

Dr. rer. nat. Sabine Bartel

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Date of birth: 01.02.1986 in Dachau; **Nationality:** German

Language skills: **English** – fluent; **French** – advanced;

Dutch – beginner, **German** – mothertongue



ACADEMIC QUALIFICATIONS

April 2015	Dr. rer. nat.– Ludwig-Maximilians University, Munich, Germany Grade: magna cum laude, equivalent to PhD Completion of the CPC Research School “Lung Biology and Disease” (with distinction)
Sep. 2010	Molecular Biotechnology (M.Sc, B.Sc) – Technical University Munich, Germany 2010: Master of Science (passed with distinction, Grade 1.3) 2008: Bachelor of Science (passed with distinction, Grade: 1.5)
May 2005	General University Entrance Qualification - Ignaz-Taschner Gymnasium, Dachau, Germany Abitur (Grade 1.8)

EMPLOYMENT

From 11/2018	University Medical Center Groningen, Groningen, The Netherlands ERS/EU RESPIRE3 Marie-Sklodowska Curie postdoctoral fellow <i>Research topic:</i> ‘Generating Episomes - design and targeted delivery of epigenetic editors to the human lung epithelium in COPD by extracellular vesicles’
01/2015- 10/2018	Research Center Borstel, Leibniz Lung Center, Borstel, Germany Group: Early Life Origins of Chronic Lung Disease Postdoctoral scientist and deputy group leader (since 04/2017) <i>Research interest:</i> Investigation of epithelial crosstalk by extracellular vesicle-associated microRNAs & analysis and modulation of the lung microbiota in asthma and COPD <ul style="list-style-type: none">• Co-Supervision of five PhD students• Junior PI in the Leibniz Science Campus ‘Evolung’• Project manager for safety of genetic engineering in the lab• Co-founder and active member of the Borstel Postdoc Initiative (Organization of career development trainings for fellow postdocs)• Spokesperson and founding member of the nationwide Leibniz Postdoc Network• Early Career Member Representative of Assembly 3, European Respiratory Society
01/2011- 01/2015	Comprehensive Pneumology Center, Helmholtz Center Munich, Germany PhD student in the group ‘Developmental Origins of Respiratory Disease’ <i>Thesis: microRNA-based identification of pulmonary signaling pathways in experimental asthma- The role of the cAMP responsive element binding protein (Creb1)</i> <ul style="list-style-type: none">• Co-Supervision of MD student (09/2012- ~06/2014)• Graduate student representative of the CPC research school (2011)• Active participation in the international review of the research school “Lung biology and disease” (06/2013) (Talk) and the Helmholtz graduate school HELENA (07/2014) (Poster).
04-05/ 2013	Children’s National Medical Center, Washington DC, USA Short-term research stay at the laboratory of Prof. Dr. Robert Freishtat <ul style="list-style-type: none">• Isolation of miRNA-containing small extracellular vesicles from human nasal lavages

GRANTS, PRIZES & AWARDS (SELECTED)

- 05/2018 **ERS/EU RESPIRE 3 Marie-Sklodowska Curie Fellowship** (€ 149,800) – European Respiratory Society
- 11/2017 **Bencard Next Generation Award** (7500 €) – Bencard Allergie GmbH
Funding for the research project: ‘Development of a biomarker signature to differentiate subphenotypes of asthma based on extracellular vesicle-associated miRNAs’
- 02/2016 **Deutsche Lungenstiftung e.V.** (€ 3000)
Award for the best experimental doctoral dissertation in the field of Pneumology 2015
- 06/2015 **EAACI Annual Congress Milan 2013, Barcelona 2015 & Helsinki 2017** (each € 200)
Prize for outstanding poster (2013) and oral presentation (2015 & 2017)
- 03/2015 **13th ERS Lung Science Conference, Estoril, Portugal** (€ 500)
Participation in the Young Investigator Session and travel grant recipient (also 2013)
- 01/2014 **3rd Annual Meeting German Center for Lung Research, Heidelberg, Germany**
(€ 500) Poster prize for the Disease Area Asthma & Allergy

