotas, RS, Brazil

RESEARCH/TEACHING & EMPLOYMENT POSITIONS

- 2017 - Guest Lecturer at Deggendorf Institute of Technology, Germany, delivering eHealth modules
- 2016 - Senior Advisor, HuSCO, Human Spaceflight Capitalization Office, London, UK
- 2015 - Co-Founder, Corporate Director & Chief Medical Officer, International Space Medicine Consortium Inc. (www.ISMCInc.com)
- 2013 - Guest Lecturer at Alto University, Finland delivering Space & Design modules
- 2009 - 2009 Consultant - Wyle Laboratories GmbH, Cologne, Germany - Earlobe Arterialized Blood Collector Study
- 2001 - Supervisor - MSc Dissertations - Biomedical Engineering Master's Degree Program, School of Engineering, PUCRS, Porto Alegre, RS, Brazil
- 2009 - Visiting Senior Lecturer, CHAPS, Faculty of Life Sciences & Medicine, King's College, London
- 2000 - 2009 Visiting Research Fellow - Department of Aerospace Medicine and Human Applied Physiology, King's College London
- 1999 - Coordinator of the Microgravity Centre, PUCRS, Porto Alegre, RS, Brazil
- 1997 - Guest Scientist - Institute of Aerospace Medicine, German Space Agency – DLR, Cologne, Germany
- 1998 - Professor - Biomedical Engineering Master's Degree Program – School of Electrical Engineering, PUCRS, Porto Alegre, RS, Brazil
- 1998 - Professor - Institute of Aeronautical Sciences, PUCRS, Porto Alegre, RS, Brazil
- 1998 - Professor - Department of Internal Medicine, School of Medicine, PUCRS, Porto Alegre, RS, Brazil
- 1993 - 1998 Assistant Professor - Department of Internal Medicine, School of Medicine, PUCRS, Porto Alegre, RS, Brazil
- 1990 - 1993 Associate Researcher - Institute of Cardiology of Rio Grande do Sul, Porto Alegre, RS, Brazil

RESEARCH WORK – DISSERTATION AND THESIS

- 1998 "The Effect of 6 degree Head-Down Tilt With and Without Hypoxia and Light Exercise on Lung Function", King's College London, England, UK (PhD Thesis).
- 1995 "Cardiovascular Responses to 6 h of 6 degree Head-Down Tilt", King's College London, England, UK (MPhil/PhD Program – Dissertation)
- 1991 "Gender Differences in Subjective Self-evaluation of Cognitive Performance During Sleep Deprivation", Wright University, Dayton, Ohio, USA (Master Degree Thesis)
- 1986 "Primary Attention in Mental Health in Disasters", Universidad Haveriana de Bogota and Johns Hopkins University, Armero, Colombia

EDUCATIONAL WORK IN SPACE SCIENCE

- 2011 - Contributor to the Brazilian Space Agency educational program for teachers - Escola do Espaço
- 1992 - 1994 "The ABC of Living in Space" - Educational Program in Space Sciences for Elementary/High School students and teachers (Lectures: 210 classes for Elementary School students, 72 for High School students and 20 for Elementary and High School teachers - Total of 10000 students and 550 teachers in 12 Brazilian cities)
- 1992 - 1994 "Space Life Sciences for the General Public" - (Lectures for the general public about Space Life Sciences (Total of 12 lectures in 5 Brazilian cities)
- 1992 "Aerospace Topics and News", Radio Program (30 minutes, Sundays morning) at Guaiba Radio Station, Porto Alegre, RS, Brazil
- 1992 - 1994 "Aerospace Medicine / Introduction and General Considerations" – (Lectures for medical doctors and commercial/military pilots - Total = 21 lectures)
- 1993 "First Brazilian Course in Aerospace Medicine", 12 h course at the School of Medicine, PUCRS University, Porto Alegre, RS, Brazil

