

Publication Record

(20/06/2017)

Dr Jan Schumacher

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1. Refereed Papers

1. Schumacher J, Standl T. Hyperplasia of the lingual tonsil as an unexpected intubation obstruction in a preschool child. *Anesthesiol Intensivmed Notfallmed Schmerzther* 1997; 32: 325-327 [Link](#)
2. Heringlake M, Wagner KF, Schumacher J, Schmucker P, Pagel H. The influence of angiotensin II and aldosterone on the diuretic effects of atrial natriuretic peptide in isolated perfused rat kidneys *Nieren- und Hochdruckkrankheiten* 1998; 12: 533-538
3. Schumacher J, Eichler W, Bauer O, Klotz KF. Perioperative tissue thickness measurement by a new miniature ultrasound device *Journal of Clinical Monitoring and Computing* 1998; 14: 471-476 [Link](#)
4. Eichler W, Sedemund-Adib B, Schumacher J, Klotz KF. Diagnosis, procedure and conservative therapy of a bronchial rupture after intubation with double lumen tube. *Anesthesiol Intensivmed Notfallmed Schmerzther* 1999; 34: 66-70 [Link](#)
5. Heringlake M, Wagner KF, Schumacher J, Pagel H. Urinary excretion of urodilatin is increased during pressure natriuresis in the isolated perfused rat kidney. *American Journal of Physiology* 1999; 277: F347-351 [Link](#)
6. Schumacher J, Engelke A, Wagner KF, Eichler W, Markert U, Klotz KF. Measurement of peripheral tissue thickness by ultrasound during the perioperative period. *British Journal of Anaesthesia* 1999; 82: 641-643 [Link](#)

7. Schumacher J, Müller G, Klotz KF. Large hepatic hematoma and intraabdominal hemorrhage associated with abuse of anabolic steroids *New England Journal of Medicine* 1999; 340: 1123-1124 [Link](#)
8. Eichler W, Eisenbeiß C, Schumacher J, Klaus S, Vogel R, Klotz KF. Changes of interstitial fluid volume in superficial tissues detected by a mini ultrasound device. *Journal of Applied Physiology* 2000; 89: 359-363 [Link](#)
9. Meier T, Leibecke T, Schumacher J, Berger K, Klotz KF. Detection of a tracheal obstruction caused by a retrosternal goiter by the use of the cuff leak test. *Anesthesia and Analgesia* 2000; 90: 1002 [Link](#)
10. Schumacher J, Rob P, Kreft B, Engelke A, Heringlake M, Klotz KF. Measurement of fluid volume shifts during haemodialysis by A-mode ultrasonography. *Blood Purification* 2000; 18: 103-109 [Link](#)
11. Roth-Isigkeit A, Dibbelt L, Eichler W, Schumacher J, Schmucker P. Blood levels of atrial natriuretic peptide, endothelin, cortisol and ACTH in patients undergoing coronary artery bypass grafting surgery with cardiopulmonary bypass. *Journal of Endocrinological Investigator* 2001; 24: 777-785 [Link](#)
12. Schumacher J, Russlies M, Eichler W, Großherr M, Klotz KF. Comparison of three different methods of sedation for spinal anesthesia in sheep. *Lab Animal (NY)* 2001; 30: 40-44 [Link](#)
13. Schumacher J, Pörksen M, Klotz KF. Effects of isoflurane, enflurane and halothane on skeletal muscle microcirculation in the endotoxemic rat *Journal Critical Care* 2001; 16: 1-7 [Link](#)
14. Eichler W, Schumacher J, Roth-Isigkeit A, Braun J, Kuppe H, Klotz KF. Automated evaluation of functional residual capacity by oxygen washout. *Journal of Clinical Monitoring and Computing* 2002; 17: 195-201 [Link](#)

15. Gehring H, Hornberger C, Dibbelt L, Roth-Isigkeit A, Gerlach K, Schumacher J, Schmucker P. Accuracy of point-of-care-testing (POCT) for determining hemoglobin concentrations. *Acta Anaesthesiologica Scandinavica* 2002; 46: 980-986 [Link](#)

