

Fleming, Ingrid Professor Dr.

Date and place of birth 03/06/1966 in Ballymena, Northern Ireland
Nationality: British and Irish

Address

Institute for Vascular Signalling
Centre for Molecular Medicine
Goethe-University Frankfurt, Theodor Stern Kai 7
60590 Frankfurt/Main, Germany
Phone +49 69 6301-6972
Fax +49 69 6301- 86880
e-mail Fleming@em.uni-frankfurt.de

Citation record: Researcher ID: L-1225-2014, ORCID: 0000-0003-1881-3635
Total citations: 34226, h-index: 94 (Google Scholar).

Education

1984 - 1988 BSc in Pharmacology and Biochemistry (Combined Honours, *First Class*), Aston University, Birmingham, England.
1988 - 1991 PhD in Molecular Pharmacology, Université Louis Pasteur, Strasbourg, France, (defense: 28.9.91; grade: *très honorable*).
1999 Habilitation in Physiology.

Professional Positions

1991 - 1993 Post-Doc at Institut für Angewandte Physiologie (Director: Professor Dr. E. Bassenge), Albert-Ludwigs-University Freiburg, Germany.
1993 - 1999 Senior Research Fellow at the Institut für Kardiovaskuläre Physiologie (Director: Professor Dr. R. Busse), Goethe University, Frankfurt am Main, Germany.
1999 - 2004 Leader of the Vascular Signal Transduction Section, at the Institut für Kardiovaskuläre Physiologie, Goethe University, Frankfurt am Main, Germany.
2004 - 2008 Professor of Physiology (C3; Vascular Signalling), at the Goethe University, Frankfurt am Main, Germany.
2007- 2008 Chairperson of the Centre of Physiology, at the Goethe University, Frankfurt am Main, Germany.
Since 2008 Professor of Physiology (W3) and Director of the Institute for Vascular Signalling, Centre for Molecular Medicine, Goethe University, Frankfurt am Main, Germany.
Since 2010 Chairperson of the Centre for Molecular Medicine, at the Goethe University, Frankfurt am Main, Germany.

Awards and Honors

1988 Greenshield award for Biochemistry, Aston University, Birmingham
1996 Dr. Paul und Cilli Weill-Stiftung für den Wissenschaftlichen Nachwuchs, JWG-Universität, Frankfurt am Main
1999 Servier Förderpreis der Gesellschaft für Mikrozirkulation und Vaskuläre Biologie
1999 Heinz Meise-Preis der Deutschen Herzstiftung (German Heart foundation)
2000 Nitric Oxide Society Young Investigator Award
2002 The Herbert und Hedwig Eckelmann Prize
2002 Arthur Weber Prize of the Deutsche Gesellschaft für Kardiologie –Herz- und Kreislaufforschung. (German Cardiac Society).
2003 Schunk-Preis for Medicine from the Justus-Liebig-Universität Universität, Gießen, Germany.
2010 - 2013 President of the European Vascular Biology Organization.
Since 2016 Member of the Deutschen Akademie der Naturforscher Leopoldina (German National Academy of Sciences).
2018 - 2021 Guest Professor at Huazhong University of Science and Technology, Wuhan, China.
Since 2018 Member of the Academia Europaea (The Academy of Europe).
Since 2021 Fellow of the IUPS (International Union of Physiological Sciences) Academy.

Research Management

2005 - 2009 Speaker of the DFG-funded Research Unit (#501) "Vascular homeostasis: molecular mediators and cellular mechanisms"

- 2006 - 2018 Member of the Excellence Cluster Cardio-Pulmonary Systems (ECCPS) Steering Committee.
- Since 2010 Speaker of the DFG-funded Collaborative Research Centre (SFB 834) "Endothelial Signalling and Vascular Repair".
- Since 2011 Principle Investigator German Centre for Cardiovascular Research.
- Since 2013 Steering Committee Member of the DFG-funded Collaborative Research Centre (SFB 1039) "Signalling by Fatty Acid Derivatives and Sphingolipids in Health and Disease".
- Since 2017 Steering Committee Member of the DFG-funded Collaborative Research Centre (SFB 815) "Redox Regulation: generator Systems and Functional Consequences".
- Since 2017 Vice-Speaker of the DFG-funded Research Training Group (RTG) 2336 "Resolution of Inflammation".
- Since 2019 Member of the Excellence Cluster "Cardio-Pulmonary Institute (CPI)" Steering Committee.
- 2020 - 2022 Nucleus member of the European Society of Cardiology Working Group on Coronary Pathophysiology & Microcirculation.

Reviewer for Journals Arteriosclerosis, Thrombosis and Vascular Biology, American Journal of Physiology, Circulation Research, Arteriosclerosis, Thrombosis and Vascular Biology, Circulation, European Journal of Physiology/Pflügers Archiv, Hypertension, Journal of Cardiovascular Research, Journal of Clinical Investigation, Journal of Pharmacology and Experimental Therapeutics, Journal of Physiology, Nature, Nature Communications.

Reviewer for funding bodies: Deutsche Forschungsgemeinschaft, European Commission (FP5&FP6-Programm, ERC consolidator and advanced grants), ATIP-AVENIR.

Editorial boards

Current:	Cardiovascular Research	(Associate Editor)
	Pflüger's Arch Eur J Physiol	(Associate Editor)
	Journal of Vascular Research	(Consulting Editor)
	Prostaglandins & Other Lipid Mediators	(Associate Editor)
	Am. J. Physiol.-Heart and Circulatory Physiology	(Editorial Board)
	Am. J. Physiol.-Cell	(Editorial Board)
	Basic Research in Cardiology	(Editorial Board)
	Journal of Cardiovascular Pharmacology	(Editorial Board)
Retired:	British Journal of Pharmacology	(Editorial Board)
	Circulation Research	(2007-2013 Associate Editor)
	Circulation Research	(2014-2019 Consulting Editor)

PUBLIKATIONEN IN PEER-REVIEW-JOURNALEN

PUBLICATIONS IN PEER-REVIEWED JOURNALS

-1990-

1. **Fleming** I, Gray GA, Julou-Schaeffer G, Parratt JR, Stoclet J-C. Incubation with endotoxin activates the L-arginine pathway in vascular tissue. *Biochem Biophys Res Commun* 1990;171:562-568.
2. Gray GA, Julou-Schaeffer G, Oury K, **Fleming** I, Parratt JR, Stoclet J-C. An L-arginine-derived factor mediates endotoxin-induced vascular hyposensitivity to calcium. *Eur J Pharmacol* 1990;191:89-92.
3. Julou-Schaeffer G, Gray GA, **Fleming** I, Schott C, Parratt JR, Stoclet J-C. Loss of vascular responsiveness induced by endotoxin involves the L-arginine pathway. *Am J Physiol* 1990;259:H1038-H1043.

-1991-

4. **Fleming** I, Julou-Schaeffer G, Gray GA, Parratt JR, Stoclet J-C. Evidence that an L-arginine/nitric oxide-dependent elevation of tissue cyclic GMP content is involved in depression of vascular reactivity by endotoxin. *Br J Pharmacol* 1991;103:1047-1052.
5. **Fleming** I, Gray GA, Stoclet J-C. Inducible but not constitutive production of nitric oxide by vascular smooth muscle cells. *Eur J Pharmacol* 1991;200:375-376.

6. Gray GA, Schott C, Julou-Schaeffer G, **Fleming** I, Parratt JR, Stoclet J-C. The effect of inhibitors of the L-arginine/nitric oxide pathway on endotoxin-induced loss of vascular responsiveness in anaesthetized rats. *Br J Pharmacol* 1991;103:1218-1224.
7. Julou-Schaeffer G, Gray GA, **Fleming** I, Parratt JR, Stoclet J-C. Activation of the L-arginine pathway is involved in vascular hyporeactivity induced by endotoxin. *J Cardiovasc Pharmacol* 1991;17:S207-S212.

-1992-

8. Schuller F, **Fleming** I, Stoclet J-C, Gray GA. Effect of endotoxin on circulating cyclic GMP in the rat. *Eur J Pharmacol*. 1992;212:93-96.
9. **Fleming** I, Dambacher T, Busse R. Endothelium-derived kinins account for the immediate response of endothelial cells to bacterial lipopolysaccharide. *J Cardiovasc Pharmacol*. 1992;20:S135-S138.

-1993-

10. **Fleming** I, Gray GA, Stoclet J-C. Influence of the endothelium on induction of the L-arginine pathway by bacterial lipopolysaccharide in the rat aorta. *Am J Physiol*. 1993;264:H1200-H1207.
11. Paya D, Gray GA, **Fleming** I, Stoclet J-C. Effect of dexamethasone on the onset and persistence of vascular hyporeactivity induced by *E.coli*. lipopolysaccharide in rats. *Circ Shock*. 1993;41:103-112.
12. Busse R, **Fleming** I, Hecker M. Endothelium-derived bradykinin: implications for ACE inhibitor therapy. *J Cardiovasc Pharmacol*. 1993;22:S31-S36.
13. Busse R, **Fleming** I. The endothelial organ. *Curr Opin Cardiol*. 1993;8:719-727.
14. Hecker M, **Fleming** I, Pörsti I, Busse R. ACE inhibitors, kinins and endothelial autacoid formation. *Pharm Pharmacol Lett*. 1993;3:64-67.

-1994-

15. **Fleming** I, Hecker M, Busse R. Intracellular alkalization induced by bradykinin sustains activation of the constitutive nitric oxide synthase in endothelial cells. *Circ Res*. 1994;74:1220-1226.

-1995-

16. **Fleming** I, Fisslthaler B, Busse R. Calcium signaling in endothelial cells involves activation of tyrosine kinases and leads to activation of MAP kinase. *Circ Res*. 1995;76:522-529.
17. Hecker M, **Fleming** I, Busse R. Kinin-mediated activation of endothelial nitric oxide formation. Possible role during myocardial ischemia. *Agents Actions*. 1995;45:119-128.
18. Busse R, **Fleming** I. Regulation and functional consequences of endothelial nitric oxide formation. *Ann Med*. 1995;27:331-340.
19. **Fleming** I, Busse R. Control and consequences of endothelial nitric oxide formation. *Adv Pharmacol*. 1995;34:187-206.

-1996-

20. Ayajiki K, Kindermann M, Hecker M, **Fleming** I, Busse R. Intracellular pH and tyrosine phosphorylation but not calcium determine shear stress-induced nitric oxide production in native endothelial cells. *Circ Res*. 1996;78:750-758.
21. Bauersachs J, Popp R, Hecker M, Sauer E, **Fleming** I, Busse R. Nitric oxide attenuates the release of endothelium-derived hyperpolarizing factor. *Circulation*. 1996;94:3341-3347.
22. Busse R, **Fleming** I. Molecular responses of endothelial tissue to kinins. *Diabetes*. 1996;45:S8-S13.
23. **Fleming** I, Bara A, Busse R. Calcium signalling and autacoid production in endothelial cells are modulated by changes in tyrosine kinase and phosphatase activity. *J Vasc Res*. 1996;33:225-234.
24. **Fleming** I, Fisslthaler B, Busse R. Interdependence of calcium signaling and protein tyrosine phosphorylation in human endothelial cells. *J Biol Chem*. 1996;271:11009-11015.
25. Popp R, Bauersachs J, Hecker M, **Fleming** I, Busse R. A transferable, β -naphthoflavone-inducible, hyperpolarizing factor is synthesised by native and cultured porcine coronary endothelial cells. *J Physiol (Lond)*. 1996;497.3:699-709.
26. Bauersachs J, **Fleming** I, Busse R. Pathophysiology of chronic venous insufficiency. *Phlebology*. 1996;11:16-22.
27. Busse R, **Fleming** I. Endothelial dysfunction in atherosclerosis. *J Vasc Res*. 1996;33:181-194.

28. **Fleming** I, Bauersachs J, Busse R. Paracrine functions of the coronary vascular endothelium. *Mol Cell Biochem.* 1996;157:137-145.

-1997-

29. Bauersachs J, **Fleming** I, Scholz D, Popp R, Busse R. Endothelium-derived hyperpolarizing factor but not nitric oxide is reversibly inhibited by brefeldin A. *Hypertension*. 1997;30:1598-1605.
30. Bauersachs J, Popp R, **Fleming** I, Busse R. Nitric oxide and endothelium-derived hyperpolarizing factor: formation and interactions. *Prostaglandins Leukot Essent Fatty Acids*. 1997;57:439-446.
31. Bouloumié A, Bauersachs J, Linz W, Schölkens BA, Wiemer G, **Fleming** I, Busse R. Endothelial dysfunction coincides with an enhanced NO synthase expression and superoxide anion production. *Hypertension*. 1997;30:934-941.
32. **Fleming** I, Bauersachs J, Busse R. Calcium-dependent and -independent activation of the endothelial NO synthase. *J Vasc Res*. 1997;34:165-174.
33. **Fleming** I, Busse R. Tyrosine phosphorylation and bradykinin-induced signaling in endothelial cells. *Am J Cardiol*. 1997;80:102A-109A.

-1998-

34. Bauersachs J, Bouloumié A, Mülsch A, Wiemer G, **Fleming** I, Busse R. Vasodilator dysfunction in aged spontaneously hypertensive rats: changes in NO synthase III and soluble guanylyl expression and in superoxide anion production. *Cardiovasc Res*. 1998;37:772-779.
35. Fisslthaler B, Schini-Kerth VB, **Fleming** I, Busse R. Thrombin receptor expression is increased by angiotensin II in cultured and native vascular smooth muscle cells. *Cardiovasc Res*. 1998;38:263-271.
36. **Fleming** I, Bauersachs J, Fisslthaler B, Busse R. Calcium-independent activation of the endothelial nitric oxide synthase in response to tyrosine phosphatase inhibitors and fluid shear stress. *Circ Res*. 1998;82:686-695.
37. Popp R, **Fleming** I, Busse R. Pulsatile stretch in coronary arteries elicits release of endothelium-derived hyperpolarizing factor: a modulator of arterial compliance. *Circ Res*. 1998;82:696-703.
38. Busse R, **Fleming** I. Pulsatile stretch and shear stress: physical stimuli determining the production of endothelium-derived relaxing factors. *J Vasc Res*. 1998;35:73-84.
39. **Fleming** I, Busse R. EDHF: update on an alternative vasodilator with potential renal significance. *Nephrol Dial Transplant*. 1998;13:2721-2723.

