



## Katharina Schimmel

Postdoctoral Scholar, Pulmonary and Critical Care Medicine

### Bio

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#### INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

#### HONORS AND AWARDS

- Mechanisms and Innovations in Vascular Disease T32 Training Grant, National Heart, Lung and Blood Institute (08/2021)
- Vevo Travel Award 2019 in Cardiology Track, FUJIFILM VisualSonics Inc (10/2019)
- New Investigator Travel Award for the talk on cardiac regeneration in the Session “Next Best Thing”, AHA Basic Cardiovascular Sciences 2019 Scientific Sessions, Boston (07/2019)
- Stanford Cardiovascular Institute Travel Award, AHA Scientific Sessions 2018, Chicago (11/2018)
- Runner-up in the Young Investigator Award Session, Dutch German Cardiology Meeting 2018, Amsterdam (03/2018)
- Best Poster Session Basic Science, ESC (European Society of Cardiology) Congress 2017, Barcelona (08/2017)
- Work on cardiac fibrosis ranked position #1 for ingenuity, Scientific advisory board of the FIBROTARGETS consortium, Annual Meeting 2016, Rome (08/2016)
- Achievement scholarships, Karl-Franzens-University Graz (2007 and 2008)

#### PROFESSIONAL EDUCATION

- Master of Science, Universitat Graz (2012)
- Doctor of Philosophy, Hanover School of Medicine (2017)
- Certificate, Stanford Graduate School of Business , Stanford Ignite Entrepreneurship Program (2020)

#### PATENTS

- Thomas Thum, Katharina Schimmel, Quoc-Tuan Do, Philippe Bernard. "United States Patent US16/481,569 Natural compounds and fibrosis", MEDIZINISCHE HOCHSCHULE HANNOVER, Jan 29, 2018

### Publications

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#### PUBLICATIONS

- **The role of circular RNAs in pulmonary hypertension.** *The European respiratory journal*  
Ali, M. K., Schimmel, K., Zhao, L., Chen, C. K., Dua, K., Nicolls, M. R., Spiekerkoetter, E.  
2022
- **Cardiac Fibrosis in the Pressure Overloaded Left and Right Ventricle as a Therapeutic Target.** *Frontiers in cardiovascular medicine*  
Schimmel, K., Ichimura, K., Reddy, S., Haddad, F., Spiekerkoetter, E.  
2022; 9: 886553
- **Arteriovenous Malformations-Current Understanding of the Pathogenesis with Implications for Treatment.** *International journal of molecular sciences*

Schimmel, K., Ali, M. K., Tan, S. Y., Teng, J., Do, H. M., Steinberg, G. K., Stevenson, D. A., Spiekerkoetter, E.

2021; 22 (16)