16. Heringlake M, Schumacher J, Sedemund-Adib B, Bahlmann L, Eleftheriadis S, Sievers HH, Dalhoff K, Schmucker P. Bronchial stenting and high-frequency percussive ventilation treatment of descending aortic aneurysm-induced atelectasis of the left lung. *Anesthesia and Analgesia* 2002; 95:1189-1191 [Link](#)

17. Russlies M, R  ther P, Stromberg P, Fink K, Schumacher J, Behrens P, K  ller W. Knorpelersatzgewebe nach verschiedenen Methoden der Knorpeldefektbehandlung beim Schaf – Biomechanische Eigenschaften. *Focus MUL* 2002; 19: 146-153

18. Schumacher J, Gosch U, Klotz KF. Comparison of two Oxygen Delivery Systems for safe Sedation and Spinal Anesthesia during Cartilage Surgery in Sheep. *Lab Animal (NY)* 2002; 31: 45-47 [Link](#)

19. Eichler W, Bechtel JF, Schumacher J, Wermelt JA, Klotz KF, Bartels C. A rise of MMP-2 and MMP-9 in bronchoalveolar lavage fluid is associated with acute lung injury after cardiopulmonary bypass in a swine model. *Perfusion* 2003; 18:107-13 [Link](#)

20. Schumacher J, Dendorfer A, Binkowski K, Klotz KF. A miniature self-inflating bag-mask ventilator for rats. *Lab Animal* 2003; 37:360-2 [Link](#)

21. Schumacher J, Binkowski K, Dendorfer A, Klotz KF. Organ-specific extravasation of albumin-bound Evans blue during nonresuscitated hemorrhagic shock in rats. *Shock* 2003; 20:565-8 [Link](#)

22. Eichler W, Schumacher J, Ohgke H, Klotz KF. Reuse of a set for total intravenous anaesthesia: Safe against bacterial contamination? *European Journal of Anaesthesiology* 2004; 21: 501-503 [Link](#)
23. Schumacher J, Eichler W, Heringlake M, Sievers HH, Klotz KF. Evaluation of Intercompartmental Fluid Volume Shifts during Cardiopulmonary Bypass by A-Mode Ultrasonography. *Perfusion* 2004; 19: 277-281 [Link](#)
24. Schumacher J, Puchakayala MR, Binkowski K, Eichler W, Dendorfer A, Klotz KF. Effects of candesartan and enalaprilat on the organ-specific microvascular permeability during haemorrhagic shock in rats. *British Journal of Anaesthesia* 2006; 96: 437-443 [Link](#)
25. Brinker A, Gray SA, Schumacher J. Influence of air-purifying respirators on the simulated first response emergency treatment of CBRN victims. *Resuscitation* 2007; 74: 310-6 [Link](#)
26. Heringlake M, Handke U, Hanke T, Eberhardt F, Schumacher J, Gehring H, Heinze H. Lack of agreement between thermodilution and electrical velocimetry cardiac output measurements. *Intensive Care Medicine* 2007; 33: 2168-72 [Link](#)
27. Heringlake M, Handke U, Hanke T, Eberhardt F, Schumacher J, Gehring H, Heinze H. Reply to the comment by Dr. Bernstein. *Intensive Care Medicine* 2007; 33: 2221-2 [Link](#)
28. Schumacher J, Prior K. Knowledge of chemical warfare injuries - Reply. *British Medical Journal* 2007; 335: 1313-1315 [Link](#)

29. Schumacher J, Runte J, Brinker A, Prior K, Heringlake M, Eichler W. Respiratory protection during high fidelity simulated resuscitation of casualties contaminated with chemical warfare agents - Respiratory protection for anaesthetists during resuscitation. *Anaesthesia* 2008; 63: 593-8 [Link](#)

30. Brinker A, Stratling WM, Schumacher J. Evaluation of bag-valve-mask ventilation in simulated toxic environments. *Anaesthesia* 2008; 63: 1234-1237 [Link](#)

31. Boye S, Schumacher J. Diagnosis of vertebral canal haematoma by myelography and spiral CT in a patient with an implantable cardioverter defibrillator contraindicating MRI. *British Journal of Anaesthesia* 2009;103:137-138 [Link](#)

32. Schumacher J, Gray SA, Weidelt L, Prior K, Brinker A, Stratling WM. Comparison of powered and conventional air-purifying respirators during simulated resuscitation of CBRN victims. *Emergency Medical Journal* 2009; 26:501-505 [Link](#)