THE MICROGRAVITY CENTRE/FENG-PUCRS

Established (1999) and currently Coordinator of the Microgravity Centre/FENG- PUCRS University, Porto Alegre, RS, Brazil - a pioneering reference centre in Central and Latin America for research in Space Life Sciences, Space Biomedical Engineering and Telemedicine & eHealth - www.pucrs.br/feng/microg

RESEARCH LABORATORIES OF THE MICROG CENTRE, PUCRS

Telemedicine & eHealth Lab
John Ernsting Aerospace Physiology Lab
Aerospace Biomedical Engineering Lab
Joan Vernikos Aerospace Pharmacy Lab
Aerospace Biomechanical Lab
Aerospace Physiotherapy Lab
Aviation Research Lab
Imaging Laboratory
UsaLab – Usability of health equipment

PRINCIPAL PROJECTS

Development and Validation of the first all-Brazilian Heart Defibrillator
Development and Validation of a Normobaric Hypoxia Chamber
Development and Validation of a Lower Body Positive Pressure Box
Development and Validation of a Human Powered Small Centrifuge
Development and Validation of a Tilt Table for Microgravity Simulation
Development and Validation of a Lower Body Negative Pressure Box
Development of an Earlobe Blood Collector for use in Microgravity
Evaluation of Cardiopulmonary Resuscitation Procedures in Microgravity (Parabolic Flight) and Hypogravity simulations
Development and Validation of a Clinostat 3D for the Study of Cells in Microgravity Simulation
Development and Validation of a Barany's Chair for the Study of the Vestibular System
Development of small centrifuge for the study of effects of hyperG on plants
Development of small hypobaric chamber to study the effects of pressure changes on medication
Development and validation of individual portable dark chambers
Tele-transmission of surgical procedures
Tele-education via international video conferences
Tele-medical assistance to remote areas including projects in: Tele-ECG, Tele-dermatology, Tele-pathology, Tele-odontology, Tele-toxicology, Tele-nutrition, Tele-pharmacy, Tele-physiotherapy, Tele-psychiatry and Tele-radiology
eHealth for primary care attention
eHealth for Indian tribes in the Amazon, Brazil

CO-OPERATIONS & EXCHANGES

Responsible for the establishment of official co-operations and student/professors exchange between the Microgravity Centre/PUCRS and the following Universities/Institutions/Organizations:

Centre of Human, Aerospace & Physiological Sciences, Kings College London, London/UK
Institute of Aerospace Medicine, German Space Agency, Cologne, Germany
Catholic University of Argentina, establishment of the MicroG Buenos Aires
Kingston University, London/UK
Department of Aerospace Medicine, Wright State University, Dayton, USA
Ames Research Centre, NASA, USA
Johnson Space Centre, NASA, USA
Aalto University, Finland
Greek Aerospace Medical Association, Thessalonik, Greece
Medical University of Warsaw, Poland
Medical University of Kaunas, Lithuania
New York University, USA
Embry-Riddle Aeronautical University, USA
University of Central Florida
Brazilian Society of Aerospace Medicine
Brazilian Space Agency

PRESENTATION/PUBLICATION & EDUCATIONAL WORKS

Scientific/educational works in 200+ scientific events in 30+ countries with 300+ scientific papers presented in:

Argentina, Austria, Bosnia & Herzogovina, Brazil, Canada, China, Croatia, Czech Republic, England, Finland, France, Germany, Greece, India, Israel, Italy, Lithuania, Luxembourg, Mexico, The Netherlands, Norway, Philippines, Poland, Portugal, Romania, Russia, Scotland, Singapore, Slovenia, South Africa, Spain, Switzerland, Thailand, and United States of America.

SELECTION OF RELEVANT PUBLICATIONS IN SCIENTIFIC JOURNALS

For a complete list of papers and research projects and meetings proceedings see: www.pucrs.br/feng/microg

ATTIAS, J; CARVIL P; WALDIE J; **RUSSOMANO, T**; EVETTS, S; GREEN, D A. The Gravity-Loading countermeasure Skinsuit (GLCS) and its effect upon aerobic exercise performance. *Acta Astronautica*, v. 132, p. 111-116, 2017.

