INSTITUT FÜR PROPHYLAXE & EPIDEMIOLOGIE DER KREISLAUFKRANKHEITEN (IPEK)

DIREKTOR: UNIV.-PROF. DR. CHRISTIAN WEBER

ANZAHL DER PLANSTELLEN FÜR WISSENSCHAFTLICHE MITARBEITER: 18

ANZAHL DER PLANSTELLEN FÜR NICHT-WISSENSCHAFTLICHE MITARBEITER: 14
ANZAHL ALLER DRITTMITTELFINANZIERTEN MITARBEITER: 68

DRITTMITTELAUSGABEN (IN €):

	Anzahl Projekte	Ausgaben 2013 laut Verwaltung
DFG	19	1.276.928
BMBF, StMWFK, EU	7	976.638
Stiftungen (Humboldt, Fondation Leducq, etc.)	12	570.656
Summe begutachtete externe Drittmittel		**2.824.222**

	Anzahl Projekte	Ausgaben 2013 laut Verwaltung
FöFoLe	12	106.386
Lebmit (Invest.)	14	12.288
Summe interne Drittmittel		**118.674**

Gesamtsumme verausgabte Drittmittel		**2.942.896**

PUBLIKATIONEN:

	Anzahl	ungewichteter IF
Im WoS gelistete Originalarbeiten, Reviews, Editorials	57	366.3
Nicht im WoS gelistete Originalarbeiten, Reviews, Editorials	-	-
Beiträge in Lehr-/Handbüchern, Monographien	2	1.0
Gesamtsumme	**59**	**367.3**

FORSCHUNGSSCHWERPUNKTE

- Chemokine und Chemokinrezeptoren bei entzündlicher und atherogener Leukozytenrekrutierung
- Versatile Regulation der Atherosklerose durch microRNAs
- Funktion der Neutrophilen und Ihrer Sekretion in frühen Stadien der Atherosklerose
- Rolle von Chemokinen und Chemokin-ähnliche Funktionen von MIF in der Atherosklerose und Restenose
- Struktur und Funktion der Heterooligomerisierung und Proteoglykanbindung von Chemokinen (‚Interaktom')
- Signaltransduktion der Integrinregulation in Leukozyten und der endothelialen Aktivierung durch Zytokine
- Junktionale Adhäsionsmoleküle in der transendothelialen Diapedese und der vaskulären Entzündungsreaktion
- Chemokine und ihre Rezeptoren in der myokardialen Ischäme-Reperfusion und bei MyokardInfarkt
- Rolle von Leukozytensubpopulationen (Monozyten, T Zellen, dendritische Zellen, Mastzellen) in der Atherosklerose
- Regulation der Homöstase und Rekrutierung vaskulärer Vorläuferzellen in der Atherosklerose und nach Infarkt
- Physiologie und Pathophysiologie endothelialer Vorläuferzellen in der Endothelregeneration und Risikobestimmung
- Statine zur Prävention der Endotheldysfunktion und miniaturisierte, eluierende Formgedächtnis- und Polymer-Stents
- Intravitalmikroskopie, 2-Photonmikroskopie und Mechanismen der Plaquedestabilisierung
- Transmembranäre Chemokine und proteolytische Spaltung durch ADAM Metalloproteasen
- Rolle des Endocannabinoidsystems in der Atherosklerose und Ischämie/Reperfusion

PUBLIKATIONEN

Originalarbeiten, Reviews, Editorials - gelistet im Web of Science (WoS)

[1] Akthar S, Gremse F, Kiessling F, Weber C, Schober A (2013) CXCL12 promotes the stabilization of atherosclerotic lesions mediated by smooth muscle progenitor cells in mice. *Arterioscler Thromb Vasc Biol* 33:679-86. *IF 6.338*

[2] Asare Y, Shagdarsuren E, Schmid JA, Grommes J, El Bounkari O, Weber C, de Winther MPJ, Noels H, Bernhagen J (2013) Endothelial CSN5 impairs NF-kB activation and monocyte adhesion to endothelial cells and is highly expressed in human atherosclerotic lesions. *Thromb Haemost* 110:141-152. *IF 6.094*

[3] Badr Eslam R, Lang IM, Koppensteiner R, Calatzis A, Panzer S, Gremmel T. (2013) Residual platelet activation through protease-activated receptors (PAR)-1 and -4 in patients on P2Y12 inhibitors. *Int J Cardiol* 168:403-406. *IF 5.509*

