

Application for DZL Principal Investigatorship



Name, Title, Date of Birth

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Title: Dr. biol. hum.
D.o.B: 14.09.1989

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Current position

Postdoctoral Scientist at Justus Liebig University

Positions & Employment

September 2021- Present	Postdoctoral Scientist, Justus Liebig University Gießen
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Education & Degrees

Stages	Periods and Details
Degree programme	2007-2011 B.Tech. in Biotechnology, Anna University, Chennai, India 2012-2014 M.Sc. in Agrobiotechnology, Justus Liebig university, Giessen, Germany 2014-2017 International Graduate Programme, Universites of Giessen and Marburg Lung Center (UGMLC), Giessen, Germany
Doctorates	2021 Dr. biol. hum., supervisor: Prof. Soni Savai Pullamsetti, Max Planck Institute for heart and Lung research & Justus Liebig University Giessen, Germany grade: Summa Cum Laude

Additional Qualifications

2015	FELASA - Course on laboratory animals handling and performing surgery , FEDERATION OF EUROPEAN LABORATORY ANIMAL SCIENCE ASSOCIATIONS
2020	Planung und Durchführung klinischer Studien, HGA - Gesundheitsakademie Hessen

Honors and Awards

2025	Academy co-chair for Hessen Lung Academy (HLA) in Institute for Lung Health (ILH)
2024	Elected Site representative for Deutsches Zentrum Für Lungenforschung (DZL) at UGMLC site

2023	Keystone Symposia Travel award, Keystone Symposia on pulmonary hypertension, Santa Fe, New Mexico, USA
2023	Co-Chaired the session “Narrowing the Gap between Discovery and Therapy in pulmonary Hypertension” with Prof. Stefan Archer in Keystone Symposia on pulmonary hypertension, Santa Fe, New Mexico, USA
2022	Institute of Lung Health (ILH) postdoctoral research grant (142000 euros)
2021	der René-Baumgart-Stiftung Forschungspries, Hessen, Germany
2020	Best abstract award, Pulmonary Vascular Research Institute Annual world Congress on PVD, Lima, Peru
2020	Best Basic Science Rapid Fire presentation award, Pulmonary Vascular Research Institute Annual world Congress on PVD, Lima, Peru
2019	Best abstract award, American Thoracic Society International Conference, Dallas, Texas, USA
2019	International Trainee Scholarship (ITS) award, American Thoracic Society international Conference, Dallas, Texas, USA
2018	Best Poster Award, Deutsches Zentrum für Lungenforschung e. V. Annual meeting, Hessen, Germany
2017	Travel award, UGMLC graduate program MBML, Hessen, Germany

Patents Applications

1. Pullamsetti S. S, Cherian V. A, **Valasarajan C**, De P, Seeger W. The invention relates to development of a unique chip system for in vitro culturing of precision cut lung slices (PCLS). EP25206419.1 (SHWAS).

2. Pullamsetti S. S, **Valasarajan C**, Anari B. H, Seeger W. The invention relates to development of a novel lung specific gene delivery system. EP25202272.8 (EN-PRECIS)

Extramural Funding acquired

Role	Funding name & agency	Funded money
Lead Applicant	LncRNAs in macrophage mediated vascular remodelling in pulmonary hypertension and lung cancer associated pulmonary hypertension (ILH grant)	142,000€
Co-Investigator	Drug testing in ex vivo pulmonary hypertension models (GB002, Gossamer Bio)	159,675€
Associate scientific lead	Molecular analysis (Transcriptomic and Epigenetic alterations) of COVID samples. (NAPKON, BMBF)	

Five most important Publications

*equal contribution

1) **Chanil Valasarajan**, Tina Rasper, Jochen Wilhelm, Deepesh Dhakad, Stefan Kuhnert, Werner Seeger, Stefanie Dimmeler, Robert Bals, Rajkumar Savai, Ali Önder Yildirim, Andreas

Zeiber, Soni Savai Pullamsetti. Loss of Y Chromosome Associates With Lung and Cardiac Dysfunction in COPD. *Compr Physiol.* 2026 Apr;16 (2):e70142 (IF 5.2)

2) Zehendner CM*, [Valasarajan C*](#), Werner A, Boeckel JN, Bischoff FC, John D, Weirick T, Glaser SF, Roszbach O, Jaé N, Demolli S, Khassafi F, Yuan K, de Jesus Perez VA, Michalik KM, Chen W, Seeger W, Guenther A, Wasnick RM, Uchida S, Zeiber AM, Dimmeler S, Pullamsetti SS. Long Noncoding RNA TYKRIL Plays a Role in Pulmonary Hypertension via the p53-mediated Regulation of PDGFR β . *Am J Respir Crit Care Med.* 2020 Nov 15;202(10):1445-1457 (IF 19.4)

3) [Valasarajan C](#), Karger A, Savai R, Pullamsetti SS. Long Noncoding RNAs: Emerging Regulators of Platelet-derived Growth Factor Signaling. *Am J Respir Cell Mol Biol.* 2022 May; 66(5):473-475. (IF 5.3)