SUNDARESAN, Alamelu; MEHTA, Satish K; SCHLEGEL, Todd T; **RUSSOMANO, Thais**; PIERSON, Duane L; MANN, Vivek; MANSOOR, Elvedina; OLAMIGOKE, Loretta; OKORO, Elvis. Placental Growth Factor Levels in Populations with High Versus Low Risk for Cardiovascular Disease and Stressful Physiological Environments such as Microgravity: A Pilot Study. *Microgravity, Science and Technology (Print)*, v. 29, p. 145-149, 2017.

BAERS, J H; VELHO, R; ASHCROFT, A; REHNBERG, L; BAPTISTA, R; **RUSSOMANO, T**. Is Weight a Pivotal Factor for the Performance of External Chest Compressions on Earth and in Space?. *Journal of Exercise Physiology Online*, v. 19, p. 1-15, 2016.

RUSSOMANO, THAIS; MAY, Francica; DALMARCO, Gustavo; BAPTISTA, R.; GAUGER, Peter; PETRAT, Guido; BECK, Luis. A Gender comparison of Cardiovascular Responses to Lower Body Negative Pressure Exposure. *American Journal of Medical and Biological Research*, v. 3, p. 95-101, 2015.

MARCELO, N; **RUSSOMANO, THAIS**; SANTOS, Marlise A Dos; POEHLS Leticia. A New Electronically Monitored Centrifuge for the Analysis of Plant Growth in Simulated Hypergravity. *American Journal of Medical and Biological Research*, v. 3, p. 88-94, 2015.

BAPTISTA, RAFAEL R; SUSIN, Thiago B; DIAS, M.K.P; CORREA Nicholas K; CARDOSO, Ricardo B; **RUSSOMANO, THAIS**. Muscle Activity during the Performance of CPR in Simulated Microgravity and Hypogravity. *American Journal of Medical and Biological Research*, v. 3, p. 82-87, 2015.

VAQUER, SERGI; MASIP, JORDI; GILI, GISELA; GOMÀ, GEMMA; OLIVA, JOAN CARLES; FRECHETTE, ALEXANDRE; EVETTS, SIMON; **RUSSOMANO, THAIS**; ARTIGAS, ANTONIO. Operational evaluation of the earlobe arterialized blood collector in critically ill patients. *Extreme Physiology and Medicine*, v. 4, p. 5-10, 2015

DAILEY CHRISTINE M; REINHOLTZ CHARLES; **RUSSOMANO THAIS**; SCHUETTE MICHAEL; BAPTISTA RAFAEL; CAMBRAIA RODRIGO. Resistance Exercise Machine within Lower Body Negative Pressure for Counteracting Effects of Microgravity. *Gravitational and Space Research* v. 2 (1) p. 94-107, Aug 2014.

REHNBERG, LUCAS; ASHCROFT, ALEXANDRA; BAERS, JUSTIN H.; CAMPOS, FABIO; CARDOSO, RICARDO B.; VELHO, ROCHELLE; GEHRKE, RODRIGO D.; DIAS, MARIANA K. P.; BAPTISTA, RAFAEL R.; **RUSSOMANO, THAIS**; Three Methods of Manual External Chest Compressions During Microgravity Simulation. *Aviation, Space, and Environmental Medicine*, v. 85, no. 7, p. 687-693, 2014.

VAQUER, SERGI; MASIP, JORDI; GILI, GISELA; GOMÀ, GEMMA; OLIVA, JOAN; FRECHETTE, ALEXANDRE; EVETTS, Simon; **RUSSOMANO, THAIS**; ARTIGAS, ANTONIO . Earlobe arterialized capillary blood gas analysis in the intensive care unit: a pilot study. *Annals of Intensive Care*, v. 4, p. 11-19, 2014.