[4] Borissoff JI, Otten JJ, Heeneman S, Leenders P, van Oerle R, Soehnlein O, Loubele ST, Hamulyák K, Hackeng TM, Daemen MJ, Degen JL, Weiler H, Esmon CT, van Ryn J, Biessen EA, Spronk HM, Ten Cate H. Genetic and pharmacological modifications of thrombin formation in apolipoprotein E-deficient mice determine atherosclerosis severity and atherothrombosis onset in a neutrophil-dependent manner. *PLoS One* 8:e55784. *IF 3.730*

[5] Bras G, Bochenska O, Rapala-Kozik M, Guevara-Lora I, Faussner A, Kamysz W, Kozik A (2013) Release of biologically active kinin peptides, Met-Lys-bradykinin and Leu-Met-Lys-bradykinin from human kininogens by two major secreted aspartic proteases of Candida parapsilosis. *Peptides* 48C:114-123. *IF 2.522*

[6] Casanova-Acebes M, Pitaval C, Weiss LA, Nombela-Arrieta C, Chèvre R, A-González N, Kunisaki Y, Zhang D, van Rooijen N, Silberstein L, Weber C, Nagasawa T, Frenette PS, Castrillo A, Hidalgo A (2013) Rhythmic modulation of the hematopoietic niche through neutrophil clearance. *Cell* 153:1025-35. *IF 31.957*

[7] Döring Y, Weber C, Soehnlein O (2013) Footprints of neutrophil extracellular traps as predictors of cardiovascular risk. *Arterioscler Thromb Vasc Biol* 33:1735-6. *IF 6.338*

[8] Drechsler M, Soehnlein O, Weber C (2013) Nitric oxide-donating statins upgrade the benefits of lipid-lowering in vascular inflammation by desensitizing neutrophil activation. *Cardiovasc Drugs Ther* 27:183-5. *IF 2.673*

[9] Drechsler M, Soehnlein O (2013) The complexity of arterial classical monocyte recruitment. *J Innate Immun* 5:358-66. *IF 4.458*

[10] Fujita B, Strodthoff D, Fritzenwanger M, Pfeil A, Ferrari M, Goebel B, Figulla HR, Gerdes N, Jung C (2013) Altered red blood cell distribution width in overweight adolescents and its association with markers of inflammation. *Pediatr Obes* 8(5):385-91. *IF 0.200*

[11] Gerdes N, Winkels H, Weber C (2013) Atherosclerosis: cell biology and lipoproteins - focus on anti-inflammatory mechanisms as thera-peutic options. *Curr Opin Lipidol* 24:187-188. *IF 5.839*

[12] Ghosh M, van den Akker NM, Wijnands KA, Poeze M, Weber C, McQuade LE, Pluth MD, Lippard SJ, Post MJ, Molin DG, van Zandvoort MA (2013) Specific visualization of nitric oxide in the vasculature with two-photon microscopy using a copper based fluorescent probe. *PLoS One* 8:e75331. *IF 3.730*

[13] Goyal P, Pandey D, Brünnert D, Hammer E, Zygmunt M, Siess W (2013) Cofilin oligomer formation occurs in vivo and is regulated by cofilin phosphorylation. *PLoS One* 8:e71769. *IF 3.730*

[14] Guevara-Lora I, Blonska B, Faussner A, Kozik A. (2013) Kinin-generating cellular model obtained from human glioblastoma cell line U-373. *Acta Biochim Pol* 60:299-305. *IF 1.185*

[15] Heymans S, Corsten MF, Verhesen W, Carai P, van Leeuwen RE, Custers K, Peters T, Hazebroek M, Stöger L, Wijnands E, Janssen BJ, Creemers EE, Pinto YM, Grimm D, Schürmann N, Vigorito E, Thum T, Stassen F, Yin X, Mayr M, De Windt LJ, Lutgens E, Wouters K, de Winther MP, Zacchigna S, Giacca M, van Bilsen M, Papageorgiou AP, Schroen B (2013) Macrophage microRNA-155 promotes cardiac hypertrophy and failure. *Circulation* 128(13):1420-32. *IF 15.202*

[16] Kanzler I, Tuchscheerer N, Steffens G, Simsekyilmaz S, Konschalla S, Kroh A, Simons D, Asare Y, Schober A, Bucala R, Weber C, Bernhagen J, Liehn EA (2013) Differential roles of angiogenic chemokines in endothelial progenitor cell-induced angiogenesis. *Basic Res Cardiol* 108:310. *IF 5.904*

