

**BIBLIOGRAPHY PETER CARMELIET**Total citations (last update: September 2020): 89,361 – H-index: 142<sup>#</sup>**1984**

1. F. Van de Werf, J. Minten, P. CARMELIET, H. De Geest & H. Kesteloot. The genesis of the third and fourth heart sounds. A pressure-flow study in dogs. **J Clin Invest** 73: 1400-7 (1984) (IF = 15.1)

**1988**

2. P. CARMELIET & C. Denef. Immunocytochemical and pharmacological evidence for an intrinsic cholinomimetic system modulating prolactin and growth hormone release in rat pituitary. **Endocrinology** 123: 1128-39 (1988) (IF = 5.3).
3. D. R. Matteson & P. CARMELIET. Modification of K channel inactivation by papain and N-bromoacetamide. **Biophys J** 53: 641-5 (1988) (IF = 4.5)

**1989**

4. P. CARMELIET, M. Baes & C. Denef. The glucocorticoid hormone dexamethasone reverses the growth hormone-releasing properties of the cholinomimetic carbachol. **Endocrinology** 124: 2625-34 (1989) (IF = 5.3).
5. P. CARMELIET & C. Denef. Synthesis and release of acetylcholine by normal and tumoral pituitary corticotrophs. **Endocrinology** 124: 2218-27 (1989) (IF = 5.3).
6. P. CARMELIET, P. Maertens & C. Denef. Stimulation and inhibition of prolactin release from rat pituitary lactotrophs by the cholinomimetic carbachol in vitro. Influence of hormonal environment and intercellular contacts. **Mol Cell Endocrinol** 63: 121-31 (1989) (IF = 2.8).
7. H. Vankelecom, P. CARMELIET, J. Van Damme, A. Billiau & C. Denef. Production of interleukin-6 by folliculo-stellate cells of the anterior pituitary gland in a histiotypic cell aggregate culture system. **Neuroendocrinology** 49: 102-6 (1989) (IF = 2.6).
8. P. CARMELIET, J. Van Damme & C. Denef. Interleukin-1 beta inhibits acetylcholine synthesis in the pituitary corticotropic cell line AtT20. **Brain Res** 491: 199-203 (1989) (IF = 2.3)
9. C. Denef, P. Maertens, W. Allaerts, A. Mignon, W. Robberecht, L. Swennen & P. CARMELIET. Cell-to-cell communication in peptide target cells of anterior pituitary. **Methods Enzymol** 168: 47-71 (1989) (IF = 1.7).
10. P. CARMELIET. Production, release and paracrine action of Acetylcholine in the anterior pituitary of the rat. PhD dissertation. **Acta Biomedica Lovaniensis**. (1989) (IF = n.a.).

**1990**

11. P. CARMELIET. Interleukin-6: a putative mediator of anterior pituitary hormone secretion during the stress of infection? **Trends Endocrinol Metab** 1: 237-82 (1990) (Review) (IF = 7.2).
12. P. CARMELIET, A. Aubert, F. Van de Werf & H. De Geest. Evaluation of transmitral pressure gradients at different heart rates: divergent action of isoprenaline and atropine. **Cardiovasc Res** 24: 560-9 (1990) (IF = 5.9).

---

<sup>#</sup> ISI Web of Knowledge - Web of Science Core Collection.

13. K. Bauer, P. CARMELIET, M. Schulz, M. Baes & C. Denef. Regulation and cellular localization of the membrane-bound thyrotropin-releasing hormone-degrading enzyme in primary cultures of neuronal, glial and adenohypophyseal cells. **Endocrinology** 127: 1224-33 (1990) (IF = 5.3).
14. H. Vankelecom, P. CARMELIET, H. Heremans, J. Van Damme, R. Dijkmans, A. Billiau & C. Denef. Interferon-gamma inhibits stimulated adrenocorticotropin, prolactin, and growth hormone secretion in normal rat anterior pituitary cell cultures. **Endocrinology** 126: 2919-26 (1990) (IF = 5.3).
15. W. Allaerts, P. CARMELIET & C. Denef. New perspectives in the function of pituitary folliculo-stellate cells. **Mol Cell Endocrinol** 71: 73-81 (1990) (Review) (IF = 2.9).