ADDITIONAL INFORMATION

Conference Organization

- 02/2018 **ERS Research Seminar** “Cross-talk in the lung microenvironment: implications for understanding chronic lung disease”, Berlin, Germany
Main Organizer, **Granted budget: ERS € 35 000; ISEV: € 2000**
- 10/2017 **Kick-Off Meeting of the Leibniz Postdoc Network**, Borstel, Germany
(Co-organization within the Borstel Postdoc Initiative)
- 2017-2019 **Member of the International Congress Planning Committee**, ERS
(Session Planning for Assembly 3 and the Early Career Member Committee)
- 11/2015 **3rd COST BM1201 Winter Training School**, Borstel, Germany
(Main Organizer)
- 06/2013 **COST BM1201 conference** “Early Origins of Chronic lung disease” Starnberg, Germany (Co-organization: administration & travel arrangements)
- 09/2014 **Munich International Autumn School (MIAS)**, Munich, Germany
(Co-organization: laboratory course & lecture)
- 09/2013 **COST BM1201 training school, Munich, Germany**
(Co-organization: laboratory course)

Invited lectures at International Conferences

- 06/2019 **Microbiome relevance in asthma and COPD** Bronchitis X, Groningen, The Netherlands
- 05/2018 **Tiny things in tiny people: the role of the microbiome in paediatric asthma.**
EAACI Annual Congress, Munich, Germany
- 04/2018 **microRNAs - tiny regulators with a large impact.**
1st International Borstel Asthmasymposium
- 02/2018 **Early interventions in the development of chronic lung diseases by bacterial metabolites**, ERS Research Seminar, Berlin, Germany

Membership and active Mandates in Societies, Consortia and Scientific Advisory Boards

- From 05/2018 **Member of the EAACI task force ‘microRNAs in allergy and asthma’**

- From 11/2017 **Member of the Scientific Advisory Board – Next Generation**
Bencard Allergie GmbH, Munich, Germany
- From 2011 **European Respiratory Society (ERS) – Early Career Member**
- 09/2016-09/2019 Elected member of the *Early Career Members Committee* (ECMC) & ECM Representative for Assembly 3, Member of the *Long Range Planning Committee* of Assembly 3 (Basic and Translational Science) and ECM Member of the ERS Science Council and Science and Event Working Group (from 2018)
- Since 2015 **International Society for Extracellular Vesicles (ISEV) – Junior Member**
- Since 2012 **European Academy of Allergy and Immunology – Junior Member**
- Since 2011 **Deutsche Gesellschaft für Pneumologie (DGP) – Member**
- 2012-2016 **COST Action BM1201** Developmental Origins of Chronic Lung Disease

Training & Certificates

- From 2018 Selected participant of the Early Career Editorial Team of the European Respiratory Journal
- 2017-2018 Selected participant for the Leibniz Mentoring Programme for Women in Science
- 2016-2017 Coaching programme by Dr. Paul Charlton (international communication, presentation skills, emotional intelligence, negotiations)
- 2016 Laboratory Animal Science: FELASA-C
- 2015 Safety aspects of genetic engineering (certified according to German law)

Chairs at International Conferences

- 09/2018 **Chair of two scientific symposia, a meet the expert course and a thematic poster session**, ERS Annual Congress, Paris, France
- 05/2018 **Chair of two thematic poster sessions**, EAACI Annual Congress, Munich, Germany
- 03/2018 **Chair of a plenary session**, ERS Lung Science Conference, Estoril, Portugal
- 02/2018 **Conference Chair ERS Research Seminar**
- 09/2017 **Chair of a Scientific Symposium, a Thematic Poster Session, a Poster Discussion Session, and a Professional Developmental Course**, ERS International Congress, Milan, Italy
- 09/2016 **Chair of a Thematic Poster Session**, ERS International Congress, London, UK
- 2017/2016/2015 **Chair of a Poster Session**, ERS Lung Science Conference, Estoril, Portugal
- 03/2015 **Chair of a Poster Session**, ERS Lung Science Conference, Estoril, Portugal