[17] Karshovska E, Weber C, von Hundelshausen P. (2013) Platelet chemokines in health and disease. *Thromb Haemost* 110:894-902. *IF 6.094*

[18] Klingenberg R, Gerdes N, Badeau RM, Gisterå A, Strodthoff D, Ketelhuth DF, Lundberg AM, Rudling M, Nilsson SK, Olivecrona G, Zoller S, Lohmann C, Lüscher TF, Jauhiainen M, Sparwasser T, Hansson GK (2013) Depletion of FOXP3+ regulatory T cells promotes hypercholesterolemia and atherosclerosis. *J Clin Invest* 123:1323-34. *IF 12.812*

[19] Kramp BK, Megens RT, Sarabi A, Winkler S, Projahn D, Weber C, Koenen RR, von Hundelshausen P. (2013) Exchange of extracellular domains of CCR1 and CCR5 reveals confined functions in CCL5-mediated cell recruitment. *Thromb Haemost* 110:795-806. *IF 6.904*

[20] Kumar N, Ippel H, Weber C, Hackeng T, Mayo KH (2013) Protein lysine N(zeta) alkylation and O-phosphorylation mediated by DTT-generated reactive oxygen species. *Protein Sci* 22:327-46. *IF 2.735*

[21] Langer HF, Weber C, Gawaz M (2013) The platelet - thrombosis and Beyond. *Thromb Haemost* 110:857-858. *IF 6.094*

[22] Legein B, Temmerman L, Biessen EA, Lutgens E (2013) Inflammation and immune system interactions in atherosclerosis. *Cell Mol Life Sci* 70:3847-69. *IF 5.615*

[23] Lenglet S, Thomas A, Soehnlein O, Montecucco F, Burger F, Pelli G, Galan K, Cravatt B, Staub C, Steffens S (2013) Fatty Acid amide hydrolase deficiency enhances intraplaque neutrophil recruitment in atherosclerotic mice. *Arterioscler Thromb Vasc Biol* 33:215-23. *IF 6.338*

[24] Leschner J, Wennerberg G, Feierler J, Bermudez M, Welte B, Kalatskaya I, Wolber G, Faussner A (2013) Interruption of the ionic lock in the bradykinin b2 receptor results in constitutive internalization and turns several antagonists into strong agonists. *J Pharmacol Exp Ther* 344:85-95. *IF 3.891*

[25] Liehn EA, Kanzler I, Konschalla S, Kroh A, Simsekyilmaz S, Sönmez TT, Bucala R, Bernhagen J, Weber C (2013) Compartmentalized protective and detrimental effects of endogenous migration-inhibitory factor mediated by CXCR2 in a mouse model of myocardial ischemia/reperfusion. *Arterioscler Thromb Vasc Biol* 33:2180-6. *IF 6.338*

[26] Lievens D, Habets KL, Robertson AK, Laouar Y, Winkels H, Rademakers T, Beckers L, Wijnands E, Boon L, Mosaheb M, Ait-Oufella H, Mallat Z, Flavell RA, Rudling M, Binder CJ, Gerdes N, Biessen EA, Weber C, Daemen MJ, Kuiper J, Lutgens E (2013) Abrogated transforming growth factor beta receptor II (TGFβRII) signalling in dendritic cells promotes immune reactivity of T cells resulting in enhanced atherosclerosis. *Eur Heart J* 34:3717-27. *IF 14.097*

[27] Lundberg AM, Ketelhuth DF, Johansson ME, Gerdes N, Liu S, Yamamoto M, Akira S, Hansson GK (2013) Toll-like receptor 3 and 4 signalling through the TRIF and TRAM adaptors in hematopoietic cells promotes atherosclerosis. *Cardiovasc Res* 99:364-73. *IF 5.940*

[28] Manthey H, Barnsteiner S, Cochain C, Karshovska E, Koch M, Chaudhari S, Busch M, Weber C, Koenen RR, Zernecke A (2013) CCR6 selectively promotes monocyte-mediated inflammation and atherogenesis in mice. *Thromb Haemost* 110:1267-1277. *IF 6.094*

[29] Molica F, Burger F, Thomas A, Staub C, Tailleux A, Staels B, Pelli G, Zimmer A, Cravatt B, Matter CM, Pacher P, Steffens S (2013) Endogenous cannabinoid receptor CB1 activation promotes vascular smooth muscle cell proliferation and neointima formation. *J Lipid Res* 54:1360-8. *IF 4.386*