4) [Valasarajan C](#), Hesami G, Maroli G, Cherian A, Laria J, Laria N, Wietelmann A, Gnatzy-Feik L, Rosenkranz S, Savai R, Seeger W, Pullamsetti S. S. Targeting ADORA1-PDE10 cAMP Microdomain: A Novel Therapeutic Approach for Pulmonary Hypertension. *bioRxiv* 2024.10.27.616460. (Currently under revision in *Eur. Respir. J.*)

5) Chelladurai P, Kuenne C, Bourgeois A, Günther S, [Valasarajan C](#), Cherian AV, Rottier RJ, Romanet C, Weigert A, Boucherat O, Eichstaedt CA, Ruppert C, Guenther A, Braun T, Looso M, Savai R, Seeger W, Bauer UM, Bonnet S, Pullamsetti SS. Epigenetic reactivation of transcriptional programs orchestrating fetal lung development in human pulmonary hypertension. *Sci Transl Med.* 2022 Jun 8;14(648):eabe5407. (IF 14.6)

List of all Publications (separate peer reviewed publications and reviews/book chapters)

1) Kim Y, Maroli G, Woodcock CC, Kim H, Liu Y, Klouda T, Li Y, Li Q, Hao Y, Schumacher V, Turton HA, Thompson AAR, Looso M, Kuenne C, [Valasarajan C](#), Ruppert C, Avolio T, Tang Y, Tai YY, Kudryashova TV, Goncharova EA, Wu JC, Li JB, Bertero T, Savai R, Raby BA, Chan SY, Pullamsetti SS, Yuan K. Deficiency of Smooth Muscle ADAR1 Exacerbates Vascular Remodeling and Pulmonary Hypertension. *Circ Res.* 2025.

2) Schmerer N, Janga H, Aillaud M, Hoffmann J, Aznaourova M, Wende S, Steding H, Halder LD, Uhl M, Boldt F, Stiewe T, Nist A, Jerrentrup L, Kirschbaum A, Ruppert C, Roszbach O, Ntini E, Marsico A, [Valasarajan C](#), Backofen R, Linne U, Pullamsetti SS, Schmeck B, Schulte LN. A searchable atlas of pathogen-sensitive lncRNA networks in human macrophages. *Nat Commun.* 2025.

3) Lemay SE, Mouglin M, Sauvaget M, El Kabbout R, [Valasarajan C](#), Yamamoto K, Martineau S, Pelletier A, Bilodeau C, Grobs Y, Bourgeois A, Romanet C, Breuils-Bonnet S, Montesinos MS, Lu M, Chen H, Gilbert M, Théberge C, Potus F, Pullamsetti S, Provencher S, Bonnet S, Boucherat O. Unraveling AURKB as a potential therapeutic target in pulmonary hypertension using integrated transcriptomic analysis and pre-clinical studies. *Cell Rep Med.* 2025.

4) Grobs Y, Romanet C, Lemay SE, Bourgeois A, Voisine P, Theberge C, Sauvaget M, Breuils-Bonnet S, Martineau S, El Kabbout R, [Valasarajan C](#), Chelladurai P, Pelletier A, Mouglin M, Dumais E, Perron J, Flamand N, Potus F, Provencher S, Pullamsetti SS, Boucherat O, Bonnet S. ATP citrate lyase drives vascular remodeling in systemic and pulmonary vascular diseases through metabolic and epigenetic changes. *Sci Transl Med.* 2024.

5) Zierden M, Berghausen EM, Gnatzy-Feik L, Millarg C, Picard FSR, Kiljan M, Geißen S, Polykratis A, Zimmermann L, Nies RJ, Pasparakis M, Baldus S, [Valasarajan C](#), Pullamsetti SS, Winkels H, Vantler M, Rosenkranz S. Hematopoietic PI3K δ deficiency aggravates murine atherosclerosis through impairment of Tregs. *JCI Insight.* 2024.

6) [Valasarajan C](#), Hesami G, Maroli G, Cherian A, Laria J, Laria N, Wietelmann A, Gnatzy-Feik L, Rosenkranz S, Savai R, Seeger W, Pullamsetti S. S. Targeting ADORA1-PDE10 cAMP

Microdomain: A Novel Therapeutic Approach for Pulmonary Hypertension. **bioRxiv** 2024.10.27.616460. (Currently under revision in **Eur. Respir. J.**)

7) Chu X, Kheirollahi V, Lingampally A, Chelladurai P, **Valasarajan C**, Vazquez-Armendariz AI, Hadzic S, Khadim A, Pak O, Rivetti S, Wilhelm J, Bartkuhn M, Crnkovic S, Moiseenko A, Heiner M, Kraut S, Atefi LS, Koepke J, Valente G, Ruppert C, Braun T, Samakovlis C, Alexopoulos I, Looso M, Chao CM, Herold S, Seeger W, Kwapiszewska G, Huang X, Zhang JS, Pullamsetti SS, Weissmann N, Li X, El Agha E, Bellusci S. GLI1+ Cells Contribute to Vascular Remodeling in Pulmonary Hypertension. **Circ Res.** 2024.

