

Curriculum Vitae – Status: 03.2020

NAME Katja Schenke-Layland		POSITION Professor of Medical Technologies and Regenerative Medicine	
EDUCATION/ TRAINING			
INSTITUTION AND LOCATION	DEGREE(s)	YEAR(s)	FIELD(s) OF STUDY
UCLA, Cardiovascular Research Laboratories, Los Angeles/CA, USA	Postdoctoral Research Fellow	2005-2008	Stem Cell Research/ Cardiovascular Tissue Engineering
Children's Hospital Los Angeles, Saban Research Institute, Los Angeles/CA, USA	Postdoctoral Research Fellow	2004-2005	Cardiovascular Tissue Engineering
Friedrich Schiller University (FSU) Jena, Germany	Dr.rer.nat.	2001-2004 (23.9.2004)	Biology/ Cardiovascular Tissue Engineering
Friedrich Schiller University (FSU) Jena, Germany	M.Sc.	1995-2000	Biology, Sociology, Psychology

Personal Information:

Birth Date/Place: March 21st 1977; Eisenach, Germany
 Citizenship: Dual Nationality: U.S. and German
 Website: <http://www.schenke-layland-lab.com>
 Work Addresses: [Eberhard Karls University Tübingen](#)
[Department of Women's Health](#)
[Research Institute for Women's Health at the University Hospital](#)
 Silcherstrasse 7/1, 72076 Tübingen, Germany
[Natural and Medical Sciences Institute \(NMI\) at the University of Tübingen](#)
 Markwiesenstr. 55, 72770 Reutlingen, Germany

Phone: +49 7071-29-85206 (assistant - Diana Holzer);
 +49 7121 5153037 (assistant - Ira Digel)

Work E-Mail: katja.schenke-layland@uni-tuebingen.de
katja.schenke-layland@nmi.de

**Professional Experience:**

since 04/2018 **Director**, Natural and Medical Sciences Institute at the University of Tübingen, Reutlingen, Germany (www.nmi.de/en)

since 01/2018 **Co-Editor-in-Chief**, Tissue Engineering, Part B (Mary Ann Liebert)

since 11/2011 **Full Professor (W3)**, Eberhard Karls University Tübingen (EKUT), Dept. of Women's Health, Research Institute for Women's Health, Tübingen, Germany

since 01/2012 **Executive Editor**, Advanced Drug Delivery Reviews (ADDR) (Elsevier)

since 08/2018 **Project Scientist**, University of California Los Angeles (UCLA), Dept. of Medicine/ Cardiology, Cardiovascular Research Laboratories (CVRL), Los Angeles, CA, USA

11/2013-07/2018 **Adjunct Associate Professor**, UCLA, Dept. of Medicine/ Cardiology, Los Angeles, CA, USA

01/2016-11/2017 **Director (interim, executive)**, Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB), Stuttgart, Germany

04/2013-11/2017 **Department Head**, Fraunhofer IGB, Dept. of Cell and Tissue Engineering, Stuttgart, Germany

01/2010-09/2013 **Visiting Associate Professor**, UCLA, Dept. of Medicine/ Cardiology, Los Angeles, CA, USA

01/2010-12/2014 **ATTRACT-Group Leader**, Fraunhofer IGB, Stuttgart, Germany

01/2010-03/2013 **Deputy Department Head**, Fraunhofer IGB, Dept. of Cell and Tissue Engineering, Stuttgart, Germany

11/2008-12/2009 **Assistant Research Professor**, UCLA, Dept. of Medicine/ Cardiology, Los Angeles, CA, USA

Overview of Peer-Reviewed Publications:

Peer-Reviewed Articles	Original Articles:	106
	Review Articles, Editorials, Commentaries, etc.:	27
	Senior/First Authorships:	51/24
	Book Chapters:	6
Citations <small>ISI Web of Science</small>	Sum of the times cited:	4408
Citations <small>Scopus</small>		4855
Total Impact Factor Points		608
h-Index <small>ISI Web of Science</small>		39
h-Index <small>Scopus</small>		40

Patents:

- "Glycosylated protein of an extra-cellular matrix for use in a method of treating diabetes in a human or animal subject", EP3027201B1
- "A method and apparatus for providing a desired target protein expression cell line", DE102017207262A1
- "Markers for human cardiac stem cells for regenerative therapies", USA, *US Prov App Serial No. 61/828,502*
- "Glycosylated protein of an extra-cellular matrix for use in a method of treating an ischemic heart of a human or animal subject in need thereof", PCT/EP2014/066497

