

**Curriculum vitae – Status: 08.2018**

<b>NAME</b> Katja Schenke-Layland		<b>POSITION</b> Professor of Medical Technologies and Regenerative Medicine	
<b>EDUCATION/ TRAINING</b>			
<b>INSTITUTION AND LOCATION</b>	<b>DEGREE(s)</b>	<b>YEAR(s)</b>	<b>FIELD(s) OF STUDY</b>
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 21<sup>st</sup> 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  
  
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**Professional Experience:**

since 04/2018 **Director**, Natural and Medical Sciences Institute at the University of Tübingen, Reutlingen, Germany ([www.nmi.de/en](http://www.nmi.de/en))  
 since 01/2018 **Co-Editor-in-Chief**, Tissue Engineering, Part B (Mary Ann Liepert)  
 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 11/2013 **Adjunct Associate Professor**, University of California Los Angeles (UCLA), Dept. of Medicine/ Cardiology, Cardiovascular Research Laboratories (CVRL), Los Angeles, CA, USA  
 since 01/2012 **Executive Editor**, Advanced Drug Delivery Reviews (ADDR) (Elsevier)  
 01/16-11/17 **Director** (interim, executive), Fraunhofer-Institute for Interfacial Engineering and Biotechnology (IGB), Stuttgart, Germany  
 04/13-11/17 **Department Head**, Fraunhofer IGB, Dept. of Cell and Tissue Engineering, Stuttgart, Germany  
 01/10-09/13 **Visiting Associate Professor**, UCLA, Dept. of Medicine/ Cardiology, Los Angeles, CA, USA  
 01/10-03/13, 12/14 **Deputy Department Head** (2013) and **ATTRACT-Group Leader** (2014), Fraunhofer IGB, Dept. of Cell and Tissue Engineering, Stuttgart, Germany  
 11/08-12/09 **Assistant Research Professor**, UCLA, Dept. of Medicine/ Cardiology, Cardiovascular Research Laboratories, Los Angeles, CA, USA

**Overview of Peer-Reviewed Publications:**

<b>Peer-Reviewed Articles</b>	Original Articles:	89
	Review Articles, Editorials, Commentaries, etc.:	22
	Senior/First Authorships:	42/24
	Book Chapters:	5
<b>Citations</b> <small>ISI Web of Science</small>	Sum of the times cited:	3427
<b>Citations</b> <small>Google Scholar</small>		5984
<b>Total Impact Factor Points</b>		498
<b>h-Index</b> <small>ISI Web of Science</small>		35
<b>h-Index</b> <small>Google Scholar</small>		42

**Patents:**

- "Verfahren und Systemtechnik zur Marker-freien Detektion und Selektion transgener Einzelzellen", *submitted*
- "Glycosylated protein of an extra-cellular matrix for use in a method of treating diabetes in a human or animal subject", *submitted*
- "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**

- 2017-present **Deputy Ombudsman**, Medical Faculty, EKUT, Germany
- 2016-present **Study Dean - Medical Technology**, Medical Faculty, EKUT, Germany
- 2016-present **Science Strategy Committee**, EKUT, Germany
- 2016-present **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-present **Habilitation Committee**, Medical Faculty, EKUT, Germany
- 2013-present **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:**

- 2018-present **Central Ethics Committee for Stem Cell Research** (Germany)
- 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 **Jury Member, Falling Walls Lab Germany**
- 2017-present **German-Israeli Foundation (GIF) Advisory Board – Cancer and Biomedical Research Committee**
- 2017-present **TERMIS, Strategic Alliance Committee (EU Council)**
- 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**
- 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):

- “The Future of Tissue Engineering” *Current Opinion in Biomedical Engineering* (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** (since 2017)
- **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** – HORIZON 2020
- **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
- **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:**

<b>DFG</b> <i>Blood vessel tissue engineering</i>	SCHE701/14-1	2016-2020	<b>€217.150</b>
<b>EU Horizon 2020 NMP-10-2014</b> <i>DRIVE</i>	645991	2015-2019	<b>€679.153</b>