Active peer review assignments

Journal	Impact factor
American Journal of Respiratory and Critical Care Medicine (AJRCCM)	15.24
Advanced Science	12.44
European Respiratory Journal (ERJ)	12.24
Allergy	6.05
Clinical Experimental Allergy (CEA)	5.18
Nature Scientific Reports	4.12
Pulmonary Pharmacology and Therapeutics	2.41
PLOS ONE	2.80

LIST OF PUBLICATIONS

Original articles (peer review)

* Equal contribution, # corresponding author

1. Ehlers, J.; **Bartel, S.**; Fehrenbach, H.; Vock, C. Asthma exacerbation in a dish: establishment of an *in-vitro* model to assess airway epithelial cells responses to IL-13 and polyIC co-stimulation. *Submitted*
2. **Bartel, S.**; Carraro, G.; Alessandrini, F.; Krauss-Etschmann, S.; Ricciardiolo, F. L. M.; Bellusci, S. Regulation of Wnt signaling by miR-142-3p in experimental and human asthma. *Am J Physiol Lung Cell Mol Physiol.* 2018 Aug 1;315(2):L328-L333. doi: 10.1152/ajplung.00113.2018. Epub 2018 May 3. IF 4.281
3. Dehmel, S.*, Nathan, P.*, **Bartel, S.**; El-Merhie, N., Scherb, H.; Milger, K., John-Schuster, G.; Yildirim, A.Ö.; Hylkema, M.; Irmeler, M.; Beckers, J.; Schaub, B.; Eickelberg, O.; Krauss-Etschmann, S.: Intrauterine smoke exposure affects lung function, pulmonary transcriptomes, and in particular insulin-like growth factor (IGF)-1 in a sex-specific manner. *Scientific Report*, May 15;8(1):7547. doi: 10.1038/s41598-018-25762-5., IF 4.12
4. Kaestle, M.* & **Bartel, S.***; Geillinger, K.; Irmeler, M.; Bettenbrock, A.; Beckers, J.; Ryffel, B.; Eickelberg, O.; Krauss-Etschmann, S. microRNA cluster 106a~363 is involved in T-Helper 17 (Th17) cell differentiation. *Immunology*, 2017 Nov;152 (3):402-413. doi: 10.1111/imm.12775; IF 4.078
5. Milger, K., Götschke, J., Krause, L., Nathan, P.; Alessandrini, F.; Tufman, A.; Fischer R.; **Bartel, S.**; Theis, F.J. ; Behr, J.; Dehmel, S.; Mueller, N.S.; Kneidinger, N. S.; Krauss-Etschmann, S.: Identification of a plasma miRNA biomarker-signature for allergic asthma: a translational approach. *Allergy*, 2017 Dec;72(12):1962-1971. doi: 10.1111/all.13205.; IF 6.335
6. **Bartel, S.*** & Schulz, N.*; Alessandrini, F.; Schamberger, AC.; Pagel, P.; Theis, FJ.; Noessner, E.; Stick, SM; Kicic, A.; Eickelberg, O.; Freishtat, RJ; Krauss-Etschmann, S. Pulmonary microRNA profiles identify involvement of Creb1 and Sec14l3 in allergic asthma. *Scientific Reports*, 2017;10:38–47.; doi10.1038/srep46026; IF 4.259
7. Altmae, S.; Segura, MT; Esteban, F.; **Bartel, S.**; Brandi, P.; Irmeler, M.; Beckers, J.; Demmelmair, Hans; Lopez-Sabater, C.; Koletzko, B.; Krauss-Etschmann, S.; and Campoy, C. Maternal pre-pregnancy obesity is associated with altered placental transcriptome. *Plos One*, 2017, vol: 12 (1) pp: e0169223; IF 3.54
8. Kepert, I.; Fonseca, J.; Mueller, C.; Milger, K.; Hochwind, K.; Kostic, M.; Ohnmacht, C.; Dehmel, S.; Nathan, P.; **Bartel, S.**; Eickelberg, O.; Schlöter, M.; Hartmann, A.; Philippe Schmitt-Kopplin, P. and Krauss-Etschmann, S. D-tryptophan is a probiotic substance influencing the gut microbiome and allergic airway disease. *Journal of Allergy and Clinical Immunology*, 2017 May; 139(5):1525-1535. doi: 10.1016/j.jaci.2016.09.003.; IF 12.485