KRYGIEL, REBECCA G.; WAYE, ABIGAIL B.; BAPTISTA, RAFAEL REIMANN; HEIDNER, GUSTAVO SANDRI; REHNBERG, LUCAS; **RUSSOMANO, THAIS**. The evaluation of upper body muscle activity during the performance of external chest compressions in simulated hypogravity. *Life Sciences in Space Research*, v. 1, p. 2-26, 2014.

RUSSOMANO, T; BAERS, J H; VELHO, R; CARDOSO, R B; ASHCROFT, A; GEHRKE, R; DIAS, M K P; BAPTISTA, R. A comparison between the 2010 and 2005 basic life support guidelines during simulated hypogravity and microgravity. *Extreme Physiology & Medicine* v. 1, p. 2-11, 2013.

PHILIP CARVIL; BAPTISTA, R.; **RUSSOMANO, T**. The human body in a microgravity environment: long term adaptations and countermeasures. *Aviation in Focus*, v. 4, p. 10-22, 2013.

BERNARDO de LARA; BAPTISTA, R.; **RUSSOMANO, T**. Performance maintenance strategies of athletes exposed to hypobaric environments: A literature review. *Aviation in Focus*, v. 4, p. 23-32, 2013.

WAYE, A; **RUSSOMANO, T**; KRYGIEL, R; SUSIN T B; BAPTISTA R; REHNBERG, L; HEIDNER G; CAMPOS, F; FALCÃO, F. Evaluation of upper body muscle activity during cardiopulmonary resuscitation performance in simulated microgravity. *Advances in Space Research*, p. 971-978, 2013.

Nelson Vinagre ; Dillmann A ; **RUSSOMANO, T** ; Niklas A . A Paralympian Alpine Skier in a Wind-Tunnel: A Case Study. In: Ian Brittain, editor. (Org.). *Disability sport: a vehicle for social change?*. 1ed. Champaign, Illinois, EUA: Common Ground Publishing LLC, v. 1, p. 181-194, 2013.

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SANTOS, M A; FACHEL F; MARCELO, N; ASTARITA L; COLLIN P; **RUSSOMANO, T**. Effect of Hypergravity Simulation on Carrot Germination and Growth. *Aviation, Space, and Environmental Medicine*, v. 83, p. 1011-1012, 2012.

KORDI, M; CARDOSO, Ricardo B; **RUSSOMANO, T**. A preliminary comparison between methods of performing external chest compressions during microgravity simulation.. *Aviation, Space, and Environmental Medicine*, v. 82, p. 1161-1163, 2011.

REHNBERG L; FALCAO, F. P.; CAMPOS F.; **RUSSOMANO, T.** Evaluation of a Novel Basic Life Support Method in Simulated Microgravity. *Aviation, Space, and Environmental Medicine*, v. 1, p. 104-110, 2011.

FALCAO, F., **RUSSOMANO, T.** Clinical Validation of the Earlobe Arterialized Blood Collection. *Aviation, Space, and Environmental Medicine*, v. 81: p 1053-1054, 2011.

RUSSOMANO, T., CARDOSO, R.B., LOPES, M.H.I., OLIVEIRA, H.W. HUTTNER, E., HUTTNER, E., KESSLER, M., CELIA., S. Telemedicine: Development and Validation of Tools for Assisting Dermatological Diseases. *Rev. UNIFA, Rio de Janeiro*, 23 (2010), 26, p15-22.

FALCAO,F., **RUSSOMANO, T.** Clinical Validation of the Earlobe Arterialized Blood Collection. *Aviation, Space, and Environmental Medicine*, v. 81: p 1053-1054, 2010.