8) Khassafi F, Chelladurai P, **Valasarajan C**, Nayakanti SR, Martineau S, Sommer N, Yokokawa T, Boucherat O, Kamal A, Kiely DG, Swift AJ, Alabed S, Omura J, Breuils-Bonnet S, Kuenne C, Potus F, Günther S, Savai R, Seeger W, Looso M, Lawrie A, Zaugg JB, Tello K, Provencher S, Bonnet S, Pullamsetti SS. Transcriptional profiling unveils molecular subgroups of adaptive and maladaptive right ventricular remodeling in pulmonary hypertension. **Nat Cardiovasc Res.** 2023.

9) Leisegang MS, Bains JK, Seredinski S, Oo JA, Krause NM, Kuo CC, Günther S, Sentürk Cetin N, Warwick T, Cao C, Boos F, Izquierdo Ponce J, Haydar S, Bednarz R, **Valasarajan C**, Fuhrmann DC, Preussner J, Looso M, Pullamsetti SS, Schulz MH, Jonker HRA, Richter C, Rezende F, Gilsbach R, Pflüger-Müller B, Wittig I, Grummt I, Ribarska T, Costa IG, Schwalbe H, Brandes RP. HIF1 α -AS1 is a DNA:DNA:RNA triplex-forming lncRNA interacting with the HUSH complex. **Nat Commun.** 2022.

10) Weigert A, Zheng X, Nenzel A, Turkowski K, Günther S, Strack E, Sirait-Fischer E, Elwakeel E, Kur IM, Nikam VS, **Valasarajan C**, Winter H, Wissgott A, Voswinkel R, Grimminger F, Brüne B, Seeger W, Pullamsetti SS, Savai R. Fibrocytes boost tumor-supportive phenotypic switches in the lung cancer niche via the endothelin system. **Nat Commun.** 2022.

11) **Valasarajan C**, Karger A, Savai R, Pullamsetti SS. Long Noncoding RNAs: Emerging Regulators of Platelet-derived Growth Factor Signaling. **Am J Respir Cell Mol Biol.** 2022.

12) Chelladurai P, Kuenne C, Bourgeois A, Günther S, **Valasarajan C**, Cherian AV, Rottier RJ, Romanet C, Weigert A, Boucherat O, Eichstaedt CA, Ruppert C, Guenther A, Braun T, Looso M, Savai R, Seeger W, Bauer UM, Bonnet S, Pullamsetti SS. Epigenetic reactivation of transcriptional programs orchestrating fetal lung development in human pulmonary hypertension. **Sci Transl Med.** 2022.

13) Zehendner CM*, **Valasarajan C***, Werner A, Boeckel JN, Bischoff FC, John D, Weirick T, Glaser SF, Roszbach O, Jaé N, Demolli S, Khassafi F, Yuan K, de Jesus Perez VA, Michalik KM, Chen W, Seeger W, Guenther A, Wasnick RM, Uchida S, Zeiher AM, Dimmeler S, Pullamsetti SS. Long Noncoding RNA TYKRIL Plays a Role in Pulmonary Hypertension via the p53-mediated Regulation of PDGFR β . **Am J Respir Crit Care Med.** 2020.

***equal contribution**

14) Dabral S, Muecke C, **Valasarajan C**, Schmoranzler M, Wietelmann A, Semenza GL, Meister M, Muley T, Seeger-Nukpezah T, Samakovlis C, Weissmann N, Grimminger F, Seeger W, Savai R, Pullamsetti SS. A RASSF1A-HIF1 α loop drives Warburg effect in cancer and pulmonary hypertension. **Nat Commun.** 2019.

15) Leisegang MS, Fork C, Josipovic I, Richter FM, Preussner J, Hu J, Miller MJ, Epah J, Hofmann P, Günther S, Moll F, **Valasarajan C**, Heidler J, Ponomareva Y, Freiman TM, Maegdefessel L, Plate KH, Mittelbronn M, Uchida S, Künne C, Stellos K, Schermuly RT, Weissmann N, Devraj K, Wittig I, Boon RA, Dimmeler S, Pullamsetti SS, Looso M, Miller FJ

Jr, Brandes RP. Long Noncoding RNA MANTIS Facilitates Endothelial Angiogenic Function. **Circulation**. 2017.

16) **Chanil Valasarajan**, Tina Rasper, Jochen Wilhelm, Deepesh Dhakad, Stefan Kuhnert, Werner Seeger, Stefanie Dimmeler, Robert Bals, Rajkumar Savai, Ali Önder Yildirim, Andreas Zeiher, Soni Savai Pullamsetti. Loss of Y Chromosome Associates With Lung and Cardiac Dysfunction in COPD. *Compr Physiol*. 2026 Apr;16 (2):e70142 (**IF 5.2**)