Selected Awards:

- **CyberOne Business Plan Competition Finalist** (2016)
- **RPB Harold F. Spalter International Scholar Award** (2016)
- **Tissue Engineering and Regenerative Medicine International Society (TERMIS)-EU Young Investigator Award** (2014)
- **Young Investigator Morphological Sciences Award**, American Association of Anatomists (2010)
- **Best Young Researcher Award/ Family Klee Prize**, German Society for Biomedical Engineering (2004)
- **Teaching Award Best Module - Vital Implants**, Eberhard Karls University Tübingen (2016)
- **Teaching Award Best Module - Vital Implants**, Eberhard Karls University Tübingen (2014)
- **Teaching Award Best Module - Vital Implants**, Eberhard Karls University Tübingen (2013)

Conference Leadership:

- **Conference Host** (2018) Annual Meeting of the German Society of Matrix Biology (DGMB), Stuttgart, Germany
- **Conference Host** (2016) 9th European Elastin Meeting 2016, Stuttgart, Germany
- **Conference Host** (2015) bone-tec, Stuttgart, Germany
- **Conference Co-Host** (2013) Annual Meeting DGMB, Tübingen, Germany

Academic Institutional Responsibilities

- 2019-present **University Senate**, EKUT, Germany
- 2018-present **Study Dean - Medical Technology**, Medical Faculty, EKUT, Germany
- 2016-2018 **Deputy Study Dean - Medical Technology**, Medical Faculty, EKUT, Germany
- 2016-present **Science Strategy Committee**, EKUT, Germany
- 2016-2018 **Klinikumsrat** (Hospital Senate), Medical Faculty, EKUT, Germany
- 2014-present **Technology Transfer Committee**, Medical Faculty, EKUT, Germany
- 2014-present **Science Committee**, Medical Faculty, EKUT, Germany
- 2014-2018 **Habilitation Committee**, Medical Faculty, EKUT, Germany
- 2013-2018 **Member Medical Faculty**, UCLA, USA
- 2012-present **Member Faculty of Science**, EKUT, Germany
- 2011-present **Member Medical Faculty**, EKUT, Germany

Selected National and International Committees and Boards:

- 2019-present **National Academy of Science and Engineering** (acatech)
- 2019-present **TERMIS-European Chapter, Continental Council Member**
- 2018-present **German Central Ethics Committee for Stem Cell Research** (ZES)
- 2018-present **Editorial Board, Matrix Biology** (Elsevier)
- 2018-present **Editorial Board, Current Opinion in Biomedical Engineering** (Elsevier)
- 2017-present **Board Member, Health-i Initiative**
- 2017-present **TERMIS-European Chapter, Strategic Alliance Committee**
- 2016-present **Board Member, German Society for Matrix Biology e.V.** (DGMB)
- 2016-present **Editorial Board, Journal of 3D Printing in Medicine** (Future Medicine)
- 2015-present **Editorial Board, Tissue Engineering**, Parts A, B and C (Mary Ann Liebert)
- 2015-present **Editorial Board, Scientific Reports** (Nature Publishing Group)
- 2014-present **Advisory Board, Journal of Materials Chemistry B** (Wiley)
- 2012-present **bone-tec Scientific Board**
- 2017 **Jury Member, Falling Walls Lab Germany**
- 2017-2018 **German-Israeli Foundation (GIF) Advisory Board** – Cancer and Biomedical Research Committee
- 2015-2017 **Fraunhofer Vintage Class**
- 2012-2015 **American Association of Anatomist (AAA) Postdoctoral Awards Committee**
- 2011-2015 **AAA Scientific Affairs Committee**

Selected Memberships/ Invited Fellowships:

- 2017-present **International Society of Matrix Biology**
- 2015-present **Fellow, European Alliance for Medical and Biological Engineering and Science (EAMBES)**
- 2013-present **DGMB**
- 2010-present **TERMIS**
- 2005-present **International Society for Stem Cell Research (ISSCR)**
- 2010-2015 **American Association of Anatomist (AAA)**

Teaching Conceptualization and Coordination:

Coordinator Module "Vital Implants", B.Sc. Medical Technology (Medizintechnik), EKUT, Germany

Coordinator Module "Implantology", M.Sc. Biomedical Technologies, EKUT, Germany

Instructor FELASA C, TIZ-BIFO, Munich, Germany

Special Issue Editorships (selection):