### 1991

16. P. CARMELIET, H. Vankelecom, J. Van Damme, A. Billiau & C. Denef. Release of interleukin-6 from anterior pituitary cell aggregates: developmental pattern and modulation by glucocorticoids and forskolin. **Neuroendocrinology** 53: 29-34 (1991) (IF = 2.6).

### 1993

17. P. CARMELIET, J. M. Stassen, L. Schoonjans, B. Ream, J. J. van den Oord, M. De Mol, R. C. Mulligan & D. Collen. Plasminogen activator inhibitor-1 gene-deficient mice. II. Effects on hemostasis, thrombosis, and thrombolysis. **J Clin Invest** 92: 2756-60 (1993) (IF = 15.1). [PubMed link](#)
18. P. CARMELIET, L. Kieckens, L. Schoonjans, B. Ream, A. van Nuffelen, G. Prendergast, M. Cole, R. Bronson, D. Collen & R. C. Mulligan. Plasminogen activator inhibitor-1 gene-deficient mice. I. Generation by homologous recombination and characterization. **J Clin Invest** 92: 2746-55 (1993) (IF = 15.1). [PubMed link](#)

### 1994

19. P. CARMELIET, L. Schoonjans, L. Kieckens, B. Ream, J. Degen, R. Bronson, R. De Vos, J. J. van den Oord, D. Collen & R. C. Mulligan. Physiological consequences of loss of plasminogen activator gene function in mice. **Nature** 368: 419-24 (1994) (IF = 29.3). [PubMed link](#) Highlighted by (inter)-national press.
20. P. CARMELIET, R. C. Mulligan & D. Collen. Transgenic animals as tools for the study of fibrinolysis in vivo. **J Intern Med** 236: 455-9 (1994) (Review) (IF = 4.0).
21. P. CARMELIET & D. Collen. Evaluation of the plasminogen/plasmin system in transgenic mice. **Fibrinolysis** 8, Suppl. 1: 269-76 (1994) (IF = n.a.).

### 1995

22. V. A. Ploplis, P. CARMELIET, S. Vazirzadeh, I. Van Vlaenderen, L. Moons, E. F. Plow & D. Collen. Effects of disruption of the plasminogen gene on thrombosis, growth, and health in mice. **Circulation** 92: 2585-93 (1995) (IF = 11.6).
23. G. Leonardsson, X. R. Peng, K. Liu, L. Nordstrom, P. CARMELIET, R. Mulligan, D. Collen & T. Ny. Ovulation efficiency is reduced in mice that lack plasminogen activator gene function: functional redundancy among physiological plasminogen activators. **Proc Natl Acad Sci U S A** 92: 12446-50 (1995) (IF = 10.2).
24. P. CARMELIET & D. Collen. Gene targeting and gene transfer studies of the plasminogen/plasmin system: implications in thrombosis, hemostasis, neointima formation, and atherosclerosis. **FASEB J** 9: 934-8 (1995) (Review) (IF = 7.1).
25. P. J. Declerck, P. CARMELIET, M. Verstreken, F. De Cock & D. Collen. Generation of monoclonal antibodies against autologous proteins in gene-inactivated mice. **J Biol Chem** 270: 8397-400 (1995) (IF = 5.9).
26. P. CARMELIET & D. Collen. Role of the Plasminogen/plasmin System in thrombosis, hemostasis, restenosis and atherosclerosis. Evaluation in transgenic animals. **Trends Cardiovasc Med** 5: 117-122 (1995) (Review) (IF = 4.8).

