

## CURRICULUM VITAE

### PERSONAL INFORMATIONS

Last name Lador  
Fist name Frédéric  
Sex Male  
DOB January 26<sup>th</sup> 1976.  
Nationality Suisse (Neuchâtel/NE)  
Marital status Married. 1 child (Louise, born January 31<sup>st</sup> 2013)  
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### EDUCATION

September 2000 Diplôme Fédéral de Médecin, Geneva Faculty of Medicine  
July 2009 2<sup>nd</sup> degree university Master. *Pulmonary Vascular diseases*, University of Bologna (Italy).  
September 2009 Examen FMH de spécialiste en pneumologie  
May 2011 Doctorat ès Sciences Médicales (MD-PhD), Faculté de Médecine de Genève.  
Thesis : « *Dynamique de la distribution d'oxygène chez l'humain* ».  
September 2014 Titre FMH de formation post-graduée en pneumologie.  
April 2015 Diplôme européen d'expert en médecine du sommeil (*European Sleep Research Society*).  
July 2015 Certificat *Good clinical Practice* (GCP).  
August 2015 Certificat of capacity in sleep medicine (SSSSC).  
November 2017 Privat Docent (PD, *Venia Legendi*)  
Thesis: « *Non-invasive hemodynamic evaluation in pulmonary hypertension* ».

### EMPLOYMENT HISTORY AND CURRENT POSITION

2000 – 2005 Doctorant, Département de Physiologie, Centre Médical Universitaire, Genève.  
2005 – 2007 Resident, Service de Médecine interne Générale, Geneva University Hospital (HUG).  
2007 – 2009 Resident, Service de Pneumologie, HUG.  
2009 – 2010 Senior clinical fellow, Service de Pneumologie, HUG.  
2010 – 2011 Fellow, RESPIRE postdoctoral program, *European Respiratory Society*, cofunded by the UE (7<sup>th</sup> framework program of European Union and Marie Curie Actions).  
2011 – 2015 Senior clinical fellow, Service de Pneumologie, HUG.  
December 2015 Staff physician (deputy head), Service de Pneumologie, HUG.

### INSTITUTIONAL RESPONSIBILITIES

September 2016 President of the Swiss Society for Pulmonary Hypertension (SSPH/SSHP/SGPH)  
September 2016 Responsible pulmonologist, HUG Sleep Laboratory  
September 2016 Responsible of the postgraduate formation in Pulmonology, HUG  
September 2015 Responsible of the Pulmonary Function Tests Laboratory, HUG  
October 2012 Responsible of the Pulmonary Hypertension Program, HUG

## APPROVED RESEARCH PROJECTS

CLHEO2, Cinétique de l'hémodynamique dans l'hypertension pulmonaire. Projet Recherche et Développement (PRD 9-2014-I) (principal investigator) ; Etude génétiques et des profils dysfibrinogénémiques dans l'hypertension pulmonaire post-embolique (CTEPH). (Co-investigator); Etude des interactions neurovégétatives cardio-pulmonaires chez les patients transplantés pulmonaires avant et après un programme d'entraînement physique. (principal investigator) Ref n° CER : 09-260

## SUPERVISION OF JUNIOR RESEARCHERS

2011 – 2013 Master « Etude de la dynamique de la réponse cardio-pulmonaire à l'exercice chez des patients atteints d'intolérance orthostatique chronique » (Dr CH Wassmer)  
2013 – 2015 Master « Adaptation du débit cardiaque à l'effort dans l'hypertension pulmonaire » (Dr S Bengueddache)  
Master « Modification de perfusion pulmonaire induite par la réduction endoscopique de volume » (Dr O Höhn)  
2016-2018 Master « Effet des traitements spécifiques sur l'adaptation à l'effort dans l'HTAP » (M. L Genecand)

## TEACHING ACTIVITIES

Since 2001 >1000 hours (pregraduate) mainly on respiratory physiology  
Since 2007 >200 hours (postgraduate)