-1999-

40. **Fleming** I, Bauersachs J, Schäfer A, Scholz D, Aldershvile J, Busse R. Isometric contraction induces the Ca²⁺-independent activation of the endothelial nitric oxide synthase. *Proc Natl Acad Sci USA*. 1999;96:1123-1128.
41. **Fleming** I, Schermer B, Popp R, Busse R. Inhibition of the production of the endothelium-derived hyperpolarizing factor by cannabinoid receptor agonists. *Br J Pharmacol*. 1999;126:949-960.
42. Benzing T, **Fleming** I, Blaukat A, Müller-Esterl W, Busse R. Angiotensin-converting enzyme inhibitor ramiprilat interferes with the sequestration of the B₂ kinin receptor within the plasma membrane of native endothelial cells. *Circulation*. 1999;99:2034-2040.
43. Dimmeler S, **Fleming** I, Fisslthaler B, Hermann C, Busse R, Zeiher AM. Activation of nitric oxide synthase in endothelial cells by Akt-dependent phosphorylation. *Nature*. 1999;399:601-605.
44. Fisslthaler B, Popp R, Kiss L, Potente M, Harder DR, **Fleming** I[§], Busse R. Cytochrome P450 2C is an EDHF synthase in coronary arteries. *Nature*. 1999;401:493-497. [§]Corresponding author
45. Kusterer K, Pohl T, Fortmeyer HP, März W, Scharnagl H, Oldenburg A, Angermüller S, **Fleming** I, Usadel KH, Busse R. Chronic selective hypertriglyceridemia impairs endothelium-dependent vasodilation in rats. *Cardiovasc Res*. 1999;42:783-793.
46. Busse R, **Fleming** I. A critical look at translational cardiovascular research. *Am J Physiol*. 1999;277:H1655-H1660.
47. Busse R, **Fleming** I. Nitric oxide, nitric oxide synthase and hypertensive vascular disease. *Current Hypertension Reports*. 1999;1:88-95.
48. **Fleming** I, Busse R. NO the primary EDRF. *J Mol Cell Cardiol*. 1999;31:5-14.
49. **Fleming** I, Busse R. Signal transduction of eNOS activation. *Cardiovasc Res*. 1999;43:532-541.

-2000-

50. Bolz SS, Fisslthaler B, Pieperhoff S, de Wit C, Fleming I, Busse R, Pohl U. Antisense oligonucleotides against cytochrome P450 2C8 attenuate EDHF-mediated Ca²⁺ changes and dilation in isolated resistance arteries. *FASEB J*. 2000;14:255-260.
51. Brandes RP, Schmitz-Winnenthal FH, Félétou M, Gödecke A, Huang PL, Vanhoutte PM, Fleming I, Busse R. An endothelium-derived hyperpolarizing factor distinct from NO and prostacyclin is a major endothelium-dependent vasodilator in resistance vessels of wild-type and endothelial NO synthase knockout mice. *Proc Natl Acad Sci USA*. 2000;97:9747-9752.
52. Fisslthaler B, Hinsch N, Chataigneau T, Popp R, Kiss L, Busse R, Fleming I. Nifedipine increases cytochrome P4502C expression and EDHF-mediated responses in coronary arteries. *Hypertension*. 2000;36:270-275.
53. Fisslthaler B, Dimmeler S, Hermann C, Busse R, Fleming I. Phosphorylation and activation of the endothelial nitric oxide synthase by fluid shear stress. *Acta Physiol Scand*. 2000;168:81-88.
54. Scholz D, Ito W, Fleming I, Deindl E, Sauer A, Wiesnet M, Busse R, Schaper J, Schaper W. Ultrastructure and molecular histology of rabbit hind-limb collateral artery growth. *Virchows Arch*. 2000;436:257-270.
55. Fleming I. Cytochrome P450 2C is an EDHF synthase in coronary arteries. *Trends Cardiovasc Med*. 2000;10:166-170.

-2001-

56. Fleming I, Michaelis UR, Bredenkotter D, Fisslthaler B, Dehghani F, Brandes RP, Busse R. Endothelium-derived hyperpolarizing factor synthase (Cytochrome P450 2C9) is a functionally significant source of reactive oxygen species in coronary arteries. *Circ Res*. 2001;88:44-51.
57. Fleming I, Fisslthaler B, Dimmeler S, Kemp BE, Busse R. Phosphorylation of Thr⁴⁹⁵ regulates Ca²⁺/calmodulin-dependent endothelial nitric oxide synthase activity. *Circ Res*. 2001;88:e68-e75.
58. Bauersachs J, Fleming I, Fraccarollo D, Busse R, Ertl G. Prevention of endothelial dysfunction in heart failure by vitamin E. Attenuation of vascular superoxide formation and increase in soluble guanylyl cyclase expression. *Cardiovasc Res*. 2001;51:344-350.
59. Fisslthaler B, Popp R, Michaelis UR, Kiss L, Fleming I, Busse R. Cyclic Stretch Enhances the Expression and Activity of the Coronary EDHF Synthase. *Hypertension*. 2001;38:1427-1432.
60. Fleming I, Fisslthaler B, Michaelis UR, Kiss L, Popp R, Busse R. The coronary EDHF stimulates multiple signalling pathways and proliferation in vascular cells. *Pflüger's Arch Eur J Physiol*. 2001;442:511-518.
61. Schmandra TC, Folz IC, Kimpel M, Fleming I, Holzer K, Hanisch EW. Cirrhosis serum induces a nitric oxide-associated vascular hyporeactivity of aortic segments from healthy rats in vitro. *Eur J Gastroenterol Hepatol*. 2001;13:957-962.
62. Fleming I. Cytochrome P450 and vascular homeostasis. *Circ Res*. 2001;89:753-762.
63. Fleming I, Busse R. Vascular cytochrome P450 in the regulation of renal function and vascular tone: EDHF, superoxide anions and blood pressure. *Nephrol Dial Transplant*. 2001;16:1309-1311.

-2002-

64. Teupe C, Richter S, Fisslthaler B, Randriamboavonjy V, Ihling C, Fleming I, Busse R, Zeiher AM, Dimmeler S. Vascular gene transfer of phospho-mimetic endothelial nitric oxide synthase (S1177D) using ultrasound-enhanced destruction of plasmid-loaded microbubbles improves vasoreactivity. *Circulation*. 2002;105:1104-1109.
65. Popp R, Brandes RP, Ott G, Busse R, Fleming I. Dynamic modulation of interendothelial gap junctional communication by 11,12-epoxyeicosatrienoic acid. *Circ Res*. 2002;90:800-806.
66. Potente M, Michaelis UR, Fisslthaler B, Busse R, Fleming I. CYP 2C9-induced endothelial cell proliferation involves induction of MAP kinase phosphatase 1, inhibition of the c-Jun N-terminal kinase and upregulation of cyclin D1. *J Biol Chem*. 2002;277:15671-15676.
67. Urbich C, Reissner A, Chavakis E, Dernbach E, Haendeler J, Fleming I, Zeiher AM, Kaszkin M, Dimmeler S. Dephosphorylation of endothelial nitric oxide synthase contributes to the anti-angiogenic effects of endostatin. *FASEB J*. 2002;16:706-708.
68. Bauersachs J, Christ M, Ertl G, Michaelis UR, Fisslthaler B, Busse R, Fleming I. Cytochrome P450 2C expression and EDHF-mediated relaxation in porcine coronary arteries is increased by cortisol. *Cardiovasc Res*. 2002;54:669-675.

69. Brandes RP, Popp R, Ott G, Bredenkötter D, Wallner C, Busse R, **Fleming I**. The extracellular regulated kinases (ERK) 1/2 mediate cannabinoid- induced inhibition of gap junctional communication in endothelial cells. *Br J Pharmacol*. 2002;136:709-716.
70. Busse R, Edwards G, Feletou M, **Fleming I**, Vanhoutte PM, Weston AH. EDHF: bringing the concepts together. *Trends Pharmacol Sci*. 2002;23:374-380.
71. Büsselmaker, E., Wallner, C., Fisslthaler, B., and **Fleming, I**. The Na-K-ATPase is a target for an EDHF displaying characteristics similar to potassium ions in the porcine renal interlobar artery. *Br J Pharmacol*. 2002;137:647-654.
72. Kohlstedt, K., Shogi, F., Müller-Esterl, W., Busse, R., and **Fleming, I**. CK2 phosphorylates the angiotensin converting enzyme and regulates its retention in the endothelial cell plasma membrane. *Circ Res*. 2002;91:749-756.
73. Rössig L, Li H, Fisslthaler B, Urbich C, **Fleming I**, Forstermann U, Zeiher AM, Dimmeler S. Inhibitors of histone deacetylation downregulate the expression of endothelial nitric oxide synthase and compromise endothelial cell function in vasorelaxation and angiogenesis. *Circ Res*. 2002;91:837-844.

-2003-

74. **Fleming I**, Busse R. Molecular mechanisms involved in the regulation of the endothelial nitric oxide synthase. *Am J Physiol Regul Integr Comp Physiol*. 2003;284:1-12.
75. Busse R, **Fleming I**. Regulation of endothelium-derived vasoactive autacoid production by hemodynamic forces. *Trends Pharmacol Sci*. 2003;24:24-29.
76. Hillig T, Krstrup P, **Fleming I**, Osada T, Saltin B, Hellsten Y. Cytochrome P450 2C9 plays an important role in the regulation of exercise-induced skeletal muscle blood flow and oxygen uptake in humans. *J Physiol (Lond)*. 2003;546:307-314.
77. Fisslthaler B, Michaelis UR, Randriamboavonjy V, Busse R, **Fleming I**. Cytochrome P450 epoxygenases and vascular tone: novel role for HMG Co A reductase inhibitors in the regulation of CYP 2C expression. *Biochim Biophys Acta*. 2003;1619:332-339.
78. Cronin A, Mowbray S, Dürk H, Homburg S, **Fleming I**, Fisslthaler B, Oesch F, Arand M. The N-terminal domain of mammalian soluble epoxide hydrolase is a phosphatase. *Proc Natl Acad Sci USA*. 2003;100:1552-1557.
79. Badorf C, Brandes RP, Popp R, Ruppert D, Urbich C, Aicher A, **Fleming I**, Busse R, Zeiher AM, Dimmeler S. Transdifferentiation of blood-derived human adult endothelial progenitor cells into functionally active cardiomyocytes. *Circulation*. 2003;107:1024-1032.
80. Randriamboavonjy V, Busse R, **Fleming I**. 20-HETE-induced contraction of small coronary arteries depends on the activation of Rho-kinase. *Hypertension*. 2003;41:801-806.
81. Michaelis UR, Fisslthaler B, Medhora M, Harder D, **Fleming I**, Busse R. Cytochrome P450 2C9-derived epoxyeicosatrienoic acids induce angiogenesis via cross-talk with the epidermal growth factor receptor (EGFR). *FASEB J*. 2003;17:770-772.
82. Büsselmaker E, Popp R, Binder J, Busse R, **Fleming I**. Characterization of the endothelium-derived hyperpolarizing factor (EDHF) response in the human interlobar artery. *Kidney Int*. 2003;63:1749-1755.
83. Büsselmaker E, Popp R, Fisslthaler B, Larson CM, **Fleming I**, Busse R, Brandes RP. Hyperthyroidism improves endothelium-dependent relaxation in the rat renal artery. *Cardiovasc Res*. 2003;59:181-188.
84. Potente M, Fisslthaler B, Busse R, **Fleming I**. 11,12-Epoxyeicosatrienoic acid-induced inhibition of FOXO factors promotes endothelial proliferation by down-regulating p27^{Kip1}. *J Biol Chem*. 2003;278:29619-29625.
85. Fisslthaler B, Benzing T, Busse R, **Fleming I**. Insulin enhances the expression of the endothelial nitric oxide synthase in native endothelial cells: a dual role for Akt and AP-1. *Nitric Oxide*. 2003;8:253-261
86. **Fleming I**, Schulz C, Fichtlscherer B, Kemp BE, Fisslthaler B, Busse R. AMP-activated protein kinase (AMPK) regulates the insulin-induced activation of the nitric oxide synthase in human platelets. *Thromb Haemost*. 2003;90:863-871.
87. Lenasi H, Kohlstedt K, Fichtlscherer B, Mülsch A, Busse R, **Fleming I**. Amlodipine activates the endothelial nitric oxide synthase by altering phosphorylation on Ser¹¹⁷⁷ and Thr⁴⁹⁵. *Cardiovasc Res*. 2003;59:844-853.

88. Fisslthaler B, Boengler K, **Fleming I**, Schaper W, Busse R, Deindl E. Identification of a *cis*-element regulating transcriptional activity in response to fluid shear stress in bovine aortic endothelial cells. *Endothelium*. 2003;10:267-275.
89. Passauer J, Büssemaker E, Lassig G, Pistrosch F, Fauler J, Gross P, **Fleming I**. Baseline blood flow and bradykinin-induced vasodilator responses in the human forearm are insensitive to the CYP 2C9 inhibitor sulfaphenazole. *Clin Sci (Lond)*. 2003;105:513-518.
90. Lin MI, Fulton D, Babbitt R, **Fleming I**, Busse R, Pritchard KA, Jr., Sessa WC. Phosphorylation of threonine 497 in endothelial nitric-oxide synthase coordinates the coupling of L-arginine metabolism to efficient nitric oxide production. *J Biol Chem*. 2003;278:44719-44726.
91. Büssemaker E, Popp R, Fisslthaler B, Larson CM, **Fleming I**, Busse R, Brandes RP. Aged spontaneously hypertensive rats exhibit a selective loss of EDHF-mediated relaxation in the renal artery. *Hypertension*. 2003;42:562-568.
92. Féléto M, Busse R, Edwards G, **Fleming I**, Weston AH, Vanhoutte PM. Dialogue entre cellules endothéliales et cellules musculaires lisses. *Med Sci (Paris)*. 2003;19:1242-1250.