Reviews/Editorials/Position papers (peer-review)

1. Gosens, R.; Adock, I.; Bracke, K.; Dickson, R.P., Hiemstra, P.S.; Hansbro, P.; Krauss-Etschmann, S.; Smits, H.H.; Stassen, F.; **Bartel, S.**[#] Host-microbe cross-talk in the lung microenvironment: implications for understanding and treating chronic lung disease. *Invited review in Back to Basics series – European Respiratory Journal – To be submitted in November*

2. Eguiluz Gracia, I.*; Mathioudakis, A.G.*; **Bartel, S.**, Vijverberg, S.J.H; Fuertes, E.; Comberiat, P.; Cai, Y.S.; Tomazic, P.T.; Vestbo, J.; Galan, C.; Hoffmann, B. The need for clean air: the impact of climate change and air pollution on respiratory health. *To be submitted in November*
3. Nikolić, M. Z., Garrido-Martin, E.M., Greiffo, F.R.; Fabre, A., Heijink, I.H., Boots, A., Greene, C.M., Hiemstra, P.S. , **Bartel, S.**[#]. From the Pathophysiology of the human lung alveolus to epigenetic editing – research highlights from ERS Assembly 3 ‘Basic and Translational Science’. *Submitted*
4. Hammer, B.* & Wagner, C.* & Divac Rankov, A.*; Reuter, S.; **Bartel, S.**; Hylkema, M.N.; Krüger, A.; Svanes, C. Krauss-Etschmann, S.: *In utero* exposure to cigarette smoke and effects across generations: a conference of animals on asthma. *Clin Exp Allergy*. 2018 Nov;48(11):1378-1390. doi: 10.1111/cea.13283. IF 5.158
5. Wu, D-D., Song, J.; **Bartel, S.**; Krauss-Etschmann, S.; Rots, M.; Hylkema, M.N. The potential for targeted rewriting of epigenetic marks in COPD as a new therapeutic approach. *Pharmacology and Therapeutics*, 2017 Aug 19. pii: S0163-7258(17)30217-6. doi: 10.1016/j.pharmthera.2017.08.007. [Epub ahead of print], IF 11.127
6. **Bartel, S.**; Bhakta, N.; Christenson, S.: More than meets the eye: cigarette smoke induces genomic changes in the small airway epithelium independent of histologic changes. (*Invited Editorial*), *Am J Respir Crit Care Med.*, 2017 Aug 1;196(3):260-262. doi: 10.1164/rccm.201704-0665ED.; IF 13.118
7. Jatzlauk, G.* & **Bartel, S.***; Schloter, M.; Holger, H.; Krauss-Etschmann, S. Environmental bacteria and their metabolites for the prevention of asthma and allergic diseases. *Allergy*, 2017 Dec;72(12):1859-1867. doi: 10.1111/all.13220.; IF 6.335
8. Bogdan, M.*; Kowal, E. J. K.*; van Balkom, B. W. M.; **Bartel, S.**; Bhattacharyya, S. N.; Buzás, E. I.; Buck, A. H.; de Candia, P.; Chow, F. W. N.; Das, S.; Driedonks, T. A. P.; Fernández-Messina, L.; Haderk, F.; Hill, A. F.; Jones, J. C.; Van Keuren-Jensen, K. R.; Lai, C. P.; Lässer, C.; di Liegro, I.; Lunavat, T. R.; Lorenowicz, M. J.; Maas, S. L. N.; Mäger, I.; Mittelbrunn, M.; Momma, S.; Mukherjee, K.; Nawaz, M.; Pegtel, D. M.; Pfaffl, M. W.; Schiffelers, R. M.; Tahara, H.; Théry, C.; Tosar J. P.; Wauben, M. H. M.; Witwer, K. W.; Nolte-‘t Hoen, E. N. M. Obstacles and Opportunities in the Functional Analysis of Extracellular Vesicle RNA – an ISEV position paper, *Journal of Extracellular Vesicles*, 2017, vol: 6 (1) pp1286095; IF not yet available