**Completed Support as PI:**

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

## Complete List of Peer-Reviewed Publications (without book chapters):

### 2018

1. 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)
2. 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)
3. 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, Bicca 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)
4. 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)
5. 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)
6. 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)
7. 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

8. 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)
9. 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)
10. 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)
11. 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)
12. 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)
13. 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)
14. Special Issue "Extracellular matrix proteins and mimics." **Schenke-Layland K**. *Acta Biomater* 52 (2017) (Editorial)
15. 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)
16. Raman microspectroscopy as diagnostic tool for the non-invasive analysis of fibrillin-1 deficiency in skin and in vivo skin models. Brauchle E, Bauer H, Fernes P, Zuk A, **Schenke-Layland K**, Sengle G. *Acta Biomater* 52: 41-48 (2017)
17. 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)
18. 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)
19. 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 (Commentary) (2017)

### 2016

20. Differentiation of human embryonic stem cells to HOXA<sup>+</sup> 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, Elefany AG. *Nat Biotechnol* 34(11): 1168-1179 (2016)

21. 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)
22. 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)
23. 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)
24. Endocardial-to-mesenchymal transformation and mesenchymal cell colonization at the onset of human cardiac valve development. Monaghan MG, Linneweh M, Liebscher S, Van Handel B, Layland SL, **Schenke-Layland K**. *Development* 143(3): 473-482 (2016)
25. Non-invasive Chamber-Specific Identification of Cardiomyocytes in Differentiating Pluripotent Stem Cells. Brauchle E, Knopf A, Bauer H, Shen N, Linder S, Monaghan MG, Ellwanger K, Layland SL, Brucker SY, Nsair A, **Schenke-Layland K**. *Stem Cell Reports* 6(2): 188-199 (2016)
26. Visualizing tropoelastin in a long-term human elastic fibre cell culture model. Halm M, **Schenke-Layland K**, Jaspers S, Wenck H, Fischer F. *Sci Rep* 6: 20378 (2016)
27. ECM and ECM-like materials – Biomaterials for applications in regenerative medicine and cancer therapy. Hinderer S, Layland SL, **Schenke-Layland K**. *Adv Drug Deliv Rev* 97: 260-269 (2016) (Review)
28. Loss of spatial organization and destruction of the pericellular matrix in early osteoarthritis in vivo and in a novel in vitro methodology. Felka T, Rothdiener M, Bast S, Uynuk-Ool T, Zouhair S, Ochs BG, De Zwart P, Stoeckle U, Aicher WK, Hart ML, Shiozawa T, Grodzinsky AJ, **Schenke-Layland K**, Venkatesan JK, Cucchiari M, Madry H, Kurz B, Rolauffs B. *Osteoarthritis Cartilage pii: S1063-4584(16)01020-7* (2016)
29. PSM Peptides of *Staphylococcus aureus* Activate the p38-CREB Pathway in Dendritic Cells, Thereby Modulating Cytokine Production and T Cell Priming. Armbruster NS, Richardson JR, Schreiner J, Klenk J, Günter M, Kretschmer D, Pöschel S, **Schenke-Layland K**, Kalbacher H, Clark K, Autenrieth SE. *J Immunol* 196(3): 1284-1292 (2016)

## 2015

30. Prospects for regenerative medicine approaches in women's health. **Schenke-Layland K**, Brucker SY. *J Anat* 227: 781-785 (2015) (Review)
31. Optical reprogramming and optical characterization of cells using femtosecond lasers. Uchugonova A, Breunig HG, Augspurger C, Monaghan M, **Schenke-Layland K**, König K. *Optically Induced Nanostructures: Biomedical and Technical Applications*. Berlin: De Gruyter; Chapter 1 (2015)
32. Modulation of inflammation and angiogenesis and changes in ECM GAG-activity via dual delivery of nucleic acids. Browne S, Monaghan MG, Brauchle E, Carvajal Berrio D, Chantepie-Laborde S, Papy-Garcia D, **Schenke-Layland K**, Pandit A. *Biomaterials* 69: 133-147 (2015)
33. In vitro elastogenesis – Instructing human vascular smooth muscle cells to generate an elastic fiber-containing extracellular matrix scaffold. Hinderer S, Shen N, Ringuette LJ, Hansmann J, Reinhardt DP, Brucker SY, Davis EC, **Schenke-Layland K**. *Biomed Mater* 10(3): 034102 (2015)
34. Fluorescent Ly6G antibodies determine macrophage phagocytosis of neutrophils and alter the retrieval of neutrophils in mice. Bucher K, Schmitt F, Autenrieth SE, Dillmann I, Nürnberg B, **Schenke-Layland K**, Beer-Hammer S. *J Leukoc Biol*. 98(3): 365-72 (2015)
35. Generation and Assessment of Functional Biomaterial Scaffolds for the Application in Cardiovascular Tissue Engineering and Regenerative Medicine. Hinderer S, Brauchle E, **Schenke-Layland K**. *Adv Healthc Mater* 10(3):034102 (2015) (Review)
36. Drug and cell delivery for cardiac regeneration. Hastings CL, Roche ET, Ruiz-Hernandez E, **Schenke-Layland K**, Walsh CJ, Duffy GP. *Adv Drug Deliv Rev* 84: 85-106 (2015) (Review)