SANTOS, M. A., BOSQUILLON, C., **RUSSOMANO, T.**, SUNDARESAN, A., FALCAO, F., MARRIOT, C., FORBES, B. Modeling the effects of microgravity on the permeability of air interface respiratory epithelial cell layers. *Advances in Space Research* 46 (2010) 712–718, 2010

RUSSOMANO, T., CARDOSO, Ricardo B, DUVAL, Vinicius, LOPES, Maria H I, Celia S, HUTTER, Eder, HUTTER, Edison. Space Technology Used to Improve Health Care in Remote Areas. *Aviation Space And Environmental Medicine.* , v.80, p.61 - 63, 2009.

MARTINELLI, Leonardo K, **RUSSOMANO, T.**, SANTOS, M. A., FALCÃO, Felipe P, BAUER, Moises, Amanda Machado, SUNDARESAN, Alamelu. The effect of microgravity immune cell viability and proliferation. *IEEE Engineering in Medicine and Biology Magazine.* , v.1, p.85 - 90, 2009.

SCOLARI, Diogo ; FAGUNDES, Rubem D. R. ; **RUSSOMANO, T.** ; ZWETSCH, Iuberi Carson . A Comparative Study between DD-HMM and RBF in Ventricular Tachycardia and Ventricular Fibrillation recognition. *Medical Engineering & Physics*, England, UK, v. 30, p. 213-217, 2008.

RUSSOMANO, T.; RIZZATTI, Mara R; AZEVEDO, Dario F G de; COELHO, Rodrigo P; SCOLARI, Diogo; SOUZA, Daniel de; PRÁVELEDA, Paula. Effects of Simulated Hypergravity on Biomedical Experiments. *IEEE Engineering in Medicine and Biology Magazine*, England, UK, v. May/Jun, p. 66-71, 2007.

RUSSOMANO, T ; EVETTS, Simon; CASTRO, João; SANTOS, Marlise A dos; GAVILLON, Jorge; AZEVEDO, Dario F G de; WHITTLE, John; COATS, Edward; ERNSTING, John. A Device for Sampling Arterialized Earlobe Blood in Austere Environments. *Aviation, Space, and Environmental Medicine*, Alexandria, Virginia, EUA, v. 77, n. 4, p. 453-455, 2006.

EVETTS, Simon ; EVETTS, Lisa ; **RUSSOMANO, T.** ; CASTRO, Joao; ERNSTING, John. Basic Life Support In Microgravity: Evaluation of a Novel Method During Parabolic Flight . *Aviation, Space, and Environmental Medicine*, Alexandria, VA, Estados Unidos, v. 76, n. 5, p. 506-510, 2005.

SIDES, Marian; VERNIKOS, Joan; CONVERTINO, Victor; STEPANEK, Jan; TRIPP, Lloyd; DRAEGER, Jorg; HARGENS, Alan; PAPADELI, Chrysoula; TRAON, Anne Pavy Le ; **RUSSOMANO, T.** ; WONG, Julielynn; BUCCELLO, Regina; LEE, Peter; NANGLAIA, Vishal; SAARY, Joan; DAY, Pam . The Bellagio Report: Cardiovascular Risks for Space Flight: Implications for the Future of Space Travel. *Aviation, Space, and Environmental Medicine*, USA, v. 76, n. 1, p. 877-895, 2005.

BOOKS PUBLISHED

RUSSOMANO, T; CASTRO, Joao de C. Fisiologia Aeroespacial - Conhecimentos Essenciais para Voar com Segurança. 1. ed. Porto Alegre: EdiPuc, 2012. v. 1. 186p.

RUSSOMANO, T; Traicao, ed. EditoraAGE & Edipucrs, 2010, 236 p.

RUSSOMANO, T; Vernikos, J. A Gravidade Esta Grande Escultora (*Gravity, This Great Sculptor*). Edipucrs, 2009. 338p.

ANTUNANO, M., Hobe, S., Gerzer, R., Russomano, T (International Academy of Astronautics) Medical Safety & Liability Issues for Short Duration Orbital Space Flight. 2009. 45p.