- **High-Frequency Ultrasound Echocardiography to Assess Zebrafish Cardiac Function.** *Journal of visualized experiments : JoVE*  
Evangelisti, A., Schimmel, K., Joshi, S., Shah, K., Fisch, S., Alexander, K. M., Liao, R., Morgado, I.  
2020
- **Natural Compound Library Screening Identifies New Molecules for the Treatment of Cardiac Fibrosis and Diastolic Dysfunction.** *Circulation*  
Schimmel, K. n., Jung, M. n., Foinquinos, A. n., San José, G. n., Beaumont, J. n., Bock, K. n., Grote-Levi, L. n., Xiao, K. n., Bär, C. n., Pfanne, A. n., Just, A. n., Zimmer, K. n., Ngoy, et al  
2020
- **Combined high-throughput library screening and next generation RNA sequencing uncover microRNAs controlling human cardiac fibroblast biology.** *Journal of molecular and cellular cardiology*  
Schimmel, K. n., Stojanovi#, S. D., Huang, C. K., Jung, M. n., Meyer, M. H., Xiao, K. n., Grote-Levi, L. n., Bär, C. n., Pfanne, A. n., Mitzka, S. n., Just, A. n., Geffers, R. n., Bock, et al  
2020
- **Long Noncoding RNA-Enriched Vesicles Secreted by Hypoxic Cardiomyocytes Drive Cardiac Fibrosis** *MOLECULAR THERAPY-NUCLEIC ACIDS*  
Kenneweg, F., Bang, C., Xiao, K., Boulanger, C. M., Loyer, X., Mazlan, S., Schroen, B., Hermans-Beijnsberger, S., Foinquinos, A., Hirt, M. N., Eschenhagen, T., Funcke, S., Stojanovic, et al  
2019; 18: 363–74
- **Gene Signatures to Distinguish Amyloid Cardiomyopathy Risk in Multiple Myeloma Patients**  
Jha, A., Morgado, I., Lee, D. J., Alexander, K., Tsai, C., Schimmel, K., Ward, J., Witteles, R., Liedtke, M., Liao, R., Dangwal, S.  
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Prenatal Exposure of Cigarette Smoke Impacts Cardiac Regeneration**  
Schimmel, K., Morgado, I., Tsai, C., Evangelisti, A., Fisch, S., Ngoy, S., Lee, D., Dangwal, S., Alexander, K., Ward, J. E., Liao, R.  
LIPPINCOTT WILLIAMS & WILKINS.2019
- **Blood-based microRNA profiling in patients with cardiac amyloidosis** *PLOS ONE*  
Derda, A. A., Pfanne, A., Baer, C., Schimmel, K., Kennel, P. J., Xiao, K., Schulze, P., Bauersachs, J., Thum, T.  
2018; 13 (10): e0204235
- **A large shRNA library approach identifies lncRNA Ntep as an essential regulator of cell proliferation.** *Cell death and differentiation*  
Beermann, J. n., Kirste, D. n., Iwanov, K. n., Lu, D. n., Kleemiß, F. n., Kumarswamy, R. n., Schimmel, K. n., Bär, C. n., Thum, T. n.  
2018; 25 (2): 307–18
- **Leukocyte telomere length correlates with hypertrophic cardiomyopathy severity.** *Scientific reports*  
Chatterjee, S. n., de Gonzalo-Calvo, D. n., Derda, A. A., Schimmel, K. n., Sonnenschein, K. n., Bavendiek, U. n., Bauersachs, J. n., Bär, C. n., Thum, T. n.  
2018; 8 (1): 11227
- **Mitochondrial energy metabolism is required for lifespan extension by the spastic paraplegia-associated protein spartin** *MICROBIAL CELL*  
Ring, J., Rockenfeller, P., Abraham, C., Tadic, J., Poglitsch, M., Schimmel, K., Westermayer, J., Schauer, S., Achleitner, B., Schimpel, C., Moitzi, B., Rechberger, G. N., Sigrist, et al  
2017; 4 (12): 411–22
- **Noncoding RNAs in Heart Failure** *HEART FAILURE*  
Dangwal, S., Schimmel, K., Foinquinos, A., Xiao, K., Thum, T., Bauersachs, J., Butler, J., Sandner, P.  
2017; 243: 423–45
- **MicroRNA-Based Therapy of GATA2-Deficient Vascular Disease.** *Circulation*  
Hartmann, D. n., Fiedler, J. n., Sonnenschein, K. n., Just, A. n., Pfanne, A. n., Zimmer, K. n., Remke, J. n., Foinquinos, A. n., Butzlaff, M. n., Schimmel, K. n., Maegdefessel, L. n., Hilfiker-Kleiner, D. n., Lachmann, et al  
2016; 134 (24): 1973–90
- **Nucleocytosolic Depletion of the Energy Metabolite Acetyl-Coenzyme A Stimulates Autophagy and Prolongs Lifespan** *CELL METABOLISM*  
Eisenberg, T., Schroeder, S., Andryushkova, A., Pendl, T., Kuettner, V., Bhukel, A., Marino, G., Pietrocola, F., Harger, A., Zimmermann, A., Moustafa, T., Sprenger, A., Jany, et al  
2014; 19 (3): 431–44