-2004-

93. Kohlstedt K, Brandes RP, Muller-Esterl W, Busse R, **Fleming I**. Angiotensin-converting enzyme is involved in outside-in signaling in endothelial cells. *Circ Res*. 2004;94:60-67.
94. Fichtlscherer S, Dimmeler S, Breuer S, Busse R, Zeiher AM, **Fleming I**. Inhibition of cytochrome P450 2C9 improves endothelium-dependent, nitric oxide-mediated vasodilatation in patients with coronary artery disease. *Circulation*. 2004;109:178-183.
95. Randriamboavonjy V, Schrader J, Busse R, **Fleming I**. Insulin induces the release of vasodilator compounds from platelets by a nitric oxide-G kinase-VAMP-3-dependent pathway. *J Exp Med*. 2004;199:347-356.
96. Michaelis, M., Michaelis, U. R., **Fleming, I.**, Sukhan, T., Cinatl, J., Blaheta, R. A., Hoffmann, K., Kotchetkov, R., Busse, R., Nau, H., and Cinatl, J., Jr. Valproic acid inhibits angiogenesis *in vitro* and *in vivo*. *Mol.Pharmacol*. 65(3), 520-527. 2004.
97. **Fleming I**. Cytochrome P450 epoxygenases as EDHF-synthase(s). *Pharmacol Res*. 2004;49:525-533.
98. Batenburg WW, Popp R, **Fleming I**, Vries Rd, Garrelds IM, Saxena PR, Danser AHJ. Bradykinin-induced relaxation of coronary microarteries: S-nitrosothiols as EDHF? *Br J Pharmacol*. 2004;142:125-135.
99. **Fleming I**, Busse.R. The physiology of nitric oxide: control and consequences. *Curr Med Chem*. 2004;3:189-205.
100. Wassmann S, Czech T, van Eickels M, **Fleming I**, Bohm M, Nickenig G. Inhibition of Diet-Induced Atherosclerosis and Endothelial Dysfunction in Apolipoprotein E/Angiotensin II Type 1A Receptor Double-Knockout Mice. *Circulation*. 2004;110:3062-3067.
101. Keller, A., Mohamed, A., Dröse, S., Brandt, U., **Fleming, I.**, and Brandes, R. P. Analysis of dichlorodihydrofluorescein and dihydrocalcein as probes for the detection of intracellular reactive oxygen species. *Free Radic.Res*. 2004;38:1257-1267.

-2005-

102. Kohlstedt K, Busse R, **Fleming I**. Signaling via the angiotensin-converting enzyme enhances the expression of cyclooxygenase-2 in endothelial cells. *Hypertension*. 2005;45:126-132.
103. Randriamboavonjy V, Kiss L, Falck JF, Busse R, **Fleming I**. The synthesis of 20-HETE in small porcine coronary arteries antagonizes EDHF-mediated relaxation. *Cardiovasc Res*. 2005;65:487-494.
104. Michaelis UR, Falck JR, Schmidt R, Busse R, **Fleming I**. Cytochrome P4502C9-derived epoxyeicosatrienoic acids induce the expression of cyclooxygenase-2 in endothelial cells. *Arterioscler Thromb Vasc Biol*. 2005;25:321-326.
105. **Fleming I**, Mohamed A, Galle J, Turchanowa L, Brandes RP, Fisslthaler B, Busse R. Oxidized low density lipoprotein increases superoxide production by endothelial nitric oxide synthase by inhibiting PKC α . *Cardiovasc Res*. 2005;65:897-906.
106. **Fleming I**, Kohlstedt K, Busse R. New fACEs in the renin-angiotensin system. *Physiology*. 2005;20:91-95.
107. Passauer J, Pistrosch F, Lässig G, Herbrig K, Büssemaker E, Gross P, **Fleming I**. Nitric oxide - and EDHF-mediated arteriolar tone in uremia is unaffected by selective inhibition of vascular cytochrome P450 2C9. *Kidney Int*. 2005;67:1907-1912.

108. Jung O, Brandes RP, Kim IH, Schweda F, Schmidt R, Hammock BD, Busse R, **Fleming I**. Soluble epoxide hydrolase is a main effector of angiotensin II-induced hypertension. *Hypertension*. 2005;45:759-765.
109. Brandes RP, **Fleming I**, Busse R. Endothelial aging. *Cardiovasc Res*. 2005;66:286-294.
110. **Fleming I**, Fisslthaler B, Dixit M, Busse R. Role of PECAM-1 in the shear-stress-induced activation of Akt and the endothelial nitric oxide synthase (eNOS) in endothelial cells. *J Cell Sci*. 2005;118:4103-4111. *Highlighted in the editor's choice Sci.Signal*. 2005;302:tw333.
111. Vriens J, Owsianik G, Fisslthaler B, Suzuki M, Janssens A, Voets T, Morisseau C, Hammock BD, **Fleming I**, Busse R, Nilius B. Modulation of the Ca²⁺ permeable cation channel TRPV4 by cytochrome P450 epoxygenases in vascular endothelium. *Circ Res*. 2005;97:908-915.
112. Michaelis UR, Fisslthaler B, Barbosa-Sicard E, Falck JR, **Fleming I**, Busse R. Cytochrome P450 epoxygenases 2C8 and 2C9 are implicated in hypoxia-induced endothelial cell migration and angiogenesis. *J Cell Sci*. 2005;118:5489-5498.
113. Mollnau H, Oelze M, August M, Wendt M, Daiber A, Schulz E, Baldus S, Kleschyov AL, Materne A, Wenzel P, Hink U, Nickenig G, **Fleming I**, Munzel T. Mechanisms of increased vascular superoxide production in an experimental model of idiopathic dilated cardiomyopathy. *Arterioscler Thromb Vasc Biol*. 2005;25:2554-2559.
114. Dixit M, Loot AE, Mohamed A, Fisslthaler B, Boulanger CM, Ceacareanu B, Hassid A, Busse R, **Fleming I**. Gab1, SHP2, and protein kinase A are crucial for the activation of the endothelial NO synthase by fluid shear stress. *Circ Res*. 2005;97:1236-1244.

-2006-

115. **Fleming I**, Kohlstedt K, Busse R. The tissue renin-angiotensin system and intracellular signalling. *Curr Opin Nephrol Hypertens*. 2006;15:8-13.
116. Kohlstedt K, Kellner R, Busse R, **Fleming I**. Signaling via the somatic angiotensin converting enzyme results in the phosphorylation of the non muscle myosin heavy chain IIA (MYH9). *Mol Pharmacol*. 2006;69:19-26.
117. Michaelis M, Suhan T, Michaelis UR, Beek K, Rothweiler F, Tausch L, Werz O, Eikel D, Zörnig M, Nau H, **Fleming I**, Doerr HW, Cinatl J, Jr. Valproic acid induces extracellular signal-regulated kinase 1/2 activation and inhibits apoptosis in endothelial cells. *Cell Death Differ*. 2006;13:446-453.
118. Pokreisz P, **Fleming I**, Kiss L, Barbosa-Sicard E, Fisslthaler B, Falck JR, Hammock BD, Kim IH, Szelid Z, Vermeersch P, Gilljins H, Pellens M, Grimminger F, van Zonneveld AJ, Collen D, Busse R, Janssens S. Cytochrome P450 epoxygenase gene function in hypoxic pulmonary vasoconstriction and pulmonary vascular remodeling. *Hypertension*. 2006;47:762-770.
119. **Fleming I**, Busse R. Endothelium-derived epoxyeicosatrienoic acids and vascular function. *Hypertension*. 2006;47:629-633.
120. **Fleming I**. Signaling by the angiotensin-converting enzyme. *Circ Res*. 2006;98:887-896.
121. Kohlstedt K, Gershon C, Friedrich M, Muller-Esterl W, Alhenc-Gelas F, Busse R, **Fleming I**. Angiotensin-converting enzyme (ACE) dimerization is the initial step in the ACE inhibitor-induced ACE signaling cascade in endothelial cells. *Mol Pharmacol*. 2006;69:1725-1732.
122. Michaelis UR, **Fleming I**. From endothelium-derived hyperpolarizing factor (EDHF) to angiogenesis: epoxyeicosatrienoic acids (EETs) and cell signaling. *Pharmacol Ther*. 2006;111:584-595.
123. Oelze M, Warnholtz A, Faulhaber J, Wenzel P, Kleschyov AL, Coldewey M, Hink U, Pongs O, **Fleming I**, Wassmann S, Meinertz T, Ehmke H, Daiber A, Munzel T. NADPH oxidase accounts for enhanced superoxide production and impaired endothelium-dependent smooth muscle relaxation in BKβ1^{-/-} mice. *Arterioscler Thromb Vasc Biol*. 2006;26:1753-1759.
124. Busse R, **Fleming I**. Vascular endothelium and blood flow. *Handb Exp Pharmacol*. 2006;176 Pt2:43-78.

-2007-

125. **Fleming I**. Epoxyeicosatrienoic acids, cell signaling and angiogenesis. *Prostaglandins Other Lipid Mediat*. 2007;82:60-67.
126. Fisslthaler B,* **Fleming I**,* Keserü B, Walsh K, Busse R. Fluid shear stress and NO decrease the activity of the hydroxy-methylglutaryl coenzyme A reductase in endothelial cells via the AMP-activated protein kinase and FoxO1. *Circ Res*. 2007;100:e12-e21. *Both authors contributed equally.

127. Wojciak-Stothard B, Torondel B, Tsang LYF, **Fleming I**, Fisslthaler B, Leiper JM, Vallance P. The ADMA/DDAH pathway is a critical regulator of endothelial cell motility. *J Cell Sci.* 2007;120:929-942.
128. Metzner J, Popp L, Marian C, Manderscheid C, Renne C, Fisslthaler B, **Fleming I**, Busse R, Geisslinger G, Niederberger E. The effects of COX-2 selective and non-selective NSAIDs on the initiation and progression of atherosclerosis in ApoE^{-/-} mice. *J Mol Med.* 2007;85:623-633.
129. Nüsing RM, Schweer H, **Fleming I**, Zeldin DC, Wegmann M. Epoxyeicosatrienoic acids affect electrolyte transport in renal tubular epithelial cells: dependence on cyclooxygenase and cell polarity. *Am J Physiol Renal Physiol.* 2007;293:F288-F298.
130. Fischer D, Landmesser U, Spiekermann S, Hilfiker-Kleiner D, Hospely M, Muller M, Busse R, **Fleming I**, Drexler H. Cytochrome P450 2C9 is involved in flow-dependent vasodilation of peripheral conduit arteries in healthy subjects and in patients with chronic heart failure. *Eur J Heart Failure.* 2007;9:770-775.
131. **Fleming I**. DiscrEET regulators of homeostasis: epoxyeicosatrienoic acids, cytochrome P450 epoxygenases and vascular inflammation. *Trends in Pharmacol Sci.* 2007;28:448-452.
132. **Fleming I**, Rueben A, Popp R, Fisslthaler B, Schrod T, Sander A, Haendeler J, Falck JR, Morisseau C, Hammock BD, Busse R. Epoxyeicosatrienoic acids regulate Trp channel dependent Ca²⁺ signaling and hyperpolarization in endothelial cells. *Arterioscler Thromb Vasc Biol.* 2007;27:2612-2618. (Editorial: Larsen BT, Zhang DX, Gutterman DD. Epoxyeicosatrienoic acids, TRP channels, and intracellular Ca²⁺ in the vasculature: an endothelium-derived endothelium-hyperpolarizing factor? *Arterioscler Thromb Vasc Biol.* 2007;27:2496-2498)

-2008-

133. Randriamboavonjy V, Pistrosch F, Bölck B, Schwinger RH, Dixit M, Badenhop K, Cohen RA, Busse R, **Fleming I**. Platelet SERCA-2 and μ -calpain activity are altered in type 2 diabetes and restored by rosiglitazone. *Circulation.* 2008;117:52-60.
134. **Fleming I**. Vascular cytochrome P450 enzymes: physiology and pathophysiology. *Trends Cardiovasc Med.* 2008;18:20-25.
135. Dixit M, Bess E, Fisslthaler B, Hartel FV, Noll T, Busse R, **Fleming I**. Shear stress-induced activation of the AMP-activated protein kinase regulates FoxO1a and angiopoietin-2 in endothelial cells. *Cardiovasc Res.* 2008;77:160-168.
136. Michaelis UR, Xia N, Barbosa-Sicard E, Falck JR, Busse R, **Fleming I**. Role of cytochrome P450 2C epoxygenases in hypoxia-induced cell migration and angiogenesis in retinal endothelial cells. *Invest Ophthalmol Vis Sci.* 2008;49:1242-1247.
137. Webler AC, Popp R, Korff T, Michaelis UR, Urbich C, Busse R, **Fleming I**. Cytochrome P450 2C9-induced angiogenesis is dependent on EphB4. *Arterioscler Thromb Vasc Biol.* 2008;28:1123-1129.
138. Fisslthaler B, Loot AE, Mohamed A, Busse R, **Fleming I**. Inhibition of endothelial nitric oxide synthase activity by proline-rich tyrosine kinase 2 in response to fluid shear stress and insulin. *Circ Res.* 2008;102:1520-1528.
139. Wenzel P, Schulz E, Oelze M, Muller J, Schuhmacher S, Alhamdani MS, Debrezion J, Hortmann M, Reifenberg K, **Fleming I**, Munzel T, Daiber A. AT₁-receptor blockade by telmisartan upregulates GTP-cyclohydrolase I and protects eNOS in diabetic rats. *Free Radic Biol Med.* 2008;45:619-626.
140. Dernbach E, Randriamboavonjy V, **Fleming I**, Zeiher AM, Dimmeler S, Urbich C. Impaired interaction of platelets with endothelial progenitor cells in patients with cardiovascular risk factors. *Basic Res Cardiol.* 2008;103:572-581.
141. Webler AC, Michaelis UR, Popp R, Barbosa-Sicard E, Murugan A, Falck JR, Fisslthaler B, **Fleming I**. Epoxyeicosatrienoic acids are part of the VEGF-activated signaling cascade leading to angiogenesis. *Am J Physiol Cell Physiol.* 2008;295:C1292-C1301.
142. Loot AE, Popp R, Fisslthaler B, Vriens J, Nilius B, **Fleming I**. Role of cytochrome P450-dependent transient receptor potential V4 activation in flow-induced vasodilatation. *Cardiovasc Res.* 2008;80:445-452.
143. Keserü B, Barbosa-Sicard E, Popp R, Fisslthaler B, Dietrich A, Gudermann T, Hammock BD, Falck JR, Weissmann N, Busse R, **Fleming I**. Epoxyeicosatrienoic acids and the soluble epoxide hydrolase are determinants of pulmonary artery pressure and the acute hypoxic pulmonary vasoconstrictor response. *FASEB J.* 2008;22:4306-4315.