27. P. CARMELIET & D. Collen. Gene targeting and gene transfer studies of the biological role of the plasminogen/plasmin system. **Thromb Haemost** 74: 429-36 (1995) (Review) (IF = 3.1).
28. R. H. Lijnen, L. Moons, V. Beelen, P. CARMELIET. & D. Collen. Biological effects of combined inactivation of plasminogen activator inhibitor-1 gene function in mice. **Thromb Haemost** 74: 1126-31 (1995) (IF = 3.1).
29. P. CARMELIET, A. Bouche, C. De Clercq, S. Janssen, S. Pollefeyt, S. Wyns, R. C. Mulligan & D. Collen. Biological effects of disruption of the tissue-type plasminogen activator, urokinase-type plasminogen activator, and plasminogen activator inhibitor-1 genes in mice. **Ann N Y Acad Sci** 748: 367-81; discussion 381-2 (1995) (IF = 1.9).
30. P. CARMELIET. Physiological consequences of over- or under-expression of fibrinolytic system components in transgenic mice. **Baillieres Clin Haematol** 8: 391-401 (1995) (Review) (IF = n.a.).
31. P. CARMELIET. Modulation génique et transfert de gènes dans le système plasminogène/plasmine. Application pour la biologie vasculaire. **Sang Thrombose Vaisseaux** 7: 529-534 (1995) (Review) (IF = n.a.).

## 1996

32. P. CARMELIET, V. Ferreira, G. Breier, S. Pollefeyt, L. Kieckens, M. Gertsenstein, M. Fahrig, A. Vandenhoeck, K. Harpal, C. Eberhardt, C. Declercq, J. Pawling, L. Moons, D. Collen, W. Risau & A. Nagy. Abnormal blood vessel development and lethality in embryos lacking a single VEGF allele. **Nature** 380: 435-9 (1996) (IF = 29.3). [Pubmed link](#) Highlighted by (inter)-national press.
33. P. CARMELIET, N. Mackman, L. Moons, T. Luther, P. Gressens, I. Van Vlaenderen, H. Demunck, M. Kasper, G. Breier, P. Evrard, M. Muller, W. Risau, T. Edgington & D. Collen. Role of tissue factor in embryonic blood vessel development. **Nature** 383: 73-5 (1996) (IF = 29.3). [Pubmed link](#)
34. M. Dewerchin, A. V. Nuffelen, G. Wallays, A. Bouche, L. Moons, P. CARMELIET, R. C. Mulligan & D. Collen. Generation and characterization of urokinase receptor-deficient mice. **J Clin Invest** 97: 870-8 (1996) (IF = 15.1).
35. H. R. Lijnen, P. CARMELIET, A. Bouche, L. Moons, V. A. Ploplis, E. F. Plow & D. Collen. Restoration of thrombolytic potential in plasminogen-deficient mice by bolus administration of plasminogen. **Blood** 88: 870-6 (1996) (IF = 10.3).
36. Y. Y. Huang, M. E. Bach, H. P. Lipp, M. Zhuo, D. P. Wolfer, R. D. Hawkins, L. Schoonjans, E. R. Kandel, J. M. Godfraind, R. Mulligan, D. Collen & P. CARMELIET. Mice lacking the gene encoding tissue-type plasminogen activator show a selective interference with late-phase long-term potentiation in both Schaffer collateral and mossy fiber pathways. **Proc Natl Acad Sci U S A** 93: 8699-704 (1996) (IF = 10.2).
37. T. H. Bugge, M.J. Flick, M.J. Danton, C.C. Daugherty, J. Romer, K. Dano, P. CARMELIET, D. Collen & J.L. Degen. Urokinase-type plasminogen activator is effective in fibrin clearance in the absence of its receptor or tissue-type plasminogen activator. **Proc Natl Acad Sci U S A** 93: 5899-904 (1996) (IF = 10.2).
38. G. Leloup, P. Lemoine, P. CARMELIET & G. Vaes. Bone resorption and response to calcium-regulating hormones in the absence of tissue or urokinase plasminogen activator or of their type 1 inhibitor. **J Bone Miner Res** 11: 1146-57 (1996) (IF = 6.5).
39. T. Luther, C. Flossel, N. Mackman, A. Bierhaus, M. Kasper, S. Albrecht, E. H. Sage, L. Iruela-Arispe, H. Grossmann, A. Strohle, Y. Zhang, P. P. Nawroth, P. CARMELIET, D. J. Loskutoff & M. Muller. Tissue factor expression during human and mouse development. **Am J Pathol** 149: 101-13 (1996) (IF = 5.8).
40. E. Idusogie, E. Rosen, J. P. Geng, P. CARMELIET, D. Collen & F. J. Castellino. Characterization of a cDNA encoding murine coagulation factor VII. **Thromb Haemost** 75: 481-7 (1996) (IF = 3.1).
41. E. Idusogie, E. D. Rosen, P. CARMELIET, D. Collen & F. J. Castellino. Nucleotide structure and characterization of the murine blood coagulation factor VII gene. **Thromb Haemost** 76: 957-64 (1996) (IF = 3.1).
42. P. CARMELIET & D. Collen. Gene manipulation and transfer of the plasminogen and coagulation system in mice. **Semin Thromb Hemost** 22: 525-42 (1996) (Review) (IF = 2.1).