RUSSOMANO, T; Dalmarco, G; Falcao, Felipe P. Synthesis Lectures on Biomedical Engineering #18 - The Effects of Hypergravity and Microgravity on Biomedical Experiment (Paperback). 1. ed. Connecticut: Morgan & Claypool Publishers, 2008. v. 1. 70 p.

RUSSOMANO, T; Dalmarco, G; Falcao, Felipe P. 1st. Ed. Connecticut: Biomedical Engineering Book Series Editor for Morgan and Claypool Publishers, 2007. v. 1. 70 p. The Effects of Hypergravity and Microgravity on Biomedical Experiments – also as an e-book (online)

RUSSOMANO, T. Mosaico. 1. ed. Pelotas: Editora Jornal Diario Popular, 2002. v. 1. 238 p.

RUSSOMANO, T.; Bauermann, B.. O ABC da vida no espaço. (*The ABC of Life in Space*) 1. ed. Porto Alegre: Editora Alcance, 1992. v. 1. 82 p.

RUSSOMANO, T.; Chatkin, M. ; Chatkin, A. . Três Crianças Falam de Astronomia. (*Three Children Talk About Astronomy*) 1. ed. Rio de Janeiro: Editora Freitas Bastos S.A., 1976. v. 1. 43 p.

CHAPTERS in BOOKS

RUSSOMANO, T.. Da ideia ao mercado ? percepção dos inventores/pesquisadores da PUCRS - o Caso MicroG. In: ETT - Marli Elizabeth Ritter dos Santos. (Org.). Seminário ETT/PUCRS: um decênio de história na gestão de Propriedade Intelectual. 1ed.Porto Alegre, RS, Brasil: Pacartes, 2016, v. 1, p. 113-115.

RUSSOMANO, THAIS. Life Support Systems for Manned Mars Missions, Overview. In: Erik Seedhouse; D. Shaler. (Org.). Handbook of Life Support Systems for Spacecraft and Extraterrestrial Habitats. 1ed.NY, USA: Springer International Publishing, 2016, v., p. 1-12.

RUSSOMANO, THAIS. What medical skills will the crew need to survive and ultimately thrive on Mars? Improvisation and Exploration. In: Norbert Kraft, James R Kass, Raye Kass. (Org.). Mars One - Humanity's Next Great Adventure. 1ed.Dallas, Texas, EUA: BenBella Books Inc, 2016, v. 1, p. 23-36.

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RUSSOMANO, T. Development of a Walking Pattern Evaluation System for Hypogravity Simulation. In: Nilmini Wickramasinghe and Eliezer Geisler, editors. (Org.). Encyclopedia of Healthcare Information Systems. New York: Information Science Reference (an imprint of IGI Global), 2008, v. 1, p. 440-445.

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Evaluation of External Cardiac Massage Performance During Hypogravity Simulation. In: Nilmini Wickramasinghe and Eliezer Geisler, editors.. (Org.). Encyclopedia of Healthcare Information Systems. New York: Information Science Reference (an imprint of IGI Global), 2008, v. 2, p. 551-560.

RUSSOMANO, T. Center of Microgravity - Pioneering Center of Research and Teaching in Biomedicine & Aerospace Biomedical Engineering. In: Jorge Luis Nicolas Audy & Marília Costa Morosini. (Org.). Innovation and Interdisciplinarity in the University (Inovação e Interdisciplinaridade na Universidade). 1 ed. Porto Alegre RS: EdiPucrs, 2007, v. 1, p. 325-334.

RUSSOMANO, T. Centro de Microgravidade - Centro Pioneiro de Pesquisa e Estudo em Biomedicina & Engenharia Biomédica Aeroespacial. In: Jorge Luis Nicolas Audy & Marília Costa Morosini. (Org.). Inovação e Interdisciplinaridade na Universidade. 1 ed. Porto Alegre RS: EdiPucrs, 2007, v. 1, p. 335-344.