-2009-

144. Korhonen H, Fisslthaler B, Moers A, Wirth A, Habermehl D, Wieland T, Schutz G, Wettschureck N, **Fleming I**, Offermanns S. Anaphylactic shock depends on endothelial Gq/G11. *J Exp Med*. 2009;206:411-420.
145. Revermann M, Barbosa-Sicard E, Dony E, Schermuly RT, Morriseau C, Geisslinger G, **Fleming I**, Hammock BD, Brandes RP. Inhibition of the soluble epoxide hydrolase attenuates monocrotaline-induced pulmonary hypertension in rats. *J Hypertension*. 2009;27:322-331.
146. Kohlstedt K, Gershon C, Trouvain C, Hofmann W-K, Fichtlscherer S, **Fleming I**. Angiotensin converting enzyme (ACE) inhibitors modulate CRBP1 and adiponectin expression in adipocytes via the ACE-dependent signaling cascade. *Mol Pharmacol*. 2009;75:685-692.
147. Randriamboavonjy V, **Fleming I**. Insulin, insulin resistance and platelet signaling in diabetes. *Diabetes Care*. 2009;32:528-530.
148. Randriamboavonjy V, Badenhop K, Fisslthaler B, Geisslinger G, **Fleming I**. The S1P₂ receptor is expressed in human platelets, is linked to the RhoA-Rho kinase pathway and is degraded by μ -calpain in type 2 diabetes. *Basic Res Cardiol* 2009;104:333-40.
149. Fisslthaler B, **Fleming I**. Activation and signaling by the AMP-activated protein kinase in endothelial cells. *Circ Res* 2009;105:114-27.
150. Dreieicher E, Beck KF, Lazaroski S, Boosen M, Tsalastra-Greul W, Beck M, **Fleming I**, Schaefer L, Pfeilschifter J. Nitric oxide inhibits glomerular TGF- β signaling via SMOC-1. *J Am Soc Nephrol* 2009;20:1963-74.
151. Barbosa-Sicard E,* Frömel T,* Keserü B, Brandes RP, Morisseau C, Hammock BD, Braun T, Krueger M, **Fleming I**. Inhibition of the soluble epoxide hydrolase by tyrosine nitration. *J Biol Chem* 2009;284:28156-63.
152. Hermann M, Hellermann JP, Quitzau K, Hoffmann MM, Gasser T, Meinertz T, Münzel T, **Fleming I**, Lüscher T. CYP4A11 polymorphism correlates with coronary endothelial dysfunction in patients with coronary artery disease - the ENCORE trials. *Atherosclerosis* 2009;207:476-9.
153. Loot AE, Schreiber JG, Fisslthaler B, **Fleming I**. Angiotensin II impairs endothelial function via tyrosine phosphorylation of the endothelial nitric oxide synthase. *J Exp Med* 2009;206:2889-96.

-2010-

154. Keserü B, Barbosa-Sicard E, Schermuly RT, Tanaka H, Hammock BD, Weissmann N, Fisslthaler B, **Fleming I**. Hypoxia-induced pulmonary hypertension: comparison of soluble epoxide hydrolase deletion versus inhibition. *Cardiovasc Res* 2010;85:232-40.
155. Revermann M, Schloss M, Barbosa-Sicard E, Mieth A, Liebner S, Morisseau C, Geisslinger G, Schermuly RT, **Fleming I**, Hammock BD, Brandes RP. Soluble epoxide hydrolase deficiency attenuates neointima formation in the femoral cuff model of hyperlipidemic mice. *Arterioscler Thromb Vasc Biol* 2010;30:909-14.
156. **Fleming I**. Molecular mechanisms underlying the activation of eNOS. *Pflüger's Arch Eur J Pharmacol* 2010;459:793-806.
157. Campbell WB, **Fleming I**. Epoxyeicosatrienoic acids and endothelium-dependent responses. *Pflüger's Arch Eur J Pharmacol* 2010;459:881-95.
158. Torondel B, Nandi M, Kelly P, Wojciak-Stothard B, **Fleming I**, Leiper J. Adenoviral mediated overexpression of DDAH improves vascular tone regulation. *Vasc Med* 2010;15:205-13.
159. Schäfer A, Fraccarollo D, Galuppo P, Vogt C, Widder J, Pfrang J, Tas P, Barbosa-Sicard E, Ruetten H, Ertl G, **Fleming I**, Bauersachs J. Increased cytochrome P4502E1 expression and altered hydroxyeicosatetraenoic acid formation mediate diabetic vascular dysfunction: rescue by guanylyl-cyclase activation. *Diabetes* 2010;59:2001-9
160. Randriamboavonjy V,* Isaak J,* Frömel T, Viollet B, Fisslthaler B, Preissner KT, **Fleming I**. AMPK α 2 subunit is involved in platelet signaling, clot retraction, and thrombus stability. *Blood* 2010;116:2134-40.
161. Randriamboavonjy V, **Fleming I**. The role of calpain in diabetes-associated platelet hyperactivation. *Adv Pharmacol* 2010;59:235-57.

-2011-

162. Kohlstedt K, Trouvain C, Namgaladze D, **Fleming I**. Adipocyte-derived lipids increase angiotensin-converting enzyme (ACE) expression and modulate macrophage phenotype. *Basic Res Cardiol* 2011;106:205-15.
163. Pullamsetti SS, Savai R, Schaefer MB, Wilhelm J, Ghofrani HA, Weissmann N, Schudt C, **Fleming I**, Mayer K, Leiper J, Seeger W, Grimminger F, Schermuly RT. cAMP

- phosphodiesterase inhibitors increase nitric oxide production by modulating dimethylarginine dimethylaminohydrolases. *Circulation* 2011;123:1194-204.
164. Lotz C, Fisslthaler B, Redel A, Smul TM, Stumpner J, Pocij J, Roewer N, **Fleming I**, Kehl F, Lange M. Activation of adenosine-monophosphate-activated protein kinase abolishes desflurane-induced preconditioning against myocardial infarction in vivo. *J Cardiothorac Vasc Anesth* 2011;25:66-71.
 165. **Loot AE**, **Fleming I**. Cytochrome P450-derived epoxyeicosatrienoic acids and pulmonary hypertension: central role of transient receptor potential (TRP) C6 channels. *J Cardiovasc Pharmacol* 2011;57:140-7.
 166. **Bess E**, **Fisslthaler B**, **Frömel T**, **Fleming I**. Nitric oxide-induced activation of the AMP-activated protein kinase $\alpha 2$ subunit attenuates I κ B kinase activity and inflammatory responses in endothelial cells. *PLoS ONE* 2011;6:e20848.
 167. Brecht K, Weigert A, **Hu J**, **Popp R**, **Fisslthaler B**, Korff T, **Fleming I**, Geisslinger G, Brüne B. Macrophages programmed by apoptotic cells promote angiogenesis via prostaglandin E₂. *FASEB J* 2011;25:2408-17.
 168. **Fleming I**. Cytochrome P450-dependent eicosanoid production and cross-talk. *Curr Opin Lipidology* 2011;22:403-9.
 169. Brenneis C, Sisignano M, Coste O, Altenrath K, Fischer M, Angioni C, **Fleming I**, Brandes R, Reeh P, Woolf C, Geisslinger G, Scholich K. Soluble epoxide hydrolase limits mechanical hyperalgesia during inflammation. *Mol Pain* 2011;7:78.
 170. Sander A, Jakob H, Sommer K, Sadler C, **Fleming I**, Marzi I, Frank J. Cytochrome P450-derived epoxyeicosatrienoic acids accelerate wound epithelialization and neovascularization in the hairless mouse ear wound model. *Langenbeck's Arch Surg* 2011;396:1245-53.
 171. Hahn S, Achenbach J, la Buscató-Arsequell E, Klingler F, Hieke M, Dittrich M, Zettl H, Schroeder M, Meirer K, Hering J, **Barbosa-Sicard E**, Löhr F, **Fleming I**, Doetsch V, Schubert-Zilavec M, Steinhilber D, Proschak E. Complementary screening techniques yielded fragments that inhibit the phosphatase activity of soluble epoxide hydrolase. *Chem Med Chem* 2011;6:2146-9.
 172. **Fleming I**. The cytochrome P450 pathway in angiogenesis and endothelial cell biology. *Cancer Metastasis Rev* 2011;30:541-55.

-2012-

173. **Müller H**, **Hu J**, **Popp R**, Schmidt MHH, Müller-Decker K, Mollenhauer J, **Fisslthaler B**, Eble JA, **Fleming I**. Deleted in malignant brain tumors 1 is present in the vascular extracellular matrix and promotes angiogenesis. *Arterioscler Thromb Vasc Biol* 2012;32:442-448.
174. Urbich C, Kaluza D, **Frömel T**, Knau A, Bennewitz K, Boon R, Bonauer A, Döbele C, Böckel J-N, Hergenreider E, Zeiher AM, Kroll J, **Fleming I**, Dimmeler S. MicroRNA-27a/b controls endothelial cell repulsion and angiogenesis by targeting semaphorin 6A. *Blood* 2012;119:1607-1616.
175. Hofmann B, Rödl CB, Fischer AS, Maier TJ, Michel AA, Hofmann M, Rau O, **Awwad K**, Wurglics M, Wacker M, Živkoviæ A, **Fleming I**, Schubert-Zilavec M, Stark H, Schneider G, Steinhilber D. Molecular pharmacological profile of a novel thiazolinone-based direct and selective 5-lipoxygenase inhibitor. *Br J Pharmacol* 2012;165:2304-2313.
176. **Randriamboavonjy V**, **Fleming I**. All cut up! The consequences of calpain activation on platelet function. *Vasc Pharmacol* 2012;56:210-215.
177. Benkhoff S, **Loot AE**, Pierson I, Sturza A, **Kohlstedt K**, **Fleming I**, Shimokawa H, Grisk O, Brandes RP, Schröder K. Leptin potentiates endothelium-dependent relaxation by inducing endothelial expression of neuronal nitric oxidase synthase (nNOS). *Arterioscler Thromb Vasc Biol* 2012;32:1605-1612.
178. **Frömel T**, Jungblut B, **Hu J**, **Trouvain C**, **Barbosa-Sicard E**, **Popp R**, Liebner S, Dimmeler S, Hammock BD, **Fleming I**. Soluble epoxide hydrolase regulates hematopoietic progenitor cell function via generation of fatty acid diols. *Proc Natl Acad Sci USA* 2012;109:9995-10000.
179. **Randriamboavonjy V**, **Isaak J**, **Elgheznavy A**, Pistrosch F, **Frömel T**, Yin X, Badenhoop K, Heide H, Mayr M, **Fleming I**. Calpain inhibition stabilizes the platelet proteome and reactivity in diabetes. *Blood* 2012;120:415-423.
180. Gruber C, **Kohlstedt K**, **Loot AE**, **Fleming I**, Kummer W, Mühlfeld C. Stereological characterization of left ventricular cardiomyocytes, capillaries and innervation in the non-diabetic, obese mouse. *Cardiovasc Pathol* 2012;21:346-354.

181. Durik M, Kavousi M, van der Pluijm I, Isaacs A, Cheng C, Verdonk K, Loot AE, Oeseburg H, Bhaggoe U, Leijten F, van Veghel R, de Vries R, Rudez G, Brandt R, Ridwan Y, van Deel E, de Boer M, Tempel D, **Fleming** I, Mitchell GF, Verwoert GC, Tarasov KV, Uitterlinden AG, Hofman A, Duckers HJ, van Duijn CM, Oostra BA, Witteman J, Duncker DJ, Danser AHJ, Hoeijmakers J, Roks AJM. DNA repair deficiency of the nucleotide excision repair system contributes to the progression of age-related vascular dysfunction. *Circulation* 2012;126:468-478.
182. Kovacevic I, Hu J, Siehoff-Icking A, Opitz N, Griffin A, Perkins AC, Munn AL, Muller-Esterl W, Popp R, **Fleming** I, Jungblut B, Hoffmeister M, Oess S. The F-BAR protein NOSTRIN participates in FGF signal transduction and vascular development. *EMBO J* 2012;31:3309-3322.
183. Randriamboavonjy V, **Fleming** I. Platelet function and signaling in diabetes mellitus. *Curr Vasc Pharmacol* 2012;10:532-538.
184. Loot AE, Moneke I, Keserü B, Oelze M, Syzonenko T, Daiber A, **Fleming** I. 11,12-EET stimulates the association of BK channel α and β_1 subunits in mitochondria to induce pulmonary vasoconstriction. *PLoS ONE* 2012;7:e46065.
185. Wang L, Yin J, Nickles HT, Ranke H, Tabuchi A, Hoffmann J, Tabeling C, Barbosa-Sicard E, Chanson M, Kwak BR, Shin HS, Wu S, Isakson BE, Witzentrath M, de Wit C, **Fleming** I, Kuppe H, Kuebler WM. Hypoxic pulmonary vasoconstriction requires connexin 40-mediated endothelial signal conduction. *J Clin Invest* 2012;122:4218-4230.