## MEMBERSHIP IN PANELS AND SCIENTIFIC REVIEWING ACTIVITIES

Since 2013 Member of college experts of assembly « *Clinical physiology, sleep and pulmonary circulation* », *European Respiratory Society*  
Since 2013 Member of the evaluation committee RESPIRE (*European Respiratory Society*, co-funded by European Union and Marie Curie Actions)  
Since 2014 Member of the board of the Swiss Society for Pulmonary Hypertension (SSPH/SSHP/SGPH)  
Reviewing *Lancet Respiratory Medicine*, *Journal of Heart and Lung Transplantation*, *Pediatrics*, *European Respiratory Review*, *Heart*, *European Journal of Internal Medicine*, *Journal of Rheumatology*, *American Journal of Cardiology*, *International Journal of Cardiology*, *Respiration*, *Respiratory Care*, *Orphanet Journal of Rare Diseases*, *Cardiovascular Medicine*, *BioMed Research International*, *Progress in Respiratory Medicine*, *Journal of Clinical Monitoring and Computing*, *International Journal of Environmental Research and Public Health*

## MEMBERSHIP IN SOCIETIES

European Respiratory Society (ERS), European Sleep Research Society (ESRS), Fédération des Médecins Suisses (FMH), Société Suisse de Pneumologie (SSP), Swiss Society for Pulmonary Hypertension (SSPH/SSHP/SGPH), Swiss Society for Sleep Research, Sleep Medicine and Chronobiology (SSSSC), Marie Curie Alumni Association (MCAA)

## FELLOWSHIPS

Nov. 2010 – Nov. 2011 Fellow, RESPIRE postdoctoral program, *European Respiratory Society*, cofunded by the UE (7th framework program of European Union and Marie Curie Actions). MC 1630-2010; € 30'560, to Frédéric Lador.

## ORGANISATION OF CONFERENCES

Since 2012 Annual Pulmonary Hypertension Symposium of the Suisse Romande  
November 2017 Swiss Society for Pulmonary Hypertension workshop  
November 2018 International congress of the Swiss Society for Pulmonary Hypertension

## PRIZES AND AWARDS

October 2009                    4th international congress of the Swiss Society for Pulmonary Hypertension, Best Poster.  
March 2011                    PAH-France prize : « HTAP du sujet âgé »

## MAJOR SCIENTIFIC ACHIEVEMENTS

I started my career as an assistant fellow and became human physiologist (MD-PhD) in Professor Guido Ferretti's group in the Geneva University Medical Centre. During this time, I had the opportunity to deepen my knowledge of hemodynamics with a particular emphasis on the mechanisms regulating systemic oxygen delivery to tissues and the autonomous adaptation in metabolic transitions, postural changes and during acute hypoxia. I particularly analysed the role of arterial and mixed venous oxygen flows in the regulation the cardiovascular system by dynamic studies in metabolic and postural transitions in humans. I authored and co-authored several articles wherein cardiodynamic regulation was studied in healthy humans. Our group described for the first time the simultaneous beat-by-beat kinetics of oxygen uptake,  $\dot{Q}$  and oxygen delivery at the onset of exercise in humans.

Then, I pursued my career in Pulmonology at the Geneva University Hospital and was rapidly attracted by the problematic of pulmonary vascular diseases. In this line, I earned a 2<sup>nd</sup> degree Master in Pulmonary Vascular Disease at the Italian PH reference centre directed by Pr Nazzareno Galiè in the University of Bologna. In November 2010, I joined Pr Gérald Simonneau's team in the French PH Referral Centre for a 1-year postdoctoral fellowship supported by a grant from the European Respiratory Society (RESPIRE Programme – Co-funded by the European Commission Seventh Framework Programme – Marie Curie Actions). I pursued my research activity on pulmonary vascular diseases with a particular emphasis on exercise hemodynamics and validation of non-invasive technique for hemodynamic evaluation in PH. I authored and co-authored several articles on exercise hemodynamics in PH.

My first major scientific achievement in the last five years is certainly related to the opportunity I was offered to integrate fundamental physiological culture into the clinical challenge imposed by pulmonary vascular diseases; an approach that may be named clinical physiology. My second major scientific achievement is the invaluable chance I have to pursue fruitful international collaboration with scientists from different horizon, the aim being to participate to the growing of fundamental knowledge that will be translated into patient care.