PATENTS

- (1) RUSSOMANO T., J. Dupont, MA dos Santos, BAmaro da Silveira Neto, FP Falcão - Processo de proteção de biodiesel e biodiesel obtido por tal processo (*Process for the protection of Biodiesel & Biodiesel obtained by the process*). Patent PROV020110058216 3rd June 2011 Co-ownership UFRGS
- (2) RUSSOMANO T and DFG Azevedo. Equipamento para incubação de peixes e outros animais e processo de cultivo de peixes e outros animais (*Equipment for incubation of fish and other animals and process of cultivation of fish and other animals*)
Patent 020080095366 8th July 2008; PI0802399-9 8th July 2008; PCT/BR2009/000201 8th July 2009; US Patent US13/003,061 7th Jan 2011; European Patent EP09793727.0 7th Jan 2011
- (3) RUSSOMANO T, FP Falcao, MA Santos, LV Astarita, CA Machado, P Collin and AA Vieira. Processo de cultivo de plantas sob condições de hipergravidade (*Procedure for culture of plants under conditions of hypergravity*) Patent PI 0705245-6 9th July 2007 Patent PCT/BR/2008000199 9th July 2008; European Patent EP08772762.4 8th Jan 2010; US Patent US12/668,208 8th Jan 2010
- (4) Santos MA and T RUSSOMANO. Câmara para a difusão de ingredientes ativos, e processo para cultivo de células em microgravidade. (*Chamber for the diffusion of active ingredients, and process for culture of cells in microgravity*) Patent PI0801375-6 13th May 2008 Co-ownership King's College London
- (5) RUSSOMANO T, RB Cardoso, V Nangalia, G Dalmarco, FP Facao and M Vian. Blood collector device and blood analysis process. Patent PCT/BR2007/000157 18th June 2007; Brazil PI0720946-0 10th July 2009; US Patent US12/665,433 18th Dec 2009; European Patent EP07719325.8 8th Jan 2010

- (6) RUSSOMANO T, JL Gavillon, M Vian, CL Schossler, CRV Dos Santos, DFG Azevedo and ELP Louzade. Coletor de sangue arterializado do lóbulo da orelha (*Blood collector device for arterialized blood from the earlobe*). Patent PI0203602-9 30th August 2002
- (7) RUSSOMANO T, EC Grigolo, DFG Azevedo, RP Coelho, JC Castro. Disposição construtiva em câmara escura individual e portátil (ceip). (*Development of individual portable dark chambers*) Patent MU8200234-7 31st January 2002

PROFESSIONAL ASSOCIATIONS/COMMITTEES – Past & Present

Co-founder/Co-coordinator Student Committee of the International Society for Telemedicine & eHealth
 Aerospace Medical Association, USA
 Asociacion Iberoamericana de Medicina Aeroespacial, Mexico.
 Brazilian Aerospace Society, Scientific Director, Brazil
 Honorary Member Slovenian Aerospace Medical Association, Slovenia
 IAA – International Academy of Astronautics, Space Life Sciences Committee
 International Academy of Aviation and Space Medicine, Europe
 Advisory Board of the Envihab, German Aerospace Centre
 International Space Committee ISO/TC 20/SC 14/WG 6 - Space systems - Man- Life activity support systems and equipment integration in space flight.
 Honorary member of the Philippine Academy of Aerospace Medicine & Biomedical Engineering

Former member of the IAA – Medical Guidelines for crew members - Committee
 Former member of the IAA - Study Group in Space Tourism
 Former member of the Educational and Training Committee of the Aerospace Medical Association, USA
 Former member of the Educational Committee of the International Astronautical Federation
 Former member of the International Astronautical Federation’s Committee on the Contribution of Space Related Research to Advances in the Field of Medicine