-2013-

186. Frömel T, Kohlstedt K, Popp R, Yin X, Barbosa-Sicard E, Thomas AC, Liebertz R, Mayr M, **Fleming** I. Cytochrome P4502S1: a novel monocyte/macrophage fatty acid epoxygenase in human atherosclerotic plaques. *Basic Res Cardiol* 2013;108:1-12.
187. Kohlstedt K, Trouvain C, Boettger T, Shi L, Fisslthaler B, **Fleming** I. AMP-activated protein kinase regulates endothelial cell angiotensin-converting enzyme expression via p53 and the post-transcriptional regulation of microRNA-143/145. *Circ Res* 2013;112:1158.
188. Nikolic I, Dudvarski Stankovic N, Bicker F, Meister J, Braun H, Awwad K, Baumgart J, Simon K, Thal SC, Patra C, Harter PN, Plate KH, Engel FB, Dimmeler S, Eble JA, Mittelbronn M, Schäfer MK, Jungblut B, Chavakis E, **Fleming** I, Schmidt MHH. EGFL7 ligates $\alpha v \beta 3$ integrin to enhance vessel formation. *Blood* 2013;121:3050.
189. Sander AL, Sommer K, Neumayer T, **Fleming** I, Marzi I, Barker JH, Frank J, Jakob H. Soluble epoxide hydrolase disruption as therapeutic target for wound healing. *J Surg Res* 2013;182:362-367.
190. Loot AE, Pierson I, Syzonenko T, Elgheznawy A, Randriamboavonjy V, Zivkovic A, Stark H, **Fleming** I. Calcium-sensing receptor cleavage by calpain partially accounts for altered vascular reactivity in mice fed a high fat diet. *J Cardiovasc Pharmacol* 2013;61:528-535.
191. Sturza A, Leisegang M, Babelova A, Schröder K, Benkhoff S, Loot AE, **Fleming** I, Schulz R, Muntean D, Brandes RP. Monoamine oxidases are mediators of endothelial dysfunction in the mouse aorta. *Hypertension* 2013;62:140-146.
192. Davies PF, Civelek M, Fang Y, **Fleming** I. The atherosusceptible endothelium: Endothelial phenotypes in complex hemodynamic shear stress regions *in vivo*. *Cardiovasc Res* 2013;99:315-327.
193. Benz P, Merkel C, Offner K, Abeßer M, Ullrich M, Fischer T, Bayer B, Wagner H, Gambaryan S, Ursitti J, Adham I, Linke W, Feller S, **Fleming** I, Renne T, Frantz S, Unger A, Schuh K. Mena/VASP and α II-Spectrin complexes regulate cytoplasmic actin networks in cardiomyocytes and protect from conduction abnormalities and dilated cardiomyopathy. *Cell Commun Signal* 2013;11:56.
194. Hadas K,* Randriamboavonjy V,* Elgheznawy A, Mann A, **Fleming** I. Methylglyoxal induces platelet hyperaggregation and reduces thrombus stability by activating PKC and inhibiting PI3K/Akt pathway. *PLoS ONE* 2013;8:e74401.
195. Zippel N, Abdel Malik R, Frömel T, Popp R, Bess E, Strilic B, Wettschreck N, **Fleming** I,* Fisslthaler B.* Transforming growth factor- β -activated kinase 1 regulates angiogenesis via AMP-activated protein kinase- α 1 and redox balance in endothelial cells. *Arterioscler Thromb Vasc Biol* 2013;33:2792-2799.
196. Shi L, Fisslthaler B, Zippel N, Frömel T, Hu J, Elgheznawy A, Heide H, Popp R, **Fleming** I. MicroRNA-223 antagonizes angiogenesis by targeting β 1 integrin and preventing growth factor signaling in endothelial cells. *Circ Res* 2013;113:1320-1330. One of the 10 most read articles published in *Circulation Research* in 2013 (see Bolli R. *Circ Res*. 2014;114:765-9).

-2014-

197. Hu J, Popp R, Frömel T, Ehling M, Awwad K, Adams RH, Hammes HP, **Fleming I**. Müller glia cells regulate Notch signaling and retinal angiogenesis via the generation of 19,20-dihydroxydocosapentaenoic acid. *J Exp Med* 2014;211:281-295.
198. Ellinsworth DC, Shukla N, **Fleming I**, Jeremy JY. Interactions between thromboxane A₂, thromboxane/prostaglandin (TP) receptors and endothelium-dependent smooth muscle hyperpolarization. *Cardiovasc Res* 2014;102:9-16.
199. Awwad K, Steinbrink SD, Frömel T, Lill N, Isaak J, Hafner AK, Roos J, Hofmann B, Heide H, Geisslinger G, Steinhilber D, Freeman BA, Maier TJ, **Fleming I**. Electrophilic fatty acid species inhibit 5-lipoxygenase and attenuate sepsis-induced pulmonary inflammation. *Antioxid Redox Signal* 2014;20:2667-80.
200. Ding Y, Frömel T, Popp R, Falck JR, Schunck WH, **Fleming I**. The biological actions of 11,12-epoxyeicosatrienoic acid in endothelial cells are specific to the R/S-enantiomer and require the Gs protein. *J Pharmacol Exp Ther* 2014;350:14-21.
201. Roos J, Oancea C, Heinssmann M, Khan D, Held H, Kahnt A, Capelo R, la Buscato E, Proschak E, Puccetti E, Steinhilber D, **Fleming I**, Maier T, Ruthard M. 5-Lipoxygenase is a candidate target for therapeutic management of stem cell-like cells in acute myeloid leukemia. *Cancer Res.* 2014;74:5244-55.
202. **Fleming I**. The pharmacology of the cytochrome P450/soluble epoxide axis in the vasculature. *Pharmacol Rev.* 2014;66:1106-40.
203. Schipke J, Banmann E, Nikam S, Voswinkel R, Kohlstedt K, Loot AE, **Fleming I**, Mühlfeld C. The number of cardiac myocytes in the hypertrophic and hypotrophic left ventricle of the obese and calorie-restricted mouse heart. *J Anat.* 2014;225:539-47.

-2015-

204. Awwad K, Hu J, Shi L, Mangels N, Abdel Malik R, Zippel N, Fisslthaler B, Eble JA, Pfeilschifter J, Popp R, **Fleming I**. Role of secreted modular calcium binding protein 1 (SMOC1) in transforming growth factor β signaling and angiogenesis. *Cardiovasc Res.* 2015;106:284-94.
205. Geis T, Döring C, Popp R, Grossmann N, **Fleming I**, Hansmann ML, Dehne N, Brüne B. HIF-2 α -dependent PAI-1 induction contributes to angiogenesis in hepatocellular carcinoma. *Exp Cell Res.* 2015;331:46-57.
206. Frömel T, **Fleming I**. Whatever happened to the epoxyeicosatrienoic acid-like endothelium-derived hyperpolarizing factor? The identification of novel classes of lipid mediators and their role in vascular homeostasis. *Antioxid Redox Signal.* 2015;22:1273-92.
207. Laske C, Stellos K, Kempton J, Stransky E, Maetzler W, **Fleming I**, Randriamboavonjy V. Increased cerebrospinal fluid calpain activity and microparticle levels in Alzheimer's disease. *Alzheimer's & Dementia.* 2015;11:465-74.
208. Geis T, Popp R, Hu J, **Fleming I**, Henke N, Dehne N, Brüne B. HIF-2 α attenuates lymphangiogenesis by up-regulating IGFBP1 in hepatocellular carcinoma. *Biol Cell.* 2015;107:175-88.
209. Elgheznawy A, Shi L, Hu J, Wittig I, Laban H, Pircher J, Mann A, Provost P, Randriamboavonjy V, **Fleming I**. Dicer cleavage by calpain determines platelet microRNA levels and function in diabetes. *Circ Res.* 2015;117:157-65.
210. Fork C, Gu L, Hitzel J, Josipovic I, Hu J, SzeKa Wong M, Ponomareva Y, Albert M, Schmitz SU, Uchida S, **Fleming I**, Helin K, Steinhilber D, Leisegang MS, Brandes RP. Epigenetic regulation of angiogenesis by JARID1B-induced repression of HOXA5. *Arterioscler Thromb Vasc Biol.* 2015;35:1645-52.
211. Wang SP, Iring A, Strilic B, Juárez JA, Kaur H, Troidl K, Tonack S, Burbiel JC, Müller CE, **Fleming I**, Lundberg JO, Wettschureck N, Offermanns S. P2Y₂ and Gq/G11 control blood pressure by mediating endothelial mechanotransduction. *J Clin Invest.* 2015;8:3077-3086.
212. Kovacevic I, Müller M, Kojonazarov B, Ehrke A, Randriamboavonjy V, Kohlstedt K, Hindemith T, Schermuly RT, **Fleming I**, Hoffmeister M, Oess S. The F-BAR protein NOSTRIN dictates the localization of the muscarinic M3 receptor and regulates cardiovascular function. *Circ Res.* 2015;117:460-9.
213. Randriamboavonjy V, Mann AW, Elgheznawy A, Popp R, Rogowski P, Dornauf I, Dröse S, **Fleming I**. Metformin reduces hyper-reactivity of platelets from patients with polycystic ovary syndrome by improving mitochondrial integrity. *Thromb Haemost.* 2015;114:569-78.

-2016-

214. Snodgrass RG, Boß M, Zezina E, Weigert A, Dehne N, **Fleming I**, Brüne B, Namgaladze D. Hypoxia potentiates palmitate-induced pro-inflammatory activation of primary human macrophages. *J Biol Chem*. 2016;291:413-24.
215. Schmitz K, Mangels N, Häussler A, Ferreiros N, **Fleming I**, Tegeder I. Pro-inflammatory obesity in aged cannabinoid-2 receptor deficient mice. *Int J Obesity*. 2016;40:366-79.
216. Rezende F, Löwe O, Helfinger V, Prior KC, Walter M, Zukunft S, **Fleming I**, Weissmann N, Shah AM, Brandes RP, Schröder K. Unchanged NADPH oxidase activity in Nox1-Nox2-Nox4 triple knockout mice - What do NADPH-stimulated chemiluminescence assays really detect? *Antiox Redox Signal*. 2016;24:392-9.
217. Yin J, Michalick L, Tang C, Tabuchi A, Goldenberg N, Dan Q, Awwad K, Wang L, Erfinanda L, Nouailles-Kursar G, Witzgenrath M, Vogelzang A, Lv L, Lee WL, Zhang H, Rotstein O, Kapus A, Szaszi K, **Fleming I**, Liedtke WB, Kuppe H, Kuebler WM. Role of transient receptor potential vanilloid 4 in neutrophil activation and acute lung injury. *Am J Respir Cell Mol Biol*. 2016;54:370-83.
218. Zippel N, Ding Y, **Fleming I**. A modified aortic ring assay for the assessment of angiogenic potential *in vitro*. *Methods Mol Biol*. 2016;1430:205-19.
219. Jung M, Ören B, Mora J, Mertens C, Dziumbła S, Popp R, Weigert A, Grossmann N, **Fleming I**, Brüne B. Lipocalin-2 from macrophages stimulated by tumor cell-derived sphingosine-1-phosphate promotes lymphangiogenesis and tumor metastasis. *Sci Signal*. 2016;9:ra64.
220. Jünger E, Krüger G, Rutz J, Nelson K, Werner I, Relja B, Seliger B, Fisslthaler B, **Fleming I**, Tsaury I, Haferkamp A, Blaheta RA. Renal cell carcinoma alters endothelial receptor expression responsible for leukocyte adhesion. *Oncotarget*. 2016; 7:20410-24.
221. Shi L, Kojonazarov B, Elgheznawy A, Popp R, Dahal BK, Böhm M, Pullamsetti SS, Ghofrani HA, Gödecke A, Jungmann A, Katus HA, Müller OJ, Schermully RT, Fisslthaler B, Seeger W, **Fleming I**. miR-223-IGF-IR signaling in hypoxia- and load-induced right ventricular failure: a novel therapeutic approach. *Cardiovasc Res*. 2016; 111:184-93. (Editors choice and Editorial: *Elia & Condorelli. MicroRNAs and pulmonary hypertension: a tight link. Cardiovasc Res*. 2016;111:163-4)
222. Rathnakumar K, Giri H, Satish A, Fisslthaler B, **Fleming I**, Ram U, Augustin H, Dixit M. Angiopoietin-2 mediates thrombin induced monocyte adhesion and endothelial permeability. *J Thromb Haemost*. 2016;14:1655-67.
223. Siragusa M, **Fleming I**. The eNOS signalosome and its link to endothelial dysfunction. *Pflügers Arch Eur J Physiol*. 2016;468:1125-37.
224. McManus S, Tejera N, Awwad K, Vauzour D, Rigby N, **Fleming I**, Cassidy A, Minihane AM. Differential effects of EPA vs. DHA on postprandial vascular function and the plasma oxylipin profile in men. *J Lipid Res*. 2016;57:1720-7. (Accompanying Editorial: Schunck WH. EPA and/or DHA? A test question on the principles and opportunities in utilizing the therapeutic potential of omega-3 fatty acids. *J Lipid Res*. 2016).
225. Ziegler N, Awwad K, Fisslthaler B, Reis M, Devraj K, Corada M, Minardi S, Dejana E, Plate KH, **Fleming I**, Liebner S. β -Catenin is required for endothelial Cyp1b1 regulation influencing metabolic barrier function. *J Neurosci*. 2016;36:8921-35.
226. **Fleming I**. The factor in EDHF: cytochrome P450 derived lipid mediators and vascular signaling. *Vasc Pharmacol*. 2016;86:31-40.
227. Mangels N, Awwad K, Wettenmann A, Romagueira Bichara Dos Santos L, Frömel T, **Fleming I**. The soluble epoxide hydrolase determines cholesterol homeostasis by regulating AMPK and SREBP activity. *Prostaglandin Other Lipid Mediat*. 2016;125:30-9.