Geneva, January 26<sup>th</sup> 2017

PUBLICATIONS (LAST 5 YEARS)

Updated list on <https://www.ncbi.nlm.nih.gov/pubmed/?term=lador+f>

1. Bringard A, Adami A, Fagoni N, Fontolliet T, **Lador F**, Moia C, Tam E, Ferretti G. Dynamics of the RR-interval versus blood pressure relationship at exercise onset in humans. *Eur J Appl Physiol.* 2017 Feb 25. IF: 2.33
2. **Lador F**, Bringard A, Bengueddache S, Ferretti G, Bendjelid K, Soccacal PM, Noble S, Beghetti M, Chemla D, Hervé P, Sitbon O. Kinetics of Cardiac Output at the onset of Exercise in Pre-Capillary Pulmonary Hypertension. *Biomed Res Int.* 2016; 2016: 6050193. IF: 2.13
3. **Lador F**, Hachulla AL, Hoehn O, Plojoux J, Ronot M, Montet X, Soccacal PM. Pulmonary perfusion assessed by Dual-Energy Computed-Tomography after Lung Volume Reduction by Coils. *Respiration.* 2016 ;92(6):404-413 IF: 2.65
4. Godinas L\*, **Lador F\***, Schatzberger R, Günther S, Segel M, Palti Y, Maisuls E, Sitbon O, Simonneau G. Novel use of transthoracic parametric Doppler for the non-invasive detection of pulmonary hypertension: a proof of concept study. *\*co-first authors.* *J Clin Monitor Comp.* 2016 Aug 19. [Epub ahead of print]IF: 1.82
5. Myers PO, **Lador F**, Bourchard J, Noble S, Licker M, Pache JC, Kalimanovaska-Ostic D, Djukic M, Kalangos A, Beghetti M. Unrestrictive aortopulmonary window: extreme presentation as non-Eisenmenger in a 30 year-old patient. *Circulation* 2016 May 10; 133(19):1907-10. IF: 14.43
6. Godinas L, Lau EM, Chemla D, **Lador F**, Savale L, Montani D, Sitbon O, Simonneau G, Humbert M, Herve P. Diagnostic accuracy and concordance of different criteria for exercise pulmonary hypertension. *Eur Resp J* 2016 Mar 30. IF: 8.33
7. Lau EM, Godinas L, Sitbon O, Montani D, Savale L, Jaïs X, **Lador F**, Gunther S, Celermajer DS, Simonneau G, Humbert M, Chemla D, Hervé P. Resting mean pulmonary artery pressure of 21-24 mmHg predicts impaired functional capacity and exercise pulmonary hypertension. *Eur Resp J.* 2016 Mar 10. IF: 8.33
8. Lücker LM, Hachulla AL, **Lador F**, Chizzolini C, Adler D. A 28-Year-Old Man Presenting With Incoercible Dry Cough and a History of Ulcerative Colitis. *Chest* 2016 May; 149(5):e141-5. IF: 7.48
9. Fresard I, Licker M, Adler D, Lovis A, Robert J, Karenovics W, Diaper J, Janssens JP, Triponez F, **Lador F**, Soccacal PM, Rochat T, Espinosa V, Bhatia C, Kayser B, Bridevaux PO. Pre-operative peak oxygen uptake in lung cancer patients with neo-adjuvant chemotherapy. *Resp Care* 2016 Aug;61(8):1059-66IF: 1.84
10. Perogamvros L, Pépin JL, Thorens G, Mégevand P, Claudel E, Espa F, Besson M, Cervena K, Janssens JP, **Lador F**. Baclofen associated onset of central sleep apnea in alcohol use disorder: a case report. *Respiration.* 2015; 90(6): 507-11. IF: 2.92
11. Hervé P, Lau E, Sitbon O, Savale L, Montani D, Godinas L, **Lador F**, Jais X, Parent F, Humbert M, Simonneau G, Chemla D. New Criteria for Diagnosis of Pulmonary Hypertension at Exercise. *Eur Resp J.* 2015 Sep; 46(3): 728-37. IF: 8.33
12. **Lador F**, Hervé P, Bringard A, Garcia G, Günther S, Savale L, Ferretti G, Soccacal PM, Chemla D, Humbert M, Simonneau G, Sitbon O. Non-invasive determination of cardiac output in precapillary pulmonary hypertension. *PLoS ONE.* 2015 July 30; 10(7):e0134221. IF: 3.23
13. Contal O, Pépin JL, Borel JC, Espa F, Perrig S, Lücker LM, Adler D, Janssens JP, **Lador F**. Underlying mechanisms for co-existing central and obstructive sleep apnea: Nocturnal PaCO<sub>2</sub> and poor sleep quality are key issues. *Respiration.* 2015; 89(5): 416-9. IF: 2.59
14. Montet X, Hachulla-Lemaire AL, Neroladaki A, **Lador F**, Rochat T, Botsikas D, Becker CD. Image quality of low mA CT pulmonary angiography reconstructed with model based iterative reconstruction versus standard CT pulmonary angiography reconstructed with filtered back projection: a equivalency trial. *Eur Radiol.* 2015 Jun; 25(6):1665-71. IF: 4.34
15. Günther S, Sztrymf B, Savale L, Montani D, Hervé P, **Lador F**, Jaïs X, Parent F, Simonneau G, Sitbon O, Humbert M, Chemla D. Relation between left ventricular ejection time and pulmonary hemodynamics in pulmonary hypertension. *Int J Cardiol.* 2015 Feb 27; 184:763-765. IF: 4.04
16. Ulrich S, Stricker H, Domenighetti G, Azzola A, Geiser T, Schwerzmann M, Weilenmann D, Schoch O, Fellrath JM, Rochat T, **Lador F**, Beghetti M, Nicod L, Aubert JD, Popov V, Speich R, Keusch S, Hasler E, Huber LC, Tamm M,