[30] Nakahata AM, Mayer B, Neth P, Hansen D, Sampaio MU, Oliva ML (2013) Blocking the proliferation of human tumor cell lines by peptidase inhibitors from bauhinia seeds. *Planta Med* 79:227-35. *IF 2.348*

[31] Neth P, Nazari-Jahantigh M, Schober A, Weber C (2013) MicroRNAs in flow-dependent vascular remodeling. *Cardiovasc Res* 99:294-303. *IF 5.940*

[32] Oral H, Kanzler I, Tuchscheerer N, Curaj A, Simsekyilmaz S, Sönmez TT, Radu E, Postea O, Weber C, Schuh A, Liehn EA (2013) CXC chemokine KC fails to induce neutrophil infiltration and neoangiogenesis in a mouse model of myocardial infarction. *J Mol Cell Cardiol* 60:1-7. *IF 5.148*

[33] Ortega-Gómez A, Perretti M, Soehnlein O (2013) Resolution of inflammation: an integrated view. *EMBO Mol Med* 5:661-74. *IF 7.795*

[34] Petzold T, Ruppert R, Pandey D, Barocke V, Meyer H, Lorenz M, Zhang L, Siess W, Massberg S, Moser M (2013) β1 integrin-mediated signals are required for platelet granule secretion and hemostasis in mouse. *Blood* 122:2723-31. *IF 9.060*

[35] Poti F, Gualtieri F, Sacchi S, Weißen-Plenz G, Varga G, Brodde M, Weber C, Simoni M, Nofer JR (2013) KRP203 - sphingosine 1-phosphate receptor type 1 (S1PR1) agonist ameliorates atherosclerosis in LDL receptor-deficient (LDL-$R^{-/-}$) mice. *Arterioscler Thromb Vasc Biol* 33:1505-12. *IF 6.338*

[36] Preissner KT, Weber C (2013) Go with the flow: the passion for vascular biology research. *Thromb Haemost* 109:366-367. *IF 6.094*

[37] Schaffer S, Tandon R, Zipse H, Siess W, Schmidt A, Jamasbi J, Karshovska E, Steglich W, Lorenz R (2013) Stereo specific platelet inhibition by the natural LXR agonist 22(R)-OH-cholesterol and its fluorescence labelling with preserved bioactivity and chiral handling in macrophages. *Biochem Pharmacol* 86:279-285. *IF 4.576*

[38] Seijkens T, Kusters P, Engel D, Lutgens E (2013) CD40-CD40L: linking pancreatic, adipose tissue and vascular inflammation in type 2 diabetes and its complications. *Diab Vasc Dis Res* 10:115-22. *IF 2.594*

[39] Smeets E, Meiler S, Lutgens E (2013) Lymphocytic tumor necrosis factor receptor superfamily co-stimulatory molecules in the pathogenesis of atherosclerosis. *Curr Opin Lipidol* 24:518-24. *IF 5.839*

[40] Soehnlein O (2013) Myeloid Cells in Traffic. *J Innate Immun* 12:301-303. *IF 4.458*

[41] Soehnlein O, Drechsler M, Döring Y, Vijayan S, Lievens D, Hartwig H, Projahn D, Koenen RR, Hristov M, Lutgens E, Zernecke A, Weber C (2013) Distinct functions of chemokine receptor axes in the atherogenic mobilization and recruitment of classical monocytes. *EMBO Mol Med* 5:471-81. *IF 7.795*

[42] Soehnlein O, Swirski FK (2013) Hypercholesterolemia links hematopoiesis with atherosclerosis. *Trends Endocrinol Metab* 24:129-36. *IF 8.901*

[43] Strodthoff D, Lundberg AM, Agardh HE, Ketelhuth DF, Paulsson-Berne G, Arner P, Hansson GK, Gerdes N (2013) Lack of Invariant Natural Killer T Cells Affects Lipid Metabolism in Adipose Tissue of Diet-Induced Obese Mice. *Arterioscler Thromb Vasc Biol* 33:1189-96. *IF 6.338*

[44] Strüßmann T, Tillmann S, Wirtz T, Bucala R, von Hundelshausen P, Bernhagen J. (2013) Platelets are a previously unrecognised source of MIF. *Thromb Haemost* 10:1004-1013. *IF 6.094*