-2017-

228. Abdel Malik R, Zippel N, Frömel T, Heidler J, Zukunft S, Walzog B, Ansari N, Pampaloni F, Wingert S, Rieger MA, Wittig I, Fisslthaler B, **Fleming I**. AMP-activated protein kinase $\alpha 2$ in neutrophils regulates hypoxia-inducible factor-1 α and a network of proteins affecting metabolism and vascular repair after ischemia. *Circ Res*. 2017; 120:99-109. (Editorial: Satoh K. AMPK $\alpha 2$ regulates hypoxia-inducible factor-1 α stability and neutrophil survival to promote vascular repair after ischemia. *Circ Res*. 2017;120:8-10)
229. Rezende F, Prior KK, Löwe O, Wittig I, Strecker V, Moll F, Helfinger V, Schnütgen F, Kurrle N, Wempe F, Walter M, Zukunft S, Luck B, **Fleming I**, Weissmann N, Brandes RP, Schröder K. Cytochrome P450 enzymes but not NADPH oxidases are the source of the NADPH-dependent lucigenin chemiluminescence in membrane assays. *Free Radic Biol Med*. 2017;102:57-66.

230. Loroch S, Trabold K, Gambaryan S, Reiß C, Schwierczek K, **Fleming** I, Sickmann A, Behnisch W, Zieger B, Zahedi RP, Walther U, Jurk K. New alterations of the platelet proteome in type I Glanzmann thrombasthenia. *Thromb Haemost*. 2017;117:556-569.
231. **Randriamboavonjy** V, **Kselova** A, **Elgheznawy** A, **Zukunft** S, Wittig I, **Fleming** I. Cleavage and inactivation of the prostacyclin-synthase by calpain 1 contributes to the diabetes-associated endothelial dysfunction in mouse mesenteric arteries. *Basic Res Cardiol*. 2017;112:10.
232. **Bibli** S-I, Zhou Z, **Zukunft** S, **Fisslthaler** B, Andreadou I, Czabo C, Brouckaert P, **Fleming** I, Papetropoulos A. Tyrosine phosphorylation of eNOS regulates myocardial survival after an ischemic insult: role of PYK2. *Cardiovasc Res*. 2017;113:926-937.
233. Ertuna E, **Loot** AE, **Fleming** I, Yetik-Anacak G. The role of eNOS on the compensatory regulation of vascular tonus by H₂S in mouse carotid arteries. *Nitric Oxide*. 2017;69:45-50.
234. Weichand B, **Popp** R, **Dziumbła** S, Mora J, Strack E, Elwakeel E, Frank A-C, Scholich K, Pierre S, Syed SN, Olesch C, Ringleb J, Ören B, Döring C, Savi R, Jung M, von Knethen A, Levkau B, **Fleming** I, Weigert A, Brüne B. S1PR1 on tumor-associated macrophages promotes lymphangiogenesis and metastasis via NLRP3/IL-1 β . *J Exp Med*. 2017;214(9):2695-2713.
235. Ilina EI, Armento A, Garea L, Penski C, Jennewein L, Harter PN, **Zukunft** S, **Fleming** I, Schulte D, Le Guerroue F, Behrends C, Ronellenfitdch MW, Naumann U, Mittelbronn M. Effects of soluble CPE on glioma cell migration are associated with mTOR activation and enhanced glucose flux. *Oncotarget*. 2017;8(40):67567-67591.
236. **Bibli** S-I, Szabo C, Chatzianastasiou A, **Luck** B, **Zukunft** S, **Fleming** I, Papapetropoulos A. Hydrogen sulfide preserves eNOS function by inhibiting PYK2: implications for cardiomyocyte survival and cardioprotection. *Mol Pharmacol*. 2017; 92(6):718-730.
237. **Hu** J,* **Geyer** A,* **Dziumbła** S, **Awwad** K, Zeldin DC, Schunck W-H, **Popp** R, **Frömel** T, **Fleming** I. Role of Müller cell cytochrome P450 2c44 in murine retinal angiogenesis. *Prostaglandin Other Lipid Mediat*. 2017; 133:93-102.
238. **Hu** J, **Dziumbła** S, Lin J, **Bibli** S-I, **Zukunft** S, de Mos J, **Awwad** K, **Frömel** T, Jungmann A, Devraj K, Cheng Z, Wang L, Fauser S, Eberhart CG, Sodhi A, Hammock BD, Liebner S, Müller OJ, Glaubitz C, Hammes H-P, **Popp** R, **Fleming** I. Inhibition of soluble epoxide hydrolase prevents diabetic retinopathy. *Nature* 2017;552:248-52. (Editorial: Yanagida & Hla. A dark side to omega-3 fatty acids. *Nature News & Views* 2017;552)
- 2018-**
239. Spallotta F, Cencioni C, Atlante S, Garella D, Cocco M, Mori M, Mastrocola R, Künne C, Günther S, Nanni S, Azzimato V, **Zukunft** S, Kornberger A, Sueruen D, Schnutgen F, von Melchner H, Di Stilo A, Aragno M, Braspenning M, Van Criekinge W, De Blasio MJ, Ritchie RH, Zaccagnini G, Martelli F, Farsetti A, **Fleming** I, Braun T, Beiras-Fernandez A, Botta B, Collino M, Bertinaria M, Zeiher AM, Gaetano C. Stable oxidative cytosine modifications accumulate in cardiac mesenchymal cells from Type2 diabetes patients: rescue by α -ketoglutarate and TET-TDG functional reactivation. *Circ Res*. 2018;122:31-46.
240. Rezende F, Moll F, Walter M, Helfinger V, Hahner F, Janetzko P, Ringel C, Weigert A, **Fleming** I, Weissmann N, Kuenne C, Looso M, Rieger MA, Nawroth P, Fleming T, Brandes RP, Schröder K. The NADPH oxidizers NoxO1 and p47phox are both mediators of diabetes-induced vascular dysfunction in mice. *Redox Biol*. 2018;15:12-21.
241. Zezina E, Snodgrass RG, Schreiber Y, **Zukunft** S, Meyer zu Heringdorf D, Geisslinger G, **Fleming** I, Brüne B, Namgaladze D. Mitochondrial fragmentation in human macrophages attenuates palmitate-induced inflammatory responses. *Biochem Biophys Acta - Mol Cell Biol Lipids* 2018;1863(4):433-46.
242. Köhler D, **Bibli** S-I, Klammer LP, Roth JM, Lehmann R, **Fleming** I, Granja TF, Straub A, **Benz** PM,* **Rosenberger** P.* Phosphorylation of vasodilator-stimulated phosphoprotein contributes to myocardial ischemic preconditioning. *Basic Res Cardiol* 2018. 113:11.
243. **Kohlstedt** K, **Trouvain** C, **Frömel** T, **Mudersbach** T, Henschler R, **Fleming** I. Role of the angiotensin-converting enzyme in the G-CSF-induced mobilization of progenitor cells. *Basic Res Cardiol*. 2018;113:18.
244. **Laban** H, Weigert A, **Zink** J, **Elgheznawy** A, Schürmann C, **Günther** L, **Abdel Malik** R, Bothur S, Wingert S, Bremer R, Rieger MA, Brüne B, Brandes RP, **Fleming** I, **Benz** PM. VASP regulates leukocyte infiltration, polarization, and vascular repair after ischemia. *J Cell Biol*. 2018;217:1503-19.

245. Cencioni C, Spallotta F, Savoia M, Kuenne C, Guenther S, Re A, Wingert S, Rehage M, Sürün D, Siragusa M, Smith J, Schnütgen F, Melchner H, Rieger M, Martelli F, Riccio A, **Fleming** I, Martelli F, Braun T, Zeiher AM, Farsetti A, Gaetano C. Zeb1-Hdac2-eNOS circuitry identifies early cardiovascular precursors in naïve mouse embryonic stem cells. *Nat Commun* 2018; 9:1281.
246. Hitzel J, Lee E, Zhang Y, Bibli SI, Li X, Zukunft S, Pflüger B, Hu J, Schürmann C, Vasconez AE, Oo JA, Kratzer A, Kumar S, Rezende F, Josipovic I, Thomas D, Giral H, Schreiber Y, Geisslinger G, Fork C, Yang X, Sigala F, Romanoski CE, Kroll J, Jo H, Landmesser U, Lüscher AJ, Namgaladze D, **Fleming** I, Leisegang MS, Zhu J, Brandes RP. Oxidized phospholipids regulate amino acid metabolism through MTHFD2 to facilitate nucleotide release in endothelial cells. *Nat Commun*. 2018;9:2292.
247. Bibli S-I,* Luck B,* Zukunft S, Wittig J, Chen W, Xian M, Papapetropoulos A, Hu J, **Fleming** I. A selective and sensitive method for quantification of endogenous polysulfide production in biological samples. *Redox Biol*. 2018;18:295-304.
248. Nicolay JP, Thorn V, Daniel C, Amann K, Siraskar B, Lang F, Hillgruber C, George T, Hoffmann S, Gorzelanny C, Huck V, Mess C, Obser T, Scheppenheim R, **Fleming** I, Schneider MF, Schneider SW. Cellular stress induces erythrocyte assembly on intravascular von Willebrand factor strings and promotes microangiopathy. *Sci Rep*. 2018;8:10945.
249. Elgheznavy A, **Fleming** I. Platelet-enriched microRNAs and cardiovascular homeostasis. *Antiox Redox Signal*. 2018;29:902-921.
250. Hu J, Frömel T, **Fleming** I. Angiogenesis and vascular stability in eicosanoids and cancer. *Cancer Metastasis Rev*. 2018;37:425-438.
251. Randriamboavonjy V, **Fleming** I. Platelet communication with the vascular wall: role of platelet-derived microparticles and non-coding RNAs. *Clin Sci (Lond)*. 2018;132:1875-1888.
252. Zippel N, Loot AE, Stingl H, Randriamboavonjy V, **Fleming** I, Fisslthaler B. Endothelial AMP-activated kinase α 1 phosphorylates eNOS on Thr495 and decreases endothelial NO formation. *Int J Mol Sci*. 2018;19:E2753.
253. Riddell M, Nakayama A, Hikita T, Mirzapourshafiyi F, Kawamura T, Pasha A, Li M, Masuzawa M, Looso M, Steinbacher TuS, Ebnet K, Potente M, Hirose T, Ohno S, **Fleming** I, Gattenlöher S, Aung PP, Phung T, Yamasaki O, Yanagi T, Umemura H, Nakayama M. aPKC controls endothelial growth by modulating c-Myc via FoxO1 DNA-binding ability. *Nat Commun*. 2018;9:5357
254. Namgaladze D, Zukunft S, Schnütgen F, Kurrle N, **Fleming** I, Fuhrmann D, Brüne B. Polarization of human macrophages by interleukin-4 does not require ATP-citrate lyase. *Front Immunol*. 2018;9:2858.

-2019-

255. Bibli S-I*, Hu J*, Sigala F, Wittig I, Heidler J, Zukunft S, Randriamboavonjy V, Wittig J, Siuda D, Kojonazarov B, Tsilimigras D, Schürmann C, Siragusa M, Luck B, Abdel Malik R, Filis KA, Zografos G, Chen C, Wang DW, Pfeilschifter J, Brandes RP, Szabo C, Papapetropoulos A, **Fleming** I. Cystathionine γ lyase sulfhydrates the RNA binding protein HuR to preserve endothelial cell function and delay atherosclerosis development. *Circulation*. 2019;139(1):101-114. (Editorial: *HuR-ry Up. How Hydrogen Sulfide Protects Against Atherosclerosis*. *Barton & Meyer. Circulation* 2019;139:115-118, and Highlighted in "News" in *Nat.Med.* 14th Jan 2019 "Smelly Gas Protects Against Clogged Arteries".)
256. Kyselova A, Hinrichsmeyer H, Zukunft S, Mann AW, Dornauf I, **Fleming** I, Randriamboavonjy V. Increased levels of arginase-containing platelet-derived microparticles leads to altered plasma arginine metabolism in polycystic ovary syndrome. *Metab -Clin Exp*. 2019;90:16-9.
257. Vasconez AE, Janetzko P, Oo JA, Pflüger-Müller B, Ratiu C, Gu L, Helin K, Geisslinger G, **Fleming** I, Schröder K, Fork C, Brandes RP, Leisegang M. The histone demethylase Jarid1B mediates angiotensin II-induced endothelial dysfunction by controlling the 3'UTR of soluble epoxide hydrolase. *Acta Physiol (Oxf)*. 2019;225:e13168.
258. Randriamboavonjy V, Kyselova A, **Fleming** I. Redox-regulation of calpain and its consequence for vascular function. *Antiox Redox Signal*. 2019;30(7):1011-1026.
259. Baal N, Cunningham S, Obermann HL, Thomas J, Lippitsch A, Dietert K, Gruber AD, Kaufmann A, Michel G, Nist A, Stiewe T, Rupp O, Goesmann A, Zukunft S, **Fleming** I, Bein G, Lohmeyer J, Bauer S, Hackstein H. ADAR1 is required for dendritic cell subset homeostasis and alveolar macrophage function. *J Immunol*. 2019;202(4):1099-1111.