- Grendelmeier P, Mueller-Mottet S. Long-term data from the Swiss pulmonary hypertension registry. *Respiration* 2015; 89(2): 127-40. IF: 2.59
17. **Lador F**, Tam E, Adami A, Kenfack MA, Bringard A, Cautero M, Moia C, Morel DR, Capelli C, Ferretti G. Cardiac output, O<sub>2</sub> delivery and VO<sub>2</sub> kinetics during step exercise in acute normobaric hypoxia. *Respir Physiol Neurobiol.* 2013 Apr 1; 186(2): 206-13. IF: 2.28
18. Adir Y, Humbert M, Sitbon O, Wolf R, **Lador F**, Jaïs X, Simonneau G, Amir O. Out-of-proportion pulmonary hypertension and heart failure with preserved ejection fraction. *Respiration.* 2013;85(6):471-7. IF: 2.61

#### REVIEW ARTICLES

- Hachulla AL, **Lador F**, Soccac PM, Montet X, Beghetti M. Dual-energy CT imaging of pulmonary hypertension. 2016 Aug 6;146:w14328. IF: 2.09
- Myers PO, **Lador F**, Beghetti M. How to define operability in pulmonary hypertension secondary to congenital heart disease? *Interactive Cardiovascular and Thoracic Surgery*, 2016 Jun;22(6):859. IF: 1.15
- Berra G, Noble S, Soccac PM, Beghetti M, **Lador F**. Pulmonary hypertension in the elderly – a different disease? *Breathe*, 2016 Mar; 12(1):43-9.
- Boehlen F, Landis BN, Spahr L, Hachulla AL, Ranza E, Nospikel T, **Lador F**, Samii K, Noble A. Maladie de Rendu-Osler-Weber: importance d'une prise en charge multidisciplinaire. *Rev Med Suisse*, 2016 May 25;12(520):1056-8
- Beghetti M, **Lador F**. Pediatric Pulmonary Hypertension. *Front Pediatr*, 2015 3:105
- Smith C, Plojoux J, Lucker LM, Lador F, Janssens JP. New therapeutic approaches in 2015 in pulmonary medicine. *Rev Med Suisse*, 2016 Jan 13; 12 (500):80-2, 84-5
- Lador F**, Sekarski N, Beghetti M. Treating pulmonary hypertension in pediatrics. *Expert Opin Pharmacother*, 2015 Apr;16(5):711-26. IF: 3.08
- Posa M, Stelle M, **Lador F**, Chizzolini C. Lung involvement in systemic sclerosis. *Rev Med Suisse*, 2015 Apr 8 ; 11 : 802-6.
- Lador F**, Soccac PM, Sitbon O. Biomarkers for the prognosis of pulmonary arterial hypertension: Holy grail or flying circus? *J Heart Lung Transplant*, 2014; 33:341–343. IF: 5.11
- Lador F**, Hervé P. A practical approach of pulmonary hypertension in the elderly. *Semin Resp Crit Care Med*, 2013 Oct; 34(5):654-64. IF: 3.02
- Savale L, **Lador F**, Jais X, Montani D, Simonneau G, Humbert M, Sitbon O. HIV-related pulmonary arterial hypertension. *Rev Mal Respir*, 2012 Apr;29(4):491-500. IF: 0.59

#### BOOKS AND BOOKS CHAPTERS

- Lador F**, Beghetti M. Pulmonary Hypertension Associated with Congenital Heart Disease, *Cardiologia Pediatrica*, 2<sup>nd</sup> edition, 2015.