[45] Vasina EM, Cauwenberghs S, Staudt M, Feijge M, Weber C, Koenen RR, Heemskerk JWM (2013) Aging- and activation-induced platelet microparticles suppress apoptosis in monocytic cells and differentially signal to proinflammatory mediator release. *Am J Blood Res* 3:107-23. *IF 0.200*

[46] von Hundelshausen P, Weber C (2013) Chronic inflammation and atherosclerosis *Dtsch Med Wochenschr* 138:1839-44. *IF 0.653*

[47] Wantha S, Alard JE, Megens RT, van der Does A, Döring Y, Drechsler M, Pham CT, Wang MW, Wang JM, Gallo R, von Hundelshausen P, Lindbom L, Hackeng TM, Weber C, Soehnlein O (2013) Neutrophil-derived cathelicidin promotes adhesion of classical monocytes. *Circ Res* 112:792-801. *IF 11.861*

[48] Weber C, Lip G (2013) A Happy New Year 2013 for Thrombosis and Haemostasis… *Thromb Haemost* 109:1-2. *IF 6.094*

[49] Weber C, Lip G (2013) Editors' Choice papers in Thrombosis and Haemostasis. *Thromb Haemost* 109:170-173. *IF 6.094*

[50] Weber C (2013) MicroRNAs - from basic mechanisms to clinical application in cardiovascular medicine. *Arterioscler Thromb Vasc Biol* 33:168-9. *IF 6.338*

[51] Wei Y, Nazari-Jahantigh M, Chan L, Zhu M, Heyll K, Corbalán-Campos J, Hartmann P, Thiemann A, Weber C, Schober A (2013) The microRNA-342-5p fosters inflammatory macrophage activation through an Akt1- and microRNA-155-dependent pathway during atherosclerosis. *Circulation* 127:1609-1619. *IF 15.202*

[52] Wei Y, Nazari-Jahantigh M, Neth P, Weber C, Schober A (2013) MicroRNA-126, -145, and -155: a therapeutic triad in atherosclerosis? *Arterioscler*

Thromb Vasc Biol 33:449-54. *IF 6.338*

[53] Wei Y, Schober A, Weber C (2013) Pathogenic arterial remodeling: the good and bad in microRNAs. *Am J Physiol Heart Circ Physiol* 304:1050-1059. *IF 3.629*

[54] Wu Z, Curaj A, Fokong S, Liehn EA, Weber C, Lammers T, Kiessling F, van Zandvoort M (2013) Rhodamine-loaded ICAM-targeted microbubbles for dual-modality imaging under controlled shear stresses. *Circ Cardiovasc Imaging* 6:974-981. *IF 5.795*

[55] Ylä-Herttuala S, Bentzon JF, Daemen MJ, Falk E, Garcia HM, Herrmann J, Hoefer I, Jukema JW, Krams R, Kwak B, Marx N, Naruszewicz M, Newby A, Pasterkamp G, Serruys P, Waltenberger J, Weber C, Tokgözoglu L (2013) Stabilising atherosclerotic plaques: executive summary. *Eur Heart J* 34:3251-3258. *IF 14.097*

[56] Ziegler T, Horstkotte J, Schwab C, Pfetsch V, Dietzel S, Rohwedder I, Hinkel R, Krieg L, Hu J, Theiss H, Franz WM, Söhnlein O, Sperandio M, Pohl U, Thomas M, Weber C, Augustin H, Fässler R, Deutsch U, Kupatt C (2013) Angiopoietin-2 induced pericyte loss mediates hemodynamic alterations in sepsis, *J Clin Invest* 123:3436-3445. *IF 12.812*

[57] Zimmermann R, Krueger J, Filipović MR, Ivanović-Burmazović I, Calatzis A, Weiss DR, Eckstein R (2013) A detailed examination of platelet function inhibition by nitric oxide in platelet-rich plasma and whole blood. *Clin Lab* 59:629-38. *IF 0.920*

Beiträge in Lehr-/Handbüchern und Monographien

[58] Koenen RR, Weber C (2013) Chemokines as therapeutic targets of atherosclerosis. In Atherosclerosis: Treatment and Prevention, edited by C. Weber & O. Söhnlein, Pan Stanford Publishing. ISBN: 978-981-4316-26-2. *IF 0.500*

[59] Soehnlein O, Weber C (2013) Neutrophils and their granule proteins in the treatment of atherosclerosis. In Atherosclerosis: Treatment and Prevention, edited by C. Weber & O. Söhnlein, Pan Stanford Publishing. ISBN: 978-981-4316-26-2. *IF 0.500*