260. Fuhrman DC, Olesch C, Kurrle N, Schnuetgen F, Zukunft S, **Fleming I**, Brüne B. Chronic hypoxia enhances β -oxidation-dependent electron transport via electron transferring flavoproteins. *Cells*. 2019;8:E172.
261. Bibli S-I, Papapetropoulos A, Iliodromitis EK, Daiber A, Randriamboavonjy V, Steven S, Brouckaert P, Chatzianastasiou A, Kypreos KE, Hausenloy DJ, **Fleming I**, Andreadou I. Nitroglycerin limits infarct size through S-nitrosation of cyclophilin D: A novel mechanism for an old drug. *Cardiovasc Res*. 2019;115:625-636.
262. Mudersbach T, Siuda D, Kohlstedt K, **Fleming I**. Epigenetic control of the angiotensin-converting enzyme in endothelial cells during inflammation. *PLoS ONE*. 2019;14:e0216218.
263. Iring A, Jin Y-J, Albarrán-Juárez J, Siragusa M, Wang SP, Dancs PT, Nakayama A, Tonack S, Chen M, Künne C, Sokol AM, Günther S, Martínez A, **Fleming I**, Wettschureck N, Graumann J, Weinstein LS, Offermanns S. An autocrine adrenomedullin loop and G_s/cAMP signaling mediate endothelial mechanotransduction to control vascular tone and blood pressure. *J Clin Invest*. 2019;129:2775-2791.
264. Fisslthaler B, Zippel N, Abdel Malik R, Zukunft S, Thöle J, Siuda D, Söhnlein O, Scholich K, Wittig I, Heidler J, Weigert A, **Fleming I**. Myeloid-specific deletion of the AMPK α 2 subunit alters monocyte protein expression and atherogenesis. *Int J Mol Sci*. 2019;20:E3005.
265. **Fleming I**. New lipid mediators in retinal angiogenesis and retinopathy. *Front Pharmacol*. 2019;10:739.
266. Leisegang MS, Bibli S-I, Günther S, Pflüger-Müller B, Oo JA, Seredinski S, Hu J, Sigala F, Boon RA, **Fleming I**, Brandes RP. Pleiotropic effects of laminar flow and statins depend on the Krüppel-like factor-induced lncRNA MANTIS. *Eur Heart J*. 2019;40(30):2523-2533.
267. Siragusa M, Thöle J, Bibli S-I, Luck B, Loot AE, de Silva K, Wittig I, Heidler J, Stingl H, Randriamboavonjy V, Kohlstedt K, Brüne B, Weigert A, Fisslthaler B, **Fleming I**. Nitric oxide maintains endothelial redox homeostasis through PKM2 inhibition. *EMBO J*. 2019;38:e100938.
268. Fink AF, Ciliberti G, Popp R, Frank A-C, **Fleming I**, Sekar D, Weigert A, Brüne B. IL27R α deficiency alters endothelial cell function and subverts tumor angiogenesis in mammary carcinoma. *Front. Oncology* 2019;9:1022.
269. Lasch M, Kleinert EC, Meister S, Kumaraswami K, Buchheim J-I, Grantzow T, Lautz T, Salpisti S, Fischer S, Troidl K, **Fleming I**, Randi AM, Sperandio M, Preissner KT, Deindl E. Extracellular RNA released due to shear stress controls natural bypass growth by mediating mechanotransduction. *Blood*. 2019;134:1469-1479.
270. Siuda D, Randriamboavonjy V, **Fleming I**. Regulation of calpain 2 expression by miR-223 and miR-145. *BBA Gene Regul Mech*. 2019;1862(10):194438.
271. Marín-Juez R, Helker CS, El-Sammak H, Kamezaki A, Mullapuli ST, Bibli S-I, Foglia MJ, **Fleming I**, Poss KD, Stainier DYR. Coronary revascularization after injury is regulated by endocardial and epicardial cues and forms a scaffold for cardiomyocyte regeneration. *Dev Cell*. 2019;51:503-515.
272. Hu J, Bibli S-I, Wittig J, Zukunft S, Lin J, Hammes H-P, Popp R, **Fleming I**. Soluble epoxide hydrolase promotes astrocyte survival in retinopathy of prematurity. *J Clin Invest*. 2019;129:5204-5218.

-2020-

273. Bibli S-I, Hu J, Leisegang M, Wittig J, Kapasakalidi A, Zukunft S, Fisslthaler B, Tsilimigras D, Brandes RP, Papapetropoulos A, Sigala F, * **Fleming I**.* Shear stress regulates cystathionine γ lyase expression to preserve endothelial redox balance and reduce membrane lipid peroxidation. *Redox Biol*. 2020;28:101379.
274. Benz PM, Ding Y, Stingl H, Loot AE, Zink J, Wittig I, Popp R, **Fleming I**. AKAP12 deficiency impairs VEGF-induced endothelial cell migration and sprouting. *Acta Physiol*. 2020;228:e13325. doi: 10.1111/apha.13325 (Editorial: The role of AKAP12 in coordination of VEGF-induced endothelial cell motility. Walker-Gray R, Klussmann E. *Acta Physiol (Oxf)*. 2020;228:e13359).
275. Vellecco V, Martelli A, Bibli S-I, Vallifuoco M, Manzo OL, Panza E, Citi V, Calderone V, de Dominicis G, Cozzolino C, Mariniello M, **Fleming I**, Mancini A, Bucci M, Cirino G. Anomalous Kv7 potassium channel activity in human malignant hyperthermia syndrome unmasks a key role for H₂S and persulfidation in skeletal muscle. *Br J Pharmacol*. 2020;177:810-823.
276. Kesevan R, Frömel T, Zukunft S, Laban H, Geyer A, Naeem Z, Heidler J, Wittig I, Elwakeel E, Brüne B, Weigert A, Popp R, **Fleming I**. Cyp2c44 regulates prostaglandin synthesis, lymphangiogenesis and metastasis in a mouse model of breast cancer. *Proc Natl Acad Sci USA*. 2020;117:5923-5930.

277. Dos Santos LRB, Fleming I. Role of cytochrome P450 epoxides and diols in diabetes and the metabolic syndrome. *Prostaglandins Other Lipid Mediat.* 2020;148:106407.
278. Peleli M, Bibli S-I, Li Z, Chatzianastasiou A, Varela A, Katsouda A, Zukunft S, Bucci MR, Vellecco V, Davos CH, Nagahara N, Cirino G, Fleming I, Lefer DJ, Papapetropoulos A. Cardiovascular phenotype of mice lacking 3-mercaptopyruvate sulfurtransferase. *Biochem Pharmacol.* 2020;176:113833.
279. Wang SP, Cao S, Arhatte M, Li D, Shi Y, Kurz S, Hu J, Wang L, Shao J, Atzberger A, Wang Z, Wang C, Zang W, Fleming I, Wettschurek N, Honoré E, Offermanns S. Adipocyte Piezo1 mediates obesogenic adipogenesis through the FGF1/FGFR1 signaling pathway in mice. *Nat Commun.* 2020;11:2303.
280. Lin J*, Hu J*, Schlotterer A, Wang J, Kolibabka M, Awwad K, Dietrich N, Breitschopf K, Wohlfart P, Kannt A, Lorenz K, Feng Y, Popp R, Hoffmann S, Fleming I, Hammes HP. Protective effect of soluble epoxide hydrolase inhibition in retinal vasculopathy associated with polycystic kidney disease. *Theranostics.* 2020;10:7857-7871.
281. Kyselova A, Siragusa M, Anthes J, Solari FA, Loroch S, Zahedi RP, Walter U, Fleming I, Randriamboavonjy V. Cyclin Y is expressed in platelets and modulates integrin outside-in signalling. *Int J Mol Mol Sci.* 2020; 21:8239.
282. Mamazhakypov A, Weiβ A, Zukunft S, Sydykov A, Kojonazarov B, Wilhelm J, Vroom C, Petrovic A, Kosanovic D, Weissmann N, Seeger W, Fleming I, Iglarz M, Grimminger F, Ghofrani HA, Schermuly RT. Effects of macitentan and tadalafil monotherapy or their combination on the right ventricle and plasma metabolites in pulmonary hypertensive rats. *Pulm Circ.* 2020;10:2045894020947283.
283. Kyselova A, Elgheznawy A, Wittig I, Heidler J, Mann AW, Ruf W, Fleming I, Randriamboavonjy V. Platelet-derived calpain cleaves the endothelial protease-activated receptor 1 to induce vascular inflammation in diabetes. *Basic Res Cardiol.* 2020;115:75.
- 2021-
284. Tombor LS, John D, Glaser SF, Luxán G, Forte E, Furtado M, Rosenthal N, Baumgarten N, Schulz MH, Wittig J, Rogg E-M, Manavsji Y, Fischer A, Muhly-Reinholz M, Klee K, Looso M, Selignow C, Acker T, Bibli S-I, Fleming I, Patrick R, Harvey RP, Abplanalp WT, Dimmeler S. Single cell sequencing reveals endothelial plasticity with transient mesenchymal activation after myocardial infarction. *Nat Commun.* 2021;12:681.
285. Zink J, Frömel T, Weigert A, Stingl H, Frye M, Laban H, Günther L, Hu J, John D, Salinas G, Popp R, Renné T, Vanhollebeke B, Acker-Palmer A, Fleming I, Benz PM. EVL regulates VEGF receptor 2 internalization and signaling in developmental angiogenesis. *EMBO Rep.* 2021;22:e48961.
286. Knuth A-K, Huard A, Naeem Z, Rappl P, Bauer R, Mota AC, Schmidt T, Fleming I, Fulda S, Weigert A. Apoptotic cells induce proliferation of peritoneal macrophages. *Int J Mol Sci.* 2021; 22:2230.
287. Wang B, Wu L, Chen J, Dong L, Chen C, Wen Z, Hu J, Fleming I, Wang DW. Metabolism pathways of arachidonic acids: mechanisms and potential therapeutic targets. *Signal Transduct Target Ther.* 2021;6:94.
288. Kyselova A, Zukunft S, Pupope D, Wittig I, Mann AW, Dornauf I, Fleming I, Randriamboavonjy V. Human platelets are a source of collagen I. *Hematologica.* 2020. *In Press.* doi: 10.3324/haematol.2020.255612
289. Siragusa M, Justo AFO, Malacarne PF, Strano A, Buch A, Withers B, Peters KG, Fleming I. VE-PTP inhibition elicits eNOS phosphorylation and activity to blunt endothelial dysfunction and hypertension in diabetes. *Cardiovasc Res.* 2020; *In Press.* doi: 10.1093/cvr/cvaa213
290. Bibli S-I, Hu J, Looso M, Weigert A, Ratiu C, Wittig J, Drekolia MK, Thombor L, Randriamboavonjy V, Leisegang M, Goymann P, Delgado Lagos F, Fisslthaler B, Zukunft S, Kyselova A, Justo AFO, Heidler J, Tsilimigras D, Brandes RP, Dimmeler S, Papapetropoulos A, Knapp S, Offermanns S, Wittig I, Nishimura SL, Sigala F, Fleming I. Mapping the endothelial cell sulfhydrylome highlights the role of cysteine sulfhydration in integrin signaling. *Circulation.* 2021; *In Press.* doi: 10.1161/CIRCULATIONAHA.120.051877
291. Delgado Lagos F, Elgheznawy A, Kyselova A, Meyer zu Heringdorf D, Ratiu C, Randriamboavonjy V, Mann AW, Fisslthaler B, Siragusa M, Fleming I. Secreted modular calcium binding protein 1 binds and activates thrombin to account for platelet hyper-reactivity in diabetes. *Blood.* 2021 *In Press* doi: 10.1182/blood.2020009405

292. Hartmann M, Bibli S-I, Tews D, Ni X, Kircher T, Kramer J, Kilu W, Heering J, Hernandez Olmos V, Weizel L, Scriba G, Krait S, Knapp S, Chaikwad A, Merk D, Fleming I, Fischer-Posovszky P, Proschak E. Combined cardioprotective and adipocyte browning effects promoted by the eutomer of dual sEH/PPAR γ modulator. **J Med Chem**. 2021. *In Press*

Editorials

1. **Fleming** I. Myoendothelial gap junctions. The gap is there - but does EDHF go through it? *Circ Res*. 2000;80:249-250.
2. **Fleming** I. To move or not to move? Cytochrome P450 products and cell migration. *Circ Res*. 2002;90:936-938.
3. **Fleming** I. Brain in the brawn: the neuronal nitric oxide synthase as a regulator of myogenic tone. *Circ Res*. 2003;93:586-588.
4. **Fleming** I. Bobbing along on the crest of a wave: NO ascends hamster cheek pouch arterioles. *Circ Res*. 2003;93:9-11.
5. **Fleming** I. Cytochrome P-450 under pressure: more evidence for a Link between 20-hydroxyeicosatetraenoic acid and hypertension. *Circulation*. 2005;111:5-7.
6. **Fleming** I. A spoonful of sugar helps the medicine go down... but platelet eNOS activity go up! *Thromb Haemost*. 2005;93:399-400.
7. **Fleming** I. Segregation and integration: roles played by caveolae and caveolins in the cardiovascular system. *Cardiovasc Res*. 2006;69:784-787.
8. **Fleming** I. Realizing its potential: the intermediate conductance Ca^{2+} -activated K^+ channel ($K_{Ca3.1}$) and the regulation of blood pressure. *Circ Res*. 2006;99:462-464.
9. **Fleming** I, Pohl U. Rudi Busse (1943 2007). *Circ Res*. 2007;101:431-432.
10. **Fleming** I. Dr. Rudi Busse. *Vasc Pharmacol*. 2007;47:197-198.
11. Vanhoutte PM, **Fleming** I. In Memoriam: Rudi Busse. *Cardiovasc Pharmacol*. 2007;50:223-224.
12. **Fleming** I. Double tribble: two TRIB3 variants, Insulin, Akt, and eNOS. *Arterioscler Thromb Vasc Biol*. 2008;28:1216-1218.
13. **Fleming** I. Lipid signaling mediators "mEET" TRP channels: highlighted presentations from the March 2010 Winter Eicosanoid Conference. *J Cardiovasc Pharmacol* 2011;57:131-2.
14. Shi L, **Fleming** I. One miR level of control: microRNA-155 directly regulates endothelial nitric oxide synthase mRNA and protein levels. *Hypertension* 2012;60:1381-1382
15. Loot AE, **Fleming** I. A novel APJ signaling cascade that regulates cardiovascular development. *Circ Res* 2013;113:4-6.
16. Randriamboavonjy V, **Fleming** I. Energy and motion: AMP-activated protein kinase $\alpha 1$ and its role in platelet activation. *J Thromb Haemost* 2014;12:1-3.
17. **Fleming** I. Translating GWAS into the flow-regulated modulation of lipid mediator signaling. *Circ Res*. 2015;117:302-4.
18. Benz P, **Fleming** I. Can erythrocytes release biologically active NO? *Cell Commun Signal*. 2016;14:22.
19. **Fleming** I. Annexing Axl: endothelial cell infection by the Zika virus. *Circ Res*. 2016;119:1149-50.
20. **Fleming** I. A prickly situation: competitive antagonism by different hedgehog proteins. *Cardiovasc Res*. 2021 *In Press*. doi:10.1093/cvr/cvab037.