Book chapters / educational publications/ other relevant publications

1. **Bartel, S.**; de Brandt, J.; Opportunities for Early Career Members at the Lung Science Conference 2019; *Breathe*, accepted
2. Burgy, O., Fernandez Fernandez, E., Rolandsson Enes, S., Königshoff, M., Greene, CM., **Bartel, S.**[#] New players in chronic lung disease identified at the ERS International Congress in Paris 2018: from microRNAs to extracellular vesicles; *J Thorac Dis*. 2018 Sep; 10(Suppl 25): S2983-S2987. doi: 10.21037/jtd.2018.08.20
3. Amatngalim, G.D., Paula Vieira, R., Meiners, S., **Bartel, S.**[#]: Novel insights into the effects of cigarette smoke on the airway epithelial surface—lessons learned at the ERS International Congress 2018 in Paris; *J Thorac Dis*. 2018 Sep; 10(Suppl 25): S2977–S2982. doi: 10.21037/jtd.2018.08.17

4. Almendros, I.; Alsafadi, H.N.; Bölükbas, D.; Collins, J.P. , Duch, P.; Garrido-Martin, E.M.; Kahn, N.; Karampitsakos, T.; Irma Mahmutovic Persson, I.; Tzouveleakis, A.; Uhl, F.E.; **Bartel, S[#]**. Early Career Members at the ERS Lung Science Conference: cell-matrix interactions in lung disease and regeneration. *Breathe*, 2018 14: e78-e83; DOI: 10.1183/20734735.016818
5. Nenna, R., Petarca, L., Parisi, G., Almendros, I., **Bartel, S.**, De Brandt, Jana. Zooming in on ERS fellowships and international Congress: experiences and advice from the Early Career Members. *Breathe*, 2018 Jun;14(2):141-144. doi: 10.1183/20734735.001818.
6. Kahn, NC, Bartel, S, Amaral, AFS, Bos, LD, De Brandt, J. New kids on the block in the ECMC and opportunities for early career members in 2018. *Breathe (Sheff)*. 2018 Mar;14(1):55-57. doi: 10.1183/20734735.019517
7. **Bartel, S.**, Greene, CM.: Best of Milan 2017 –ERS Lung Science Conference Session "Lung tissue repair and remodeling in chronic lung diseases: mechanisms and therapeutic approaches"; *Journal of Thoracic Disease*, 2017 Nov;9(Suppl 16):S1541-S1543. doi: 10.21037/jtd.2017.11.40.; IF 1.783
8. Almendros, I.; **Bartel, S.**; Bostantzoglou, Nina.; Jubrail, J.; Lehmann, M.; Wagner, D.: Junior's Voice on the LSC 2017: Mechanistic overlap between chronic lung injury and cancer. *Breathe*, 2017 13: 323-326; DOI: 10.1183/20734735.010217, IF 0.41
9. **Bartel, S.**, Eguiluz Gracia, I.; Mathioudakis, A.M.; Tsilochristou, O: ERS Early Career Members meet EAACI Junior Members: A strong, fruitful collaboration. *Breathe*, 2017, 13(3): 231-233.; IF 0.41
10. Bos, L.; **Bartel, S.**; Mathioudakis, A; Flood, E.: Opportunities for early career members. *Breathe*, 2017 13:127-128, IF 0.41
11. Bos, L.; **Bartel, S.**; Ojanguren Arranz, I.; Kahn, N.; Mathioudakis, A.; Flood, E.; Petarca, L.: Early Career Members at the ERS International Congress London 2016: Early Career Forum. *Breathe*, 2016 12, IF 0.41
12. Kaeuferle, T.; **Bartel, S.**; Dehmel, S.; Krauss-Etschmann; S. MicroRNA methodology: advances in miRNA-technologies; *Methods Mol Biol.*, 2014, 1169:121-30. IF 1.29