- "Biomechanics" *Matrix Biology* (2019) *in press*
- "The Future of Tissue Engineering" *Current Opinion in Biomedical Engineering* 6 (2018)
- "Extracellular Matrix Proteins and Mimics in Regenerative Medicine and Tissue Engineering" *Acta Biomaterialia* 52 (2017)
- "Strategies in Tissue Engineering" *Biotechnology Journal* 8(3) (2013)
- "From Tissue Engineering to Regenerative Medicine – The Potentials and the Pitfalls" *Advanced Drug Delivery Reviews* 63(4-5) (2011)

Invited Mentoring Programs:

- **Leibniz-Mentoring Program** (2017-2018)
- **TERMIS America SYIS** (2013), Atlanta, USA
- **TERMIS Europe SYIS** (2010), Galway, Ireland
- **MINT and WISP Program**, Germany

International Journal Reviewer (selection, alphabetically listed):

Acta Biomaterialia • Advanced Biomaterials • Advanced Drug Delivery Reviews • Advanced Functional Materials • American Journal of Transplantation • Biofabrication • Biomaterials • Biomedical Materials • Cardiovascular Pathology • Circulation • Circulation Research • eLife • EMBO Journal • International Journal of Pharmaceutics • Journal of Anatomy • Journal of Biophotonics • Journal of Investigative Dermatology • Journal of the Royal Society Interface • Journal of Structural Research • Macromolecular Bioscience • Matrix Biology • Molecular Therapy • PLoSOne • PNAS • Scientific Reports • Tissue Engineering Part A, B and C

International Grant Reviewer (selection):

- **Australia** – Australian Research Council (ARC)
- **Austria** – Austrian Science Fund (FWF)
- **Belgium** – Research Council: Katholieke Universiteit Leuven
- **Canada** – ALS Society of Canada
– Québec Consortium for Drug discovery (CQDM)
- **EU** – ERC Starting Grant and Consolidator Grant
- **Finland** – Academy of Finland
- **France** – L'Agence national de la recherche (ANR)
- **Germany** – Deutsche Forschungsgemeinschaft/ German Research Foundation (DFG)
– Bundesministerium für Bildung und Forschung/ Fed. Min. of Education and Research (BMBF)
– Alexander von Humboldt Foundation
– Helmholtz Association (Young Investigator Groups)
– VolkswagenStiftung
– Deutsche Krebshilfe
- **Iceland** – Icelandic Research Fund
- **Ireland** – Science Foundation Ireland (SFI)
- **Israel** – Israeli Ministry of Science, Technology and Space
– Advisor, German-Israeli Foundation (GIF)
- **Netherlands** – Dutch Technology Foundation STW
– Dutch Burns Foundation
- **UK** – Arthritis Research
– UK Regenerative Medicine Platform

Certifications:

- FELASA B and C (EU certified animal safety instructor/supervisor)
- Laser Safety Officer (VBG 93/BGV B2)
- Certificate, Training for project leaders in biological safety (§ 15 Abs. 2 GenTSV)

Other Notable Accomplishments:

- Handelsblatt magazine's Top 100 Innovators in Germany (2017)
- Academia.net top 100 female scientists in Germany (2010)
- Nominee UCLA Chancellor's Award for Postdoctoral Research (2007)

Ongoing Support as PI:

DFG <i>Cluster of excellence iFIT (EXC 2180)</i>	390900677	since 2019	€60.000
EU Horizon 2020-MSCA-ITN-EID <i>DELIVER (EKUT)</i>	812865	2019-2022	€505.576
DFG <i>Blood vessel tissue engineering (EKUT)</i>	SCHE701/14-1	2016-2019	€217.150
EU Horizon 2020 NMP-10-2014 <i>DRIVE (EKUT)</i>	645991	2015-2019	€679.153
Ministry of Economic Affairs Baden-Württemberg <i>Large Instrument Grant- Raman/CARS Microspectrometer</i>		2019	€700.000
University Hospital Teaching Program PROFIL		2020	€30.000

Completed Support as PI:

Ministry of Economic Affairs Baden-Württemberg <i>Large Instrument Grant</i>		2018	€700.000
Ministry of Economic Affairs Baden-Württemberg <i>Large Instrument Grant</i>		2018	€200.000
Fraunhofer MAVO <i>OptisCell (Fh-IGB)</i>	122610	2015-2018	€306.876
EU FP7 NMP3-SME-2013-604531 <i>AMCARE (Fh-IGB)</i>	604531	2014-2017	€733.000
DFG <i>Ice Free Heart Valve Cryopreservation (EKUT)</i>	SCHE701/10-1	2014-2017	€125.250
ZIM – AiF <i>Artificial Heart Development (EKUT)</i>	KF3349501CR4	2015-2017	€174.756
DFG Large Instrument Grant <i>Raman Microspectroscope</i>	INST 2388/64-1	01.2017	€195.000
Industry-on-campus Fonds, MWK Baden-Württemberg <i>Raman Spectroscopy for intraoperative tissue differentiation (Fh-IGB/ IGVP)</i>	83820131	2012-2016	€133.173
MWK Baden-Württemberg <i>(EKUT)</i>	33-729.55-3/214	2015-2016	€200.000
University Hospital Teaching Program PROFIL		2015	€30.000
EU FP7 Marie Curie (Michael Monaghan)	331430	2013-2015	€168.794
BMBF-CIRM Collaborative Grant	0316059	2012-2015	€1.072.042
DFG Optical Cellular Reprogramming	SCHE701/7-1	2012-2015	€304.425
DFG Large Instrument Grant Fluorescence Microscope	INST 2388/34-1	05.2013	€127.758
DFG Large Instrument Grant 5D Multiphoton System	INST 2388/30-1	02.2013	€275.000
DFG Large Instrument Grant ImageStreamX	INST 2388/33-1	01.2013	€265.000
Ministry of Science, Research and the Arts (MWK) Baden-Württemberg	SI-BW 01222-91	08.2011	€750.000
MWK Baden-Württemberg	33-729.55-3/214	2012-2014	€300.000
Fraunhofer Attract Group Leader Grant	Attract 692263	2010-2014	€2.704.413
DFG Research Grant, Co-Investigator	STO 359/7-1	2007-2010	€240.000
NIH-Ruth L. Kirschstein Training Grant	5T32HL007895-10	2007-2009	\$165.000
DFG - Postdoctoral Research Fellowship	SCHE 701/2-1	2005-2007	€52.800

Complete List of Peer-Reviewed Publications (without book chapters; *authors contributed equally):

2020

1. Fibronectin adsorption on electrospun synthetic vascular grafts attracts endothelial progenitor cells and promotes endothelialization in dynamic in vitro culture. Daum R, Visser D, Wild C, Kutuzova L, Schneider M, Lorenz G, Weiss M, Hinderer S, Stock UA, Seifert M, **Schenke-Layland K**. *Cells in press*
2. Trans-mucosal efficacy of non-thermal plasma treatment on cervical cancer tissue and human cervix uteri by a next generation electrosurgical argon plasma device. Wenzel T, Carvajal Berrio DA, Reisenauer C, Layland S, Koch A, Wallwiener D, Brucker SY, **Schenke-Layland K**, Brauchle EM, Weiss M. *Cancers* 12(2): pii: E267 (2020)
3. The role of extracellular matrix in biomechanics and its impact on bioengineering of cells and 3D tissues. Urbanczyk M, Layland SL, **Schenke-Layland K**. *Matrix Biology* 85-86: 1-14 (2020) (Review)
4. Non-invasive marker-independent high content analysis of a microphysiological human pancreas-on-a-chip model. Zbinden A, Marzi J, Schlünder K, Probst C, Urbanczyk M, Black S, Brauchle EM, Layland SL, Kraushaar U, Duffy G, **Schenke-Layland K***, Loskill P*. *Matrix Biology* 85-86: 205-220 (2020)
5. Controlled heterotypic pseudo-islet assembly of human beta-cells and HUVECs using magnetic levitation. Urbanczyk M, Zbinden A, Layland SL, Duffy G, **Schenke-Layland K**. *Tissue Eng Part A in press*