33. Brinker A, Prior K , Schumacher J. Personal protection during resuscitation of CBW victims. A survey among medical first receivers in the United Kingdom. *Prehospital and Disaster Medicine* 2009; 24(6):525-528 [Link](#)

34. Schumacher J, Weidelt L, Gray SA, Brinker A. Evaluation of bag valve mask ventilation by paramedics in simulated CBRN environments. *Prehospital and Disaster Medicine* 2009; 24(5): 398-401 [Link](#)

35. J. Schumacher, C. Wille, J. Vesper. Management of postoperative respiratory failure in a patient with acute diaphragmatic status dystonicus. *British Journal of Anaesthesia* 2012; 108: 329-330 [Link](#)

36. Schumacher J, Gray SA, Michel S, Alcock R, Brinker A. Respiratory protection during simulated emergency pediatric life support. *Prehospital and Disaster Medicine* 2013; 28:33-8 [Link](#)
37. Schumacher J, Stratling MWM. Laryngeal reflex responses in anaesthetised children: breach of international research governance. *Anaesthesia* 2013;68:979-80 [Link](#)
38. Schumacher J, Woodham V, Bond A, Buckingham A, Garnham F, Brinker A. Survey of UK Health Care First Responders' Knowledge of Personal Protective Equipment Requirements. *Prehospital and Disaster Medicine* 2015;30:254-8 [Link](#)
39. Schumacher J, Stoesslein E, Brinker A: Eye Protection in Anaesthesia. *Anaesthesia* 2016; 71:1499-1500 [Link](#)
40. Schumacher J, Arlidge J, Garnham F, Ahmad I. A randomised crossover simulation study comparing the impact of chemical, biological, radiological or nuclear substance personal protection equipment on the performance of advanced life support interventions. *Anaesthesia*. 2017 May;72(5):592-597 [Link](#)

Collaborator for

Moonesinghe SR, Walker EM, Bell M; SNAP-1 Investigator Group. Design and methodology of SNAP-1: a Sprint National Anaesthesia Project to measure patient reported outcome after anaesthesia. *Perioper Med (Lond)*. 2015 Apr 17;4:4 [Link](#)

2. Review articles

1. Klotz KF, Schumacher J, Schmucker P. Organ specific changes of infusion therapy with hydroxyethylstarch solutions. *Int J Intens Care* 1999; 6: 93-101
2. Schumacher J, Klotz KF. Perioperative infusion therapy
Anesthesiol Intensivmed Notfallmed Schmerzther 2001; 36: 225-242 [Link](#)
3. Schumacher J, Klotz KF. Anaesthesia in aortal surgery. Part 1
Anesthesiol Intensivmed Notfallmed Schmerzther 2002; 37(9): 559-581
[Link](#)
4. Schumacher J, Klotz KF. Anaesthesia in aortal surgery. Part 2
Anesthesiol Intensivmed Notfallmed Schmerzther 2002; 37(10): 609-627
[Link](#)
5. Schumacher J, Klotz KF. Fluid Therapy during Cardiac Anaesthesia and Intensive Care. *Applied Cardiopulmonary Pathophysiology* 2009; 13: 138-142 [Link](#)

3. Monographs

1. "The Pool-Immunofluorescence-Test for diagnosing neonatal septicaemia."

April 1995, University of Hamburg, Germany, Department for clinical Immunopathology and perinatal Immunology, *Medical Thesis* [Link](#)

2. "Secondary fluid-volume changes during haemorrhage and fluid resuscitation "

June 2004, University of Luebeck, Germany, Department of Anaesthesiology, *PhD Thesis*, Pabst Science Publishers, ISBN 978-3-89967-655-6 [Link](#)