## 2014

37. Human eye development is characterized by coordinated expression of fibrillin isoforms. Hubmacher D, Reinhardt DP, Plesec T, **Schenke-Layland K**, Apte SS. *Invest Ophthalmol Vis Sci* 55(12): 7934-44 (2014)
38. Preserved bioactivity and tunable release of a SDF1-GPVI bi-specific protein using photo-crosslinked PEGda hydrogels. Schesny M, Monaghan M, Bindermann A, Freund D, Seifert M, Eble JA, Vogel S, Gawaz MP, Hinderer S, **Schenke-Layland K**. *Biomaterials* 35(25): 7180-87 (2014)
39. Raman spectroscopy as analytical tool for melanoma research. Brauchle E, Noor S, Holthorff E, Gerbe C, **Schenke-Layland K**, Busch C. *Clin Exp Dermatol* 39(5): 636-45 (2014)
40. Cell death stages in single apoptotic and necrotic cells monitored by Raman microspectroscopy. Brauchle E, Thude S, Brucker SY, **Schenke-Layland K**. *Sci Rep* 15(4): 4698 (2014)
41. A collagen-based scaffold delivering exogenous micro-RNA-29B to modulate extracellular matrix remodelling. Monaghan M, Browne S, **Schenke-Layland K**, Pandit A. *Mol Ther* 22(4): 786-96 (2014)
42. Engineering of a bio-functionalized hybrid off-the-shelf heart valve. Hinderer S, Seifert J, Votteler M, Shen N, Rheinlaender J, Schäffer TE, **Schenke-Layland K**. *Biomaterials* 35(7): 2130-39 (2014)
43. A human in vitro model that mimics the renal proximal tubule. Hoppensack A, Kazanecki CC, Colter D, Gosiewska A, Schanz J, Walles H, **Schenke-Layland K**. *Tissue Eng Part C Methods* 20(7): 599-609 (2014)

## 2013

44. Elastogenesis at the early onset of human cardiac valve development. Votteler M, Berrio DAC, Horke A, Sabatier L, Reinhardt DP, Nsair A, Aikawa E, **Schenke-Layland K**. *Development* 140: 2345-53 (2013)

45. Design and analysis of a squamous cell carcinoma in vitro model system. Brauchle E, Johannsen H, Nolan S, Thude S, **Schenke-Layland K**. *Biomaterials* 34(30): 7401-07 (2013)
46. Tracheal tissue engineering: building on a strong foundation. Hinderer S, **Schenke-Layland K**. *Expert Rev Med Devices*. 10(1): 33-35 (2013) (Expert Opinion)
47. Epigenetic regulation of myogenic gene expression by heterochromatin protein 1 alpha. Sdek P, Oyama K, Angelis E, Chan SS, **Schenke-Layland K**, MacLellan WR. *PLoS One* 8(3): e58319 (2013)
48. Non-invasive identification of proteoglycans and chondrocyte differentiation state by Raman microspectroscopy. Pudlas M\*, Brauchle E\*, Klein TJ, Hutmacher DW and **Schenke-Layland K**. *J Biophotonics* 6(3): 205-211 (2013)
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