2019

6. Molecular effects and tissue penetration depth of physical plasma in human mucosa analyzed by contact- and marker-independent Raman microspectroscopy. Wenzel T, Carvajal Berrio DA, Daum R, Reisenauer C, Weltmann KD, Wallwiener D, Brucker SY, **Schenke-Layland K**, Brauchle EM, Weiss M. *ACS Appl Mater Interfaces* 11(46): 42885-42895 (2019)
7. Hyaluronic acid as a macromolecular crowding agent for production of cell-derived matrices. Shendi D, Marzi J, Linthicum W, Rickards AJ, Dolivo DM, Keller S, Kauss MA, Wen Q, McDevitt TC, Dominko T, **Schenke-Layland K**, Rolle MW. *Acta Biomater* 100: 292-305 (2019)
8. Donor age significantly influences the Raman spectroscopic biomolecular fingerprint of human pancreatic extracellular matrix proteins following collagenase-based digestion. Spiers RM, Marzi J, Brauchle EM, Cross SE, Vaughan RH, Bateman PA, Hughes SJ, **Schenke-Layland K**, Johnson PRV. *Acta Biomater* 99: 269-283 (2019)
9. Merging organoid and organ-on-a-chip technology to generate complex multi-layer tissue models in a human Retina-on-a-Chip platform. Achberger K, Probst C, Haderspeck J, Bolz S, Rogal J, Chuchuy J, Nikolova M, Cora V, Antkowiak L, Haq W, Shen N, **Schenke-Layland K**, Ueffing M, Liebau S, Loskill P. *Elife* 27; 8 pii: e46188 (2019)
10. A bioresorbable biomaterial carrier and passive stabilization device to improve heart function post-myocardial infarction. Dolan EB, Hofmann B, da Vaal MH, Bellavia G, Straino S, Kovarova L, Pravda M, Velebny V, Daro D, Braun N, Monahan DS, Levey RE, O'Neill H, Hinderer S, Greensmith R, Monaghan MG, **Schenke-Layland K**, Dockery P, Murphy BP, Kelly HM, Wildhirt S, Duffy GP. *Mater Sci Eng C Mater Biol Appl* 103: 109751 (2019)
11. Cardiac fibrosis – A short review of causes and therapeutic strategies. Hinderer S, **Schenke-Layland K**. *Adv Drug Deliv Rev* 146: 77-82 (2019) (Review)
12. Why, When, Who, What, How, and Where for trainees writing literature review articles. Koons GL, **Schenke-Layland K**, Mikos AG. *Ann Biomed Eng* 47 (11): 2334-2340 (2019)
13. Dose-dependent tissue-level characterization of a medical atmospheric pressure argon plasma jet. Weiss M, Barz J, Ackermann M, Utz R, Ghoul A, Weltmann KD, Stope MB, Wallwiener D, **Schenke-Layland K**, Oehr C, Brucker S, Loskill P. *ACS Appl Mater Interfaces* 11(22): 19841-19853 (2019)
14. Non-invasive detection of DNA methylation states in carcinoma and pluripotent stem cells using Raman microspectroscopy and imaging. Daum R, Brauchle EM, Carvajal Berrio DA, Jurkowski TP, **Schenke-Layland K**. *Sci Rep* 9(1):7014 (2019)
15. Tissue Engineering: Celebrating 25 years in publication and collaboration. Mikos AG, Fisher JP, **Schenke-Layland K**, Shin H, Jansen JA, Wang XM, Liebert MA. *Tissue Eng Part A* 25 (7, 8): 513-514 (2019) (Editorial)
16. Non-invasive functional molecular phenotyping of human smooth muscle cells utilized in cardiovascular tissue engineering. Marzi J, Brauchle EM, **Schenke-Layland K***, Rolle MW*. *Acta Biomater* 89: 193-205 (2019)
17. Controlled and tuneable drug release from electrospun fibers and a non-invasive approach for cytotoxicity testing. Piccirillo G, Carvajal Berrio DA, Laurita A, Pepe A, Bochicchio B, **Schenke-Layland K**, Hinderer S. *Sci Rep* 9(1): 3446 (2019)
18. Marker-independent in situ quantitative assessment of residual cryoprotectants in cardiac tissues. Marzi J, Biermann AC, Brauchle E, Brockbank KGM, Stock UA, **Schenke-Layland K**. *Anal Chem* 91(3): 2266-2272 (2019)
19. Imaging fibrosis in inflammatory diseases: Targeting exposed extracellular matrix. Beziere N, Fuchs K, Maurer A, Reischl G, Brück J, Ghoreschi K, Carvajal Berrio D, **Schenke-Layland K**, Kohlhofer U, Quintanilla-Martinez L, Gawaz M, Kneilling M, Pichler B. *Theranostics* 9(10): 2868-2881 (2019)
20. Improved long-term durability of allogeneic heart valves in the orthotopic sheep model. Biermann AC, Marzi J, Brauchle E, Wichmann JL, Arendt CT, Puntmann V, Nagel E, Abdelaziz S, Winter AG, Brockbank KGM, Layland S, **Schenke-Layland K**, Stock UA. *Eur J Cardiothorac Surg* 55(3): 484-493 (2019)
21. Stem cell-based organ-on-a-chip models for diabetes research. Rogal J, Zbinden A, **Schenke-Layland K***, Loskill P*. *Adv Drug Deliv Rev* 140: 101-128 (2019) (Review)