4. Chapters in Books

1. Schumacher J (2002) Anaesthesia in the Internet. In Schäfer R, Eberhardt M, (eds.), Klinikleitfaden Anästhesie. 4th ed. Gustav Fischer Verlag: Stuttgart, ISBN 3437414801
2. Schumacher J, Klotz KF (2002) Anaesthesia for Orthopaedic Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 4th ed. Gustav Fischer Verlag: Stuttgart, ISBN 3437414801
3. Schumacher J, Klotz KF (2002) Anaesthesia for Cardiac Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 4th ed. Gustav Fischer Verlag: Stuttgart, ISBN 3437414801
4. Schumacher J (2005) Anaesthesia in the Internet. In Schäfer R, Eberhardt M, (eds.), Klinikleitfaden Anästhesie. 5th ed. Gustav Fischer Verlag: Stuttgart, ISBN 3437238906
5. Schumacher J (2005) Anaesthesia for Orthopaedic Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 5th ed. Gustav Fischer Verlag: Stuttgart, ISBN 3437238906 [Link](#)
6. Heringlake M, Schumacher J, (2005) Anaesthesia for Cardiac Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 5th ed. Gustav Fischer Verlag: Stuttgart, ISBN 3437238906
7. Schumacher J , Söding P (2010) Anaesthesia for Trauma and Orthopaedic Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 6th edition. Gustav Fischer Verlag: Stuttgart, ISBN 3437238914
8. Schumacher J (2010) Anaesthesia for General Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 6th edition. Gustav Fischer Verlag: Stuttgart, ISBN 3437238914

9. Schumacher J (2010) Anaesthesia for Vascular Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 6th edition. Gustav Fischer Verlag: Stuttgart, ISBN 3437238914
10. Schumacher J (2010) Anaesthesia for Thoracic Surgery. In Schäfer R, Eberhardt M (eds.), Klinikleitfaden Anästhesie. 6th edition. Gustav Fischer Verlag: Stuttgart, ISBN 3437238914 [Link](#)
11. Schumacher J (2018) Respiratory Protection During High-Fidelity Simulated Resuscitation of Casualties Contaminated with Chemical Warfare Agents. In Racz L, Eninger R, Yamamoto D (eds.), Handbook of Respiratory Protection: Safeguarding Against Current and Emerging Hazards. 1st edition, Taylor and Francis, New York, USA
ISBN13: 9781498781145 [Link](#)

5. Published Abstracts

1. Standl T, Wilhelm S, Schumacher J. TIVA or balanced Anaesthesia for children undergoing ophthalmic surgery? *Der Anästhesist* 1995; 44 (Suppl. 2): 45.
2. Standl T, Wilhelm S, Horn P, Schumacher J, Schulte am Esch J. Preliminary experience with ultra-purified bovine hemoglobin in patients undergoing preoperative hemodilution prior to liver resection. *Anesthesiology*. 1996;85(3A):A63.
3. Standl T, Wilhelm S, Burmeister M, Brauer P, Horn EP, Schumacher J, Schulte am Esch J. Long-term follow-up study in liver resection patients receiving a haemoglobin-based oxygen carrier. *Crit Care*. 1997; 1(Suppl 1): P092. doi:10.1186/cc78
4. Eichler W, Schumacher J, Vogel R, Klotz KF. Tissue thickness shift detection by a new miniature ultrasound device in anaesthetic practice. *Br J Anaesth* 1998; 80 (Suppl. 1): 47.
5. Eichler W, Vogel R, Schumacher J, Klaus S, Klotz KF. Tissue thickness measurement by ultrasound – evaluation of a new method. *Anesthesiol Intensivmed Notfallmed Schmerzther* 1998; 33 (Suppl. 3): S503.
6. Schumacher J, Engelke A, Eichler W, Hagelberg S, Klotz KF. Tissue thickness shift detection by a new ultrasound device during the perioperative period of healthy surgical patients. *Br J Anaesth* 1998; 80 (Suppl. 1): 47.
7. Schumacher J, Hagelberg S, Engelke A, Klotz KF. Differences of tissue thickness due to body posture during the perioperative period. *Anesthesiol Intensivmed Notfallmed Schmerzther* 1998; 33 (Suppl. 3): S533-S534.