43. P. CARMELIET & Collen, D. Genetic analysis of the plasminogen and coagulation system in mice. **Haemostasis** 26 Suppl 4: 132-53 (1996) (Review) (IF = 1.0).
44. P. CARMELIET & D. Collen. Targeted gene manipulation and transfer of the plasminogen and coagulation systems in mice. **Fibrinolysis** 10: 195-213 (1996) (Review) (IF = n/a).
45. P. CARMELIET Targeted manipulation of the fibrinolytic and coagulation system via gene inactivation and adenovirus-mediated gene transfer. **Newsletter to the International Society of Thrombosis and Haemostasis** (Current Topic) (1996) (Review). (IF = n.a.).

## 1997

46. E. D. Rosen, J. C. Chan, E. Idusogie, F. Clotman, G. Vlasuk, T. Luther, L. R. Jalbert, S. Albrecht, L. Zhong, A. Lissens, L. Schoonjans, L. Moons, D. Collen, F. J. Castellino & P. CARMELIET. Mice lacking factor VII develop normally but suffer fatal perinatal bleeding. **Nature** 390: 290-4 (1997) (IF = 29.8). [PubMed link](#)
47. M. Baes, P. Gressens, E. Baumgart, P. CARMELIET, M. Casteels, M. Franssen, P. Evrard, D. Fahimi, P. E. Declercq, D. Collen, P. P. van Veldhoven & G. P. Mannaerts. A mouse model for Zellweger syndrome. **Nat Genet** 17: 49-57 (1997) (IF = 25.8) (highlighted by (inter)-national press). [PubMed link](#)
48. P. CARMELIET, L. Moons, R. Lijnen, M. Baes, V. Lemaitre, P. Tipping, A. Drew, Y. Eeckhout, S. Shapiro, F. Lupu & D. Collen. Urokinase-generated plasmin activates matrix metalloproteinases during aneurysm formation. **Nat Genet** 17: 439-44 (1997) (IF = 25.8) (highlighted by (inter)-national press). [PubMed link](#)
49. P. CARMELIET, L. Moons, V. Ploplis, E. Plow & D. Collen. Impaired arterial neointima formation in mice with disruption of the plasminogen gene. **J Clin Invest** 99: 200-8 (1997) (elected for international press release) (IF = 15.1).
50. A. R. Kitching, S. R. Holdsworth, V. A. Ploplis, E. F. Plow, D. Collen, P. CARMELIET & P. G. Tipping. Plasminogen and plasminogen activators protect against renal injury in crescentic glomerulonephritis. **J Exp Med** 185: 963-8 (1997) (IF = 13.9).
51. P. CARMELIET, L. Moons, R. Lijnen, S. Janssens, F. Lupu, D. Collen & R. D. Gerard. Inhibitory role of plasminogen activator inhibitor-1 in arterial wound healing and neointima formation: a gene targeting and gene transfer study in mice. **Circulation** 96: 3180-91 (1997) (IF = 11.6).
52. K. T. Sabapathy, M. S. Pepper, F. Kiefer, U. Mohle-Steinlein, F. Tacchini-Cottier, I. Fetka, G. Breier, W. Risau, P. CARMELIET, R. Montesano & E. F. Wagner. Polyoma middle T-induced vascular tumor formation: the role of the plasminogen activator/plasmin system. **J Cell Biol** 137: 953-63 (1997) (IF = 10.9).
53. P. CARMELIET, J. M. Stassen, I. Van Vlaenderen, R. S. Meidell, D. Collen & R. D. Gerard. Adenovirus-mediated transfer of tissue-type plasminogen activator augments thrombolysis in tissue-type plasminogen activator-deficient and plasminogen activator inhibitor-1-overexpressing mice. **Blood** 90: 1527-34 (1997) (IF = 10.3).
54. P. CARMELIET, L. Moons, J. M. Herbert, J. Crawley, F. Lupu, R. Lijnen & D. Collen. Urokinase but not tissue plasminogen activator mediates arterial neointima formation in mice. **Circ Res** 81: 829-39 (1997) (IF = 9.4).
55. J. M. Herbert, I. Lamarche & P. CARMELIET. Urokinase and tissue-type plasminogen activator are required for the mitogenic and chemotactic effects of bovine fibroblast growth factor and platelet-derived growth factor-BB for vascular smooth muscle cells. **J Biol Chem** 272: 23585-91 (1997) (IF = 5.8).
56. P. CARMELIET, L. Moons, J. M. Stassen, M. De Mol, A. Bouche, J. J. van den Oord, M. Kockx & D. Collen. Vascular wound healing and neointima formation induced by perivascular electric injury in mice. **Am J Pathol** 150: 761-76 (1997) (IF = 5.8).
57. P. CARMELIET & D. Collen. Molecular genetics of the fibrinolytic and coagulation systems in haemostasis, thrombogenesis, restenosis and atherosclerosis. **Curr Opin Lipidol** 8: 118-25 (1997) (Review) (IF = 5.3).
58. P. CARMELIET & D. Collen. Genetic analysis of blood vessel formation. Role of endothelial versus smooth muscle cells. **Trends Cardiovasc Med** 7: 271-81 (1997) (Review) (IF = 4.8).