2018

22. Comparative study of MSCA-1 and CD146 isolated periosteal cell subpopulations. Umrath F, Thomalla C, Pöschel S, **Schenke-Layland K**, Reinert S, Alexander D. *Cell Physiol Biochem* 51(3): 1193-1206 (2018)

23. Influence of aflibercept on platelet activation profile. Sobolewska B, Golenko J, Poeschel S, Grimm C, Gatsiou A, Sopova K, Biedermann T, **Schenke-Layland K**, Stellos K, Ziemssen F. *Exp Eye Res* 175: 166-172 (2018)
24. Biomechanical and biomolecular characterization of ECM in human colon carcinomas. Brauchle E, Kasper J, Daum R, Schierbaum N, Falch C, Kirschniak A, Schäffer T, **Schenke-Layland K**. *Matrix Biology* 68-69: 180-193 (2018)
25. Electroconductive biohybrid collagen/pristine graphene composite biomaterials with enhanced biological activity. Ryan AJ, Kearny CJ, Shen N, Khan U, Kelly AG, Probst C, Brauchle E, Biccari S, Garciarena CD, Vega-Mayoral V, Loskill P, Kerrigan SW, Kelly DJ, **Schenke-Layland K**, Coleman JN, O'Brien FJ. *Adv Mater* 30(15): 1706442 (2018)
26. Surface functionalization of electrospun scaffolds using recombinant human decorin attracts circulating endothelial progenitor cells. Hinderer S, Sudrow K, Schneider M, Holeiter M, Layland SL, Seifert M, **Schenke-Layland K**. *Sci Rep* 8(1): 110 (2018)
27. Impact of T-cell-mediated immune response on xenogeneic heart valve transplantation: short-term success and mid-term failure. Biermann AC, Marzi J, Brauchle E, Schneider M, Kornberger A, Abdelaziz S, Wichmann JL, Arendt CT, Nagel E, Brockbank KGM, Seifert M, **Schenke-Layland K**, Stock UA. *Eur J Cardiothorac Surg* 53(4): 784-792 (2018)
28. A flow bioreactor system compatible with real-time two-photon fluorescence lifetime imaging microscopy. Shen N, Riedl JA, Carvajal-Berrio DA, Davis Z, Monaghan MG, Layland SL, Hinderer S, **Schenke-Layland K**. *Biomed Mater* 13(2): 024101 (2018)
29. Exogenous miR-29B delivery via a hyaluronan-based injectable system yields functional maintenance of the infarcted myocardium. Monaghan MG, Holeiter M, Brauchle E, Layland SL, Lu Y, Deb A, Pandit A, Nsair A, **Schenke-Layland K**. *Tissue Eng Part A* 24(1-2): 57-67 (2018)