8. Eichler W, Schumacher J, Eisenbeiß C, Vogel R, Klotz KF. Miniatur Ultraschallgerät zur Bestimmung perioperativer Gewebsdickenänderungen *Anaesth Intensivmed* 1999; 5: 451.
9. Eichler W, Bechtel JFM, Schumacher J, Eickelberg O, Sommerfeld CO, Loerx R, Klotz KF. Matrix Metalloproteinasen des Schweins während extrakorporaler Zirkulation. *Anaesth Intensivmed* 1999; 5: 441.
10. Eichler W, Eisenbeiß C, Schumacher J, Klaus S, Klotz KF. Changes of interstitial fluid volume detected by a miniature ultrasound device. *Acta Anaesth Scand* 1999; 43 (Suppl.): 114.
11. Heringlake M, Klaus S, Schumacher J, Bahlmann L, Schmucker P. Effects of non-invasive ventilation on atrial peptide and renal function. *Intensive Care Med* 1999; 25 (Suppl 1) S:156.
12. Heringlake M, Wagner K, Schumacher J, Pagel H, Schmucker P. The influence of aldosterone and angiotensin II on the diuretic effects of atrial natriuretic peptide in the isolated perfused rat kidney. *Crit Care* 1999; 3 (Suppl 1): P 207.
13. Klaus S, Schumacher J, Eichler W, Bahlmann L, Klotz KF. Assessment of intraoperativ fluid shifts by CVP and ultrasonic measurement. *Acta Anaesthesiologica Scandinavica* 1999; 43 (Suppl.): 114.
14. Klotz KF, Wienstroth S, Schumacher J, Schmucker P. Skin laser-Doppler-fluxmetry reflects stimuli during induction of anesthesia. *Anesth Analg* 1999, 88 (Suppl. 2): S 143.
15. Schumacher J, Engelke A, Klaus S, Eichler W, Wagner KF, Klotz KF. Changes of the peripheral tissue thickness due to fasting and infusion therapy in different sexes. *Acta Anaesth Scand* 1999; 43 (Suppl.): 114.

16. Schumacher J, Kreft B, Rob P, Wagner KF, Eichler W, Klotz KF. Veränderungen des Durchmessers der Vena cava inferior und der Hautschichtdicke während akutem Flüssigkeitsentzug. *Anaesth Intensivmed* 1999; 5: 385.
17. Schumacher J, Rob P, Engelke A, Eichler W, Heringlake M, Klotz KF. Ultrasonographische Messung von interkompartimentellen Flüssigkeitsverschiebungen während der Hämodiafiltration. *Anaesth Intensivmed* 1999; 5: 385.
18. Schumacher J, Rob P, Kreft B, Heringlake M, Klotz KF. Measurement of intercompartmental fluid volume changes during hemodialysis by a-mode ultrasonography. *Anesth Analg* 1999; 88 (Suppl. 2): S 196.
19. Wagner KF, Heringlake M, Schumacher J, Nakagawab R, Leffler D, Otagiri T, Schmucker P. Effect of inducible NO-Synthetase Inhibition On Skeletal Muscle Arteriolar Diameter in Septicemia. *Intensive Care Medicine* 1999; 25 (Suppl.1): S 207.
20. Wagner K, Rösler M, Leffler D, Heringlake M, Schumacher J, Klotz KF, Schmucker P. Skeletal muscle microcirculation in early hyperdynamic septicemia treated with aminoguanidine. *Br J Anaesth* 1999; 82: 433.
21. Eichler W, Leyh RG, Scheemann K, Schumacher J, Bahlmann L, Braun J, Klotz KF. Bedeutung von MMP-2 und 9 für die Lungenschädigung nach extrakorporaler Zirkulation im Tiermodell. *Anästh Intensivmed* 2000, 41: 433.
22. Eichler W, Schumacher J, Klaus S, Braun J, Klotz KF. FRC-Messung mittels Sauerstoffauswasch während Spontanatmung und kontrollierter Beatmung. *Anästh Intensivmed* 2000; 41: 336.