59. J. M. Herbert & P. CARMELIET. Involvement of u-PA in the anti-apoptotic activity of TGFbeta for vascular smooth muscle cells. **FEBS Lett** 413: 401-4 (1997) (IF = 3.4).
60. A. Ny, L. Nordstrom, P. CARMELIET & T. Ny. Studies of mice lacking plasminogen activator gene function suggest that plasmin production prior to ovulation exceeds the amount needed for optimal ovulation efficiency. **Eur J Biochem** 244: 487-93 (1997) (IF = 3.2).
61. P. CARMELIET & D. Collen. Molecular analysis of blood vessel formation and disease. **Am J Physiol** 273: H2091-104 (1997) (Review) (IF = 3.1)
62. J. M. Herbert, F. Bono, I. Lamarche & P. CARMELIET. The inhibitory effect of heparin for vascular smooth muscle cell proliferation or migration is not mediated by u-PA and t-PA. **Thromb Res** 86: 317-24 (1997) (IF = 2.0).
63. P. CARMELIET, L. Moons, M. Dewerchin, N. Mackman, T. Luther, G. Breier, V. Ploplis, M. Muller, A. Nagy, E. Plow, R. Gerard, T. Edgington, W. Risau & D. Collen. Insights in vessel development and vascular disorders using targeted inactivation and transfer of vascular endothelial growth factor, the tissue factor receptor, and the plasminogen system. **Ann N Y Acad Sci** 811: 191-206 (1997) (Review) (IF = 1.9).
64. P. CARMELIET. Insights from gene-inactivation studies of the coagulation and plasminogen systems. **Fibrinolysis and Proteolysis** 11 Suppl. 2: 181-91 (1997) (Review) (IF = 1.5).

## 1998

65. P. CARMELIET, Y. Dor, J. M. Herbert, D. Fukumura, K. Brusselmans, M. Dewerchin, M. Neeman, F. Bono, R. Abramovitch, P. Maxwell, C. J. Koch, P. Ratcliffe, L. Moons, R. K. Jain, D. Collen & E. Keshert. Role of HIF-1alpha in hypoxia-mediated apoptosis, cell proliferation and tumour angiogenesis. **Nature** 39: 485-90 