2017

30. Metformin reverses TRAP1 mutation-associated alterations in mitochondrial function in Parkinson's disease. Fitzgerald JC, Zimprich A, Carvajal Berrio DA, Schindler KM, Maurer B, Schulte C, Bus C, Hauser AK, Kübler M, Lewin R, Bobbili DR, Schwarz LM, Vartholomaiou E, Brockmann K, Wüst R, Madlung J, Nordheim A, Riess O, Martins LM, Glaab E, May P, **Schenke-Layland K**, Picard D, Sharma M, Gasser T, Krüger R. *Brain* 140(9): 2444-2459 (2017)
31. Self-organized cerebral organoids with human-specific features predict effective drugs to combat Zika virus infection. Watanaba M, Buth JE, Vishlaghi N, de la Torre-Ubieta L, Taxidis J, Khakh B, Coppola G, Pearson CA, Yamauchi K, Gong D, Dai X, Damoiseaux R, Aliyari R, Liebscher S, **Schenke-Layland K**, Caneda C, Huang EJ, Zhang Y, Cheng G, Geschwind DH, Golshani P, Sun R, Novitsch BG. *Cell Reports* 21(2): 517-532 (2017)
32. Steps towards maturation of embryonic stem cell-derived cardiomyocytes by defined physical signals. Shen N, Knopf A, Westendorf C, Kraushaar U, Riedl J, Bauer H, Pöschel S, Layland SL, Monika Holeiter M, Knolle S, Brauchle E, Nsair A, Hinderer S, **Schenke-Layland K**. *Stem Cell Reports* 9(1): 122-135 (2017)
33. In vivo human somitogenesis guides somite development from hPSCs. Xi H, Fujiwara W, Gonzales K, Jan M, Liebscher S, Van Handel B, **Schenke-Layland K**, Pyle A. *Cell Reports* 18(6): 1573-1585 (2017)
34. Raman spectroscopic analyses of jaw periosteal cell mineralization. Brauchle E, Carvajal Berrio D, Rieger M, **Schenke-Layland K**, Reinert S, Alexander-Friedrich D. *Stem Cells Int* 2017: 1651376 (2017)
35. Allograft Heart Valves: Current Aspects and Future Applications. Lisy M, Kalender G, **Schenke-Layland K**, Brockbank KG, Biermann A, Stock UA. *Biopreserv Biobank* 15(2): 148-157 (2017)
36. Special Issue "Extracellular matrix proteins and mimics." **Schenke-Layland K**. *Acta Biomater* 52 (2017) (Editorial)
37. Enhanced elastin synthesis and maturation in human vascular smooth muscle tissue derived from induced-pluripotent stem cells. Eoh JH, Shen N, Burke JA, Hinderer S, Xia Z, **Schenke-Layland K**, Gerecht S. *Acta Biomater* 52: 49-59 (2017)
38. Raman microspectroscopy as diagnostic tool for the non-invasive analysis of fibrillin-1 deficiency in skin and in in vivo skin models. Brauchle E, Bauer H, Fernes P, Zuk A, **Schenke-Layland K**, Sengle G. *Acta Biomater* 52: 41-48 (2017)
39. Electrospun poly-L-lactide scaffold for the controlled and targeted delivery of a synthetically obtained Diclofenac prodrug to treat actinic keratosis. Piccirillo G, Bochicchio B, Pepe A, **Schenke-Layland K**, Hinderer S. *Acta Biomater* 52: 187-196 (2017)
40. Applying phasor approach analysis of multiphoton FLIM measurements to probe the metabolic activity of three-dimensional in vitro cell culture models. Lakner PH, Monaghan M, Möller Y, Olayioye M, **Schenke-Layland K**. *Sci Rep* 7: 42730 (2017)
41. Invited Commentary: Label-free live cell imaging by Confocal Raman Microscopy identifies CHO host and producer cell lines. Brauchle E, **Schenke-Layland K**. *Biotechnol J* 12(1): 1600412 (2017) (Commentary)

2016

42. Differentiation of human embryonic stem cells to HOXA⁺ hemogenic vasculature that resembles the aorta-gonad-mesonephros. Ng ES, Azzola L, Bruveris FF, Calvanese V, Phipson B, Vlahos K, Hirst C, Jokubaitis VJ, Yu QC, Maksimovic J, Liebscher S, Januar V, Zhang Z, Williams B, Conscience A, Durnall J, Jackson S, Costa M, Elliott D, Haylock DN, Nilsson SK, Saffery R, **Schenke-Layland K**, Oshlack A, Mikkola HKA, Stanley EG, Elefanty AG. *Nat Biotechnol* 34(11): 1168-1179 (2016)
43. Enabling multiphoton and second harmonic generation imaging in paraffin-embedded and histologically stained sections. Monaghan M, Kroll S, Brucker SY, **Schenke-Layland K**. *Tissue Eng Part C Methods* 22(6): 517-523 (2016)

44. Mononuclear phagocytes contribute to intestinal invasion and dissemination of *Yersinia enterocolitica*. Drechsler-Hake D, Alamir H, Günter M, Wagner S, Schütz M, Bohn E, **Schenke-Layland K**, Pisano F, Dersch P, Autenrieth IB, Autenrieth SE. *Int J Med Microbiol pii: S1438-4221(16)30040-6* (2016)
45. Cardiomyocyte generation from somatic sources – current status and future directions. Monaghan MG, Holeiter M, Layland SL, **Schenke-Layland K**. *Curr Opin Biotechnol* 40: 49-55 (2016) (Review)
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