23. Eichler W, Schumacher J, Klaus S, Braun J, Klotz KF. Der offene Sauerstoffauswasch zur Bestimmung der funktionellen Residualkapazität während Spontanatmung und kontrollierter Beatmung. *Biomed Tech* 2000; 45: 237.
24. Heringlake M, Bahlmann L, Klaus S, Schumacher J, Schmucker P, Pagel H. Effects of endothelin-1 on the renal excretion of urodilatin in the isolated perfused rat kidney. *Intensive Care Med* 2000; 26 (Suppl. 3): S 226.
25. Heringlake M, Klaus S, Bahlmann L, Gosch U, Schumacher J, Wilke I, Schmucker P. Plasma urodilatin is increased after cardiac surgery. *Intensive Care Med* 2000, 26 (Suppl. 3): S 257.
26. Schumacher J, Marsch J, Heringlake M, Gehring H, Klotz KF. Wirkung von Desfluran, Sevofluran und Isofluran auf die dermale Mikrozirkulation *Anästh Intensivmed* 2000; 41: S 388.
27. Schumacher J, Russlies M, Eichler W, Grossherr M, Klotz KF. Sedierungsverfahren während Spinalanästhesien beim Schaf. *Anästh Intensivmed* 2000; 41: S 478.
28. Schumacher J, Eichler W, Heringlake M, Gosch U, Sievers HH, Klotz KF. Interkompartimentelle Flüssigkeitsverschiebungen während Operationen mit extrakorporaler Zirkulation. *Anästh Intensivmed* 2001; 42: S 5.
29. Schumacher J, Eichler W, Heringlake M, Gosch U, Sievers HH, Klotz KF. Evaluation of Intercompartmental Fluid Volume Shifts during Cardiopulmonary Bypass by A-Mode Ultrasonography. *Anesthesiology* 2001; 95: A 562.
30. Gosch U, Iven H, Schumacher J, Heringlake M, Lang C, Klotz KF. Vergleich der rostralen Ausbreitung von L-Bupivacain, Ropivacain und Mepivacain bei der Periduralanästhesie am Schaf. *Anästh Intensivmed* 2002; 43: S6.

31. Heringlake M, Elefteriades S, Bahlmann L, Klaus S, Eichler W, Schumacher J, Heinzinger M, Kraatz E, Schmucker P. The relationship between plasma urotensin II (hU-II) and pulmonary artery occlusion pressure during cardiac surgery. *Crit Care* 2002; 6 (Suppl. 1): P146.
32. Eichler W, Bechtel JFM, Klaus S, Schumacher J, Hernandez M, Toerber K, Bartels C, Klotz KF. Der Na/H Austauschhemmer Cariporide – Einfluß auf den Gasaustausch nach Cardiopulmonalem Bypass. *Intensivmed Notfallmed* 2003; 40: P15.
33. Heringlake M, Klaus S, Bahlmann L, Schumacher J, Schmucker P, Pagel H. The effect of a decrease in arterial blood pressure on renal urodilatin excretion in anesthetized rats. *Crit Care* 2003; 7 (Suppl 2): P194.
34. Schumacher J, Binkowski K, Dendorfer A, Heringlake M, Eichler W, Klotz KF. Effects of Candesartan and Enalaprilat on the Organ-specific microvascular permeability during haemorrhagic shock in rats. *Eur J Anaesthesiol* 2004; 21, (Suppl 32) 56.
35. Frank I, Eichler W, Schumacher J, Nehring M, Welsch H, Klotz KF. Changes of interstitial fluid volume in superficial tissues induced by hypergravity (+2Gz) and nil-by-mouth period detected by a miniature ultrasound device. *Eur J Anaesthesiol* 2004; 21, (Suppl 32) 26.
36. Gosch U, Lang C, Schumacher J, Heringlake M, Iven H, Klotz KF. Intrathecal spread of mepivacaine , ropivacaine and levobupivacaine after epidural application in sheep. *Eur J Anaesthesiol* 2004; 21, (Suppl 32) 118.
37. Brinker A, Gray SA, Schumacher J. Influence of air-purifying respirators on the simulated first response emergency treatment of CBRN victims. *Eur J Anaesthesiol* 2007; 24, (Suppl 39) 166.

38. Schumacher J, Runte J, Brinker A, Prior K, Heringlake M, Eichler W. Respiratory protection during high fidelity simulated resuscitation of casualties contaminated with chemical warfare agents. *German Annual Anaesthesia Conference 2007*.
39. Stratling M, Niggebrügge C, Wüllenweber, Peters D, Graw M, Schumacher J. The centennial of Draeger's Pulmotor (1907-2007) an important breakthrough in the international history of ventilation and resuscitation. *Anaesthesia 2007; 63*, 111.
40. Schumacher J, Brinker A, Stratling M. Evaluation of bag valve mask ventilation in simulated toxic environments. *Anaesthesia 2007; 63*, 912.
41. Niggebrügge C, Graw M, Burckett-St.Laurent D, Schumacher J, Heinze H, Strätling MWM. 100 Jahre Pulmotor-Neue Erkenntnisse zu einem entscheidenden Meilenstein in der Geschichte der modernen Rettungsmedizin und Beatmungstechnik. *German Annual Anaesthesia Conference 2008*.
42. Schumacher J, Brinker A, Weidelt L, Gray SA, Stratling MWM. Comparison of powered and conventional air-purifying respirators during resuscitation of CBRN victims. *Eur J Anaesthesiol 2008; 25*, Supplement 44: 189.
43. Brinker A, Stratling MWM, Gray SA, Weidelt L, Schumacher J. Bag valve mask ventilation in simulated CBRN environments. *Eur J Anaesthesiol 2008; 25*, Supplement 44: 190.
44. Stratling MWM, Wüllenweber K, Niggebrügge C, Hilbert A, Schumacher J. The history of early respirators (mid1800s - 1918) – re-assessing the main "technology transfer", which lead to the development of modern anaesthesia apparatuses. 7th International Symposium on the History of Anaesthesia, Heraklion, Crete, Greece, October 2009. Book of Abstracts: 83 (Award for best paper, [Link](#)).

45. Schumacher J, Gray SA, Michel S, Alcock R, Brinker A. Respiratory protection during paediatric cardiopulmonary resuscitation. *Eur J Anaesthesiol* 2011; 28, Supplement 46: 193
46. Brinker A, Gray SA, Michel S, Schumacher J. Vascular access skills during cardiopulmonary resuscitation in hazardous environments. *Eur J Anaesthesiol* 2012; 29, Supplement 50: 191
45. Woodham V, Brinker A, Schumacher J. Anaesthetists as first receivers of CBRN casualties: Re-auditing personal protective equipment familiarity. *Anaesthesia*. 2014;69, S2:p29
46. Bond A, Buckingham A, Schumacher J. A survey of UK acute clinicians knowledge of personal protective equipment requirements for infectious diseases and chemical, biological, and radiological warfare agents. *Critical Care* 2015, 19(Suppl 1):P86 (doi: 10.1186/cc14166)

6. Published Letters

1. Schumacher J, Stratling MWM. Laryngeal reflex responses in anaesthetised children: breach of international research governance.
Anaesthesia 2013;68:979-80
doi: 10.1111/anae.12397, [Link](#)
2. Schumacher J, Arlidge J. Risk Management in Personal Protective Equipment trials.
British Medical Journal open 2016 ;6:e010250
doi:10.1136/bmjopen-2015-010250, [Link](#)

7. Chairs in International Conferences

- | | |
|------|---|
| 2004 | The World Congress of Anaesthesiologists, Paris, France
Conference C010: Fluid Therapy: <i>The Present</i> |
| 2014 | SETSA Meeting, London, United Kingdom
Academic part of the meeting including best poster competition |

8. Clinical Audits

1. Lung Protective Ventilation during Adult Surgical Anaesthesia
GSTFT Project No 4365, 2014
2. Eye Protection of Staff working in Anaesthesia
GSTFT Project No 6215, 2016
3. Personal Protection Equipment Survey for Medical First Receivers,
GSTFT Project no 3861, 2016
4. Risk Potential: Device Diversity in Anaesthetics
GSTFT Project No 7084, 2017

9. National Audits

Moonesinghe SR, Walker EM, Bell M; SNAP-1 Investigator Group. Design and methodology of SNAP-1: a Sprint National Anaesthesia Project to measure patient reported outcome after anaesthesia. *Perioper Med (Lond)*. 2015 Apr 17;4:4 [Link](#)