#### ABSTRACTS (LAST 5 YEARS)

- Lador F**, Hervé P, Simonneau G, Sitbon O. *Cardiac index by thermodilution and from non-invasive pulse pressure profiles analysis in PAH*. 5th World Symposium on Pulmonary Hypertension, Nice (France), 2013.
- Herve F, Chemla D, Montani D, Sitbon O, Savale L, Jais X, **Lador F**, Gunther S, Artaud Macari E, Parent F, Simonneau G, Humbert M. Patients With Resting Mean Pulmonary Artery Pressure 21 to 24 mmHg Have Pulmonary Hypertension At Exercise, American Thoracic Society (ATS), Philadelphie (USA), 2013.

4. **Lador F**, Hachulla AL, Espinosa V, Hoehn O, Rochat T, Montet X, Soccal PM. Pulmonary perfusion after endoscopic reduction of emphysema. ERS, Munich (Allemagne), 2014.
5. **Lador F**, Garcia G, Bringard A, Ferretti G, Soccal PM, Simonneau G, Sitbon O. *Cardiac output determined by direct Fick, Thermodilution and Modelflow in pre-capillary pulmonary hypertension*. ERS, Munich (Allemagne), 2014.
6. Ulrich S, Stricker H, Domenighetti G, Azzola A, Geiser T, Schwerzmann M, Weilenmann D, Schoch O, Fellrath JM, Rochat T, **Lador F**, Beghetti M, Nicod L, Aubert JD, Popov V, Speich R, Keusch S, Hasler E, Huber LC, Tamm M, Grendelmeier P, Mueller-Mottet S. *Long-term data from the Swiss pulmonary hypertension registry*. ERS, Munich (Allemagne), 2014.
7. Perogamvros L, Pépin JL, Thorens G, Mégevand P, Claudel E, Espa F, Besson M, Cervena K, Janssens JP, **Lador F**. *Baclofen-induced central sleep apnea*. Sleep and Breathing, 2015.
8. Lebreton A, Casini A, **Lador F**, de Moerloose P, Neerman-Arbez M. *Global fibrinolytic profile in patients with chronic thromboembolic pulmonary hypertension*. ISTH, Toronto (Canada), 2015.
9. Bengueddache S, Bringard A, Ferretti G, Beghetti M, Soccal PM, **Lador F**. *Kinetics of cardiac output at the onset of exercise in pulmonary hypertension*. Congrès international de la SSHP, Zürich, 2015.
10. Godinas L\*, **Lador F\***, Günther S, Simonneau G, Schatzberger R, Palti Y, Sitbon O. *Non-invasive diagnosis of pulmonary hypertension based on lung Doppler signal : a proof of concept study*. ERS, Amsterdam (Pays-Bas), 2015.
11. Lücker LM, Soccal PM, **Lador F**, Plojoux J. *A 25-year follow-up of 2 airways stents (Gianturco Z-stents) placed during childhood*. WCBIP/WCPE, Florence (Italie), 2016.
12. Hachulla AL, Franchi-Abella S, **Lador F**, Lambert V, Vallée JP, Beghetti M, Pariente D, Vilgrain V, Ronot M. *Heart diseases affecting the liver and liver diseases affecting the heart: crossing the diaphragm wall*. Radiological Society of North America (RSNA), Chicago (USA), 2016.
13. Rey F, **Lador F**, Noble S. *Using the antecubital vein as a safe approach for right heart catheterization in patient with suspected or confirmed pulmonary hypertension*. Société Suisse sur l'hypertension pulmonaire (Montreux, Suisse), 2016.
14. **Lador F**, Gaine S, Channick R, Di Scala L, Galiè N, Ghofrani HA, Hoepfer MM, Lang I, McLaughlin V, Preiss R, Rubin LJ, Simonneau G, Sitbon O, Tapson VF, Chin K. *Targeting the prostacyclin pathway in the treatment of PAH-CTD: Insights from the randomized controlled GRIPHON trial with selexipag*. Société Suisse sur l'hypertension pulmonaire (Montreux, Suisse), 2016.