MEMBER OF INTERNATIONAL WORKING GROUPS

- 2013 International Academy of Astronautics (IAA), Commission 2 on Space Life Sciences
- 2013 International Academy of Astronautics (IAA), Space Life Sciences in the Exploration Era
- 2011 International Space Committee ISO/TC20/SC14/WG6, Space Systems – Man-Life Activity Support Systems and Equipment Integration in Space Flight
- 2011 International Academy of Astronautics (IAA), Medical Safety Guidelines for Space Crews Involved in Short-Duration Commercial Orbital Flight Operations
- 2010 Advisory Board of Envihab, German Aerospace Centre
- 2010 International Academy of Astronautics (IAA), Space Life Sciences Committee
- 2010 International Academy of Astronautics (IAA), Space Tourism Committee
- 2008 National eHealth Policies. Promoted by The World Health Organisation & The Rockefeller Foundation.

- 2008 Commission 2 - International Academy of Astronautics Study Group –eLearning in space life science
- 2006/2007 Medical Safety Guidelines for Passengers on Commercial Orbital Space Flights. Promoted by International Academy of Astronautics Study Group, Commission 2 – Life Sciences. 2006/2007
- 2005 Space Flight Issues in the 21st Century: Cardiovascular and Fluid Shift Issues. Bellagio, Italy. Promoted by The Rockefeller Foundation & The Mayo Clinic, USA

AWARDS IN AEROSPACE MEDICINE & TELEMEDICINE

- 2014 Supervisor of Rochelle Velho, gaining 2nd place in the European Resuscitation Council Young Investigator Award, Bilbao, Spain
- 2013 Award highlighting the MicroG success, given by UniTV, Brazil
- 2013 Med-e-Tel: Best Paper Presented - Co-author - Student Working Group - International Society for Telemedicine and eHealth
- 2012 Med-e-Tel: Supervisor of Winning Research - Validation of Physiological Data Transmission System - Raphael Ferreira et al., Student Working Group - International Society for Telemedicine and eHealth
- 2012 Trophy - Excellence in the education, practice and promotion of Aerospace Medicine in Latin America - Iberoamerican Association of Aerospace Medicine
- 2012 The Colt Foundation Prize - Supervisor of best research project (MSc dissertation completed by Justin Baers), The Colt Foundation UK
- 2012 Best free paper oral presentation (co-author), Resuscitation Council UK - Scientific Symposium
- 2012 Best paper oral presentation (co-author), University Of South Florida-Nano Florida 2012. The 5th Annual Nanoscience Technology Symposium
- 2012 Supervisor of 2nd place award winning student work - History of Medicine Congress - Daniela Domingues: História da Evolução da Telemedicina no Mundo, no Brasil e no Rio Grande do Sul, Associação Gaúcha de História da Medicina
- 2011 Co-author of 2 winning works awarded the trophy DESTAQUE 2011 - XII SALÃO DE INICIAÇÃO CIENTÍFICA, PUCRS
- 2010 Ibero-American Aerospace Medicine Association (AIMA) Personality of the Year
- 2008 UNITV 10th Anniversary award for contribution in Aerospace Medicine
- 2007 National Expression Award for achievements in area of Aerospace Medicine
- 2007 Ediouro, Ludenbergue Goes, “Brazilian Women in First Place”
- 2006 Medal 14Bis 100 Anniversary of Santos Dumont Flight
- 2006 1st Place – 2nd Werner von Siemens Prize for Technology Innovation
- 1998 Award from the Federal University of Pelotas
- 1994 Best article of the year: Imprensa Sindical of Sao Paulo Best article of the year
- 1992 Multiple awards from the Cultural Society of Pelotas, Aeronautical Hospital of Canoas, Military school of Porto Alegre, & the Municipal Chamber of Pelotas
- 1991 & 1993 Pioneer in Aerospace Sciences in Brazil: Associação de Diplomadas Universitárias

LANGUAGES

- Portuguese Fluent, native language
- Spanish Fluent in comprehension, speech, reading and writing
- English Fluent in comprehension, speech, reading and writing
- French Good comprehension, speak, read and write reasonably well

REFERENCES

Available upon request