11. Supervision of PhD Students, Primary Investigator

1. Dr Lena Hauenschild: Perioperative myocardial ischaemia's. Effects of different volumes of oxygen insufflation during the early postoperative period. 2005
University of Luebeck, Germany, [Link](#)
2. Dr Kathrin Binkowski: Changes in organ specific capillary permeability during haemorrhagic shock and blockade of the renin angiotensin system. 2006
University of Luebeck, Germany, [Link](#)
3. Dr Jan Runte: Respiratory protection during high fidelity simulated resuscitation of casualties contaminated with chemical warfare agents - Respiratory protection for anaesthetists during resuscitation. 2008
University of Luebeck, Germany, [Link](#)
4. Dr Lena Weidelt: Comparison of powered and non-powered air purifying respirators during simulated resuscitation of chemical warfare casualties. 2009
University of Luebeck, Cooperation with London Ambulance Service, Germany, [Link](#)
5. Cand. med. Sophie Michel: Emergency paediatric life support under CBRN conditions. University of Luebeck, Germany, Cooperation with London Ambulance Service, Completion due in 2011

Supervision of PhD Students, Second Assessor

1. Dr. med. Maria Christine Howitz: Effekte einer akuten Hyperglykämie auf den Hochenergiephosphatmetabolismus in Gehirn und Muskulatur beim Menschen. 2007 University of Luebeck, Germany, [Link](#)
2. Dr. med. Christian Stahl: Vergleich von computer-gesteuerter, protokollbasierter Entwöhnung mit arztgesteuerter Entwöhnung vom Beatmungsgerät bei chirurgischen Intensivpatienten. 2008 University of Luebeck, Germany, [Link](#)
3. Dr. med. Christian Enzensberger: Intraoperative Hämodynamik klappentragender Biomechanischer Herzen bei erwachsenen Burenziegen. 2009 University of Luebeck, Germany, [Link](#)
4. Dr. med. Marc-Bastian Fiebig: Stressoren und Burnout bei Rettungsdiensten in Stadt und Land. 2010 University of Luebeck, Germany, [Link](#)

12. Current Research Projects: Resuscitation

Currently I am conducting studies investigating the influence of personal protective equipment on the emergency treatment of CBRN victims. Therefore, I am liaising with the London Ambulance Service and the Emergency Preparedness Division of the Department of Health. All studies are supported by TYCO Healthcare UK, Draeger Safety and Bluecher Germany.

The most recent study is supported by National Institute for Health Research Clinical Research Network (NIHR CRN) Portfolio (IRAS Ref: 130034. Study ID: 15022, First Responders Respiratory Protection during advanced life support in CBRN environments. [Link](#)

The next project is currently undergoing local R&D and Ethics review: Difficult Airway Management in Hazardous Environments "DAMHE - study".

Previous Research Projects: Capillary leak

The focus of my research over the last years focused on fluid therapy and capillary leak syndromes. Our group investigated if interstitial fluid volume changes during various perioperative situations can be detected by measuring the peripheral tissue thickness by A-Mode ultrasound. Besides these clinical studies we also investigated on organ-specific albumin extravasation during non-resuscitated haemorrhagic shock or in the presence of Renin Angiotensin Blockade in an animal model.

13. Impact factors (IF*) of all publications

Journal	First/Senior- author	Co- Autor	IF	IF Total
Acta Anaesthesiol Scand		1	2.260	2.260
Appl Cardiopulm Pathophysiol	1			
AINS	1	1	0.200	0.400
Am J Physiol		1	5.044	5.044
Anaesthesia	4		3.486	13.944
Anesth Analg		2	3.083	6.166
Blood Purif	1		2.101	2.101
Br J Anaesth	4		4.224	16.896
Br Med J	1		9.245	9.245
Eur J Anaesth		1	1.859	1.859
EMJ	1		1.477	1.477
Focus MUL		1		
Int Care Medicine		2	5.168	10.336
J Appl Physiol		1	2.781	2.781
J Clin Monit Comput	1	1		
J Crit Care	1		2.127	2.127
J Endocrinol Invest		1	1.347	1.347
Lab Animal (NY)	2		0.388	0.776
Lab Animal (UK)	1		0.942	0.942
New Eng J Med	1		31.74	31.74
Nieren- und Hochdruckkrankheiten		1		
Perfusion	1	1	0.642	1.284
Prehosp Dis Med	3			
Resuscitation	2		2.712	5.424
Shock	1		2.871	2.871
Total (publications with IF)	21	11		116.919
personal, cumulative IF score			116.919	
personal, mean IF score			116.919/ 32	<u>3.66</u>

List of all publications, including original papers, reviews, correspondence and case reports.

* Reference: Journal Citation Reports® 2006 or current IF according to the journals webpage