Letters to the Editor

1. Rezende F, Löwe O, Helfinger V, Prior KK, Walter M, Zukunft S, **Fleming** I, Weissmann N, Brandes RP, Schröder K. Response to Pagano et al. *Antioxid Redox Signal* 2015 May 28;23(15):1247-9.

Beiträge zu Monographien und Supplementbänden, Buchartikel Contributions to Supplements and Books

-1991-

1. **Fleming** I, Furman B, Gray GA, Guc O, Julou-Schaeffer G, Bigaud M, Stoclet J-C, Parratt JR. Mechanisms of vascular impairment during endotoxaemia with special reference to the role of the L-arginine pathway. In: Shock, sepsis and organ failure. Schlag E, Redl H, Siegel JH, Traber DL, eds. 1991. Springer Verlag, Berlin. p339-359.

-1992-

2. Stoclet J-C, **Fleming** I, Gray GA, Julou-Schaeffer G, Schneider F, Schott C, Parratt JR. Nitric oxide and endotoxaemia. *Circulation*. 1992;87:V77-V80.

-1993-

3. **Fleming** I, Busse R. Kinin-mediated signal transduction in endothelial cells. In: ACE Inhibitors, endothelial function and atherosclerosis. Schölkens BA, Unger T, eds. 1993. Media Medica Publications Ltd, Chichester. p1-18.
4. Parratt JR, Stoclet J-C, **Fleming** I. The role of the L-arginine pathway in sepsis and endotoxaemia with especial reference to vascular impairment. In: Pathophysiology of shock, sepsis and organ failure. Schlag E, Redl U, eds. 1993. Springer Verlag, Berlin. p575-592.
5. Busse R, **Fleming** I, Hecker M. Signal transduction in endothelium-dependent vasodilatation. *Eur Heart J*. 1993;14 Suppl I:2-9.
6. Busse R, Mülsch A, **Fleming** I, Hecker M. Mechanisms of nitric oxide release from the vascular endothelium. *Circulation*. 1993;87:V18-V25.

-1994-

7. **Fleming** I, Hecker M, Busse R. Intracellular pH regulates nitric oxide synthase activity in endothelial cells. In: Biology of nitric oxide. Moncada S, Feelisch M, Busse R, Higgs EA, eds. 1994. Portland Press, London. p18-22.
8. Busse R, Hecker M, **Fleming** I. Control of nitric oxide and prostacyclin synthesis in endothelial cells. *Arzneimittelforschung*. 1994;44:392-396.
9. **Fleming** I, Busse R. Receptor-mediated signal transduction in endothelial cells: role of endothelium-derived bradykinin. In: Functionality of the endothelium in health and diseased states: a comprehensive review. Pastelin G, Rubio R, Ceballos G, Suárez J, eds. 1994. Sociedad Mexicana de Cardiología, Mexico. p109-124.
10. Hecker M, **Fleming** I, Ayajiki K, Busse R. Mechanisms of shear stress-dependent endothelial nitric oxide release: cardiovascular implications. In: Biochemical, pharmacological and clinical aspects of nitric oxide. Weissman BA, Allon H, Shapira S, eds. 1994. Plenum Press, London.

-1995-

11. Busse R, Fleming I, Schini VB. Nitric oxide formation in the vascular wall: regulation and functional implications. *Current Top Microbiol Immunol*. 1995;196:7-18.
12. Busse R, Fleming I. Regulation of platelet function by flow-induced release of endothelial autacoids. In: Flow-dependent regulation of vascular function. Bevan JA, Kaley G, Rubanyi GM, eds. 1995. Oxford University Press, New York. p214-315.

-1996-

13. Popp R, Bauersachs J, Sauer E, Hecker M, **Fleming** I, Busse R. The cytochrome P450 monooxygenase pathway and nitric oxide-independent relaxation. In: Endothelium-derived hyperpolarizing factor. Vanhoutte PM, ed. 1996. Harwood Academic Publishers GmbH, Amsterdam. p65-71.

-1997-

14. Busse R, **Fleming** I. New aspects in shear stress-dependent nitric oxide formation in endothelial cells. In: Coronary microcirculation during ischaemia and reperfusion. *Alfred Benzon Symposium 41*. Haunso S, Aldershvile J, Svendsen JH, eds. 1997. Munksgaard, Copenhagen. p119-128.
15. **Fleming** I, Busse R. Vascular effects of NO. In: Nitric oxide and the kidney: physiology and pathophysiology. Goligorsky M, Gross SS, eds. 1997. Chapman & Hall, New York. p161-175.

-1998-

16. Busse R, **Fleming** I. Regulation of NO synthesis in endothelial cells. *Kidney Blood Press Res*. 1998;21:264-266.

-1999-

17. Busse R, **Fleming** I. Nitric oxide and vascular tone. In: Anaesthetic effects on smooth muscle tone. Dudziak R, Kessler P, Lischke V, eds. 1999. Springer-Verlag, Berlin. p55-78.
18. Busse R, **Fleming** I. The role of endothelial dysfunction in cardiovascular disease (mechanisms and treatment). *Everyday Problems in Clinical Cardiology*. 1999;9:4-7.
19. **Fleming** I, Busse R. The endothelium-derived hyperpolarizing factor released from porcine coronary arteries enhances tyrosine phosphorylation and activates Erk1/2 in cultured human coronary smooth muscle cells. In: Endothelium-Dependent Hyperpolarizations. Vanhoutte PM, ed. 1999. Harwood Academic Publishers, Amsterdam. p279-287.

-2000-

20. Busse R, **Fleming** I. Endothelium-derived hyperpolarizing factor and its interaction with NO. In: Nitric Oxide. Ignarro LJ, ed. 2000. Academic Press, San Diego. p569-583.
21. Busse R, **Fleming** I. Nitric oxide and regulation of vascular tone. In: Handbook of Experimental Pharmacology. Mayer B, ed. 2000. Springer Verlag, Berlin. p179-206.
22. **Fleming** I, Busse R. Activation of NOS by Ca²⁺-dependent and Ca²⁺-independent mechanisms. In: Nitric Oxide. Ignarro LJ, ed. 2000. Academic Press, San Diego. p621-632.
23. Busse R, **Fleming** I. Is the endothelium an important therapeutic target? *Dialogues Cardiovasc Med.* 2000;5:93-97.
24. Fisslthaler B, **Fleming** I, Busse R. EDHF: a cytochrome P450 metabolite in coronary arteries. *Semin Perinatol.* 2000;24:15-19.

-2001-

25. Chataigneau T, **Fleming** I, Busse R. EDHF-mediated responses induced by bradykinin in the porcine coronary artery. In: EDHF 2000. Vanhoutte PM, ed. 2001. Taylor & Francis, London. p187-194.
26. Fisslthaler B, Bredenkotter D, Brandes RP, Michaelis UR, Busse R, **Fleming** I. Cytochrome P450 2C - a source of EDHF and reactive oxygen species in the porcine coronary artery. In: EDHF 2000. Vanhoutte PM, ed. 2001. Taylor & Francis, London. p167-172.
27. Bauersachs J, Christ M, Ertl G, Fisslthaler B, Busse R, **Fleming** I. Cortisol increases EDHF-mediated relaxations un porcine coronary arteries and up-regulates the expression of cytochrome P450 2C9. In: EDHF 2000. Vanhoutte PM, ed. 2001. Taylor & Francis, London. p173-179.
28. Brandes RP, Félétou M, Schmitz-Winnenthal FH, Vanhoutte PM, **Fleming** I, Busse R. EDHF, which is not NO, is a major endothelium-dependent vasodilator in mice. In: EDHF 2000. Vanhoutte PM, ed. 2001. Taylor & Francis, London. p284-293.

-2002-

29. **Fleming** I, Busse R. Ca²⁺-independent nitric oxide synthase activation in endothelial cells. In: Vascular Protection. Molecular mechanisms, Novel Therapeutic Principles and Clinical Application. Rubanyi G, Dzau VJ, Cooke JP, eds. 2002. Taylor and Francis, London and New York. p121-134.

-2003-

30. Fisslthaler B, Michaelis UR, Busse R, **Fleming** I. Mechanical stimulation increases the activity and expression of cytochrome P450 2C in porcine coronary artery endothelial cells. In: EDHF 2002. Vanhoutte PM, ed. 2003. Taylor & Francis, London. p56-62.

-2004-

31. **Fleming** I, Michaelis UR, Fisslthaler B, Brandes RP, Busse R. The EDHF synthase (cytochrome P450 2C9) is a functionally significant source of reactive oxygen species in coronary artereis. In: 1st International conference on NAD(P)H oxidases. Griendling KK, Krause KH, Schmidt HHHW.

-2005-

32. Randriamboavonjy V, **Fleming** I. Endothelial nitric oxide synthase (eNOS) in platelets: how is it regulated and what is it doing there? *Pharmacological Reports.* 2005;57:59-65.

-2006-

33. **Fleming** I. Autacoid production by hemodynamic forces. In: Microvascular Research Biology and Pathology. Shepro D, ed. 2006. Elsevier Academic Press, Burlington. p215-220.eds. 2004. Books on Demand GmbH, Norderstedt. p130-135.

-2008-

34. **Fleming** I. Cytochrome P450 2C is a functionally significant source of reactive oxygen species. *Novo Acta Leopoldina.* 2008;95:53-59.
35. **Fleming** I. Biology of nitric oxide synthases. In: Handbook of Physiology: Microcirculation. Tuma RF, Durán WN, Ley K, eds. 2008. Academic Press. p56-80.
36. Kohlstedt K, **Fleming** I. A new look at the therapeutic effects of ACE inhibitors: ACE as a signal transduction molecule. In: Angiodema Congress Book. Bas M, Hoffmann T, Kojda G, eds. 2008. Georg Thieme Verlag, Stuttgart, New York. p38-41.

-2012-

37. **Fleming** I. Gefäßkrankheiten: Fischöl und Bewegung helfen. *Forschung Frankfurt* 2012;2012/1:18-21.

-2015-

38. **Fleming** I. Cytochrome P450-derived lipid mediators and vascular responses. In: Schmidt MHH, Liebner S, eds. *Endothelial Signaling in Development and Disease*. Springer; 2015.

-2016-

39. Cabrera-Fuentes HA, Alba-Alba C, Aragonés J, Bernhagen J, Boisvert WA, Botker HE, Cesarman-Maus G, **Fleming** I, Garcia-Dorado D, Lecour S, Lehn E, Marber MS, Marina N, Mayr M, Perez-Mendez O, Miura T, Ruiz-Meana M, Salinas-Estefanon EM, Ong SB, Schnittler HJ, Sanchez-Vega JT, Sumoza-Toledo A, Vogel C-W, Yarullina D, Yellon DM, Preissner KT, Hausenloy DJ. Meeting report from the 2nd International Symposium on New Frontiers in Cardiovascular Research - protecting the cardiovascular system from ischemia: between bench and bedside. *Basic Res Cardiol*. 2016;111:1-13.
40. Cabrera-Fuentes HA, Aragonés J, Bernhagen J, Boening A, Boisvert WA, Bøtker HE, Bulluck H, Cook S, Di Lisa F, Engel FB, Engelmann B, Ferrazzi F, Ferdinandy P, Fong A, **Fleming** I, Gnaiger E, Hernández-Reséndiz S, Kalkhoran SB, Kim MH, Lecour S, Liehn EA, Marber MS, Mayr M, Miura T, Ong SB, Peter K, Sedding D, Singh MK, Suleiman MS, Schnittler HJ, Schulz R, Shim W, Tello D, Vogel CW, Walker M, Li QOY, Yellon DM, Hausenloy DJ, Preissner KT. From basic mechanisms to clinical applications in heart protection, new players in cardiovascular diseases and cardiac theranostics: meeting report from the third international symposium on "New frontiers in cardiovascular research". *Basic Res Cardiol*. 2016;111:69

-2017-

41. **Fleming** I, Meens MJ, Kwak BR. The endothelial cell. In: Krams R, Bäck M, eds. *The ESC Textbook of Vascular Biology*. Oxford University Press; 2017. p. 73-90.
42. **Fleming** I. NO signaling defects in hypertension. In: Ignarro L, Freeman B, eds. *Nitric Oxide*. 3 ed. 2017.

-2019-

43. **Fleming** I. Herzgesundheit: Du bist, was du isst! Über den Einfluss von Diäten, Nahrungsergänzungsmitteln und Probiotika. *von Herzen*. 2.2019 ed. 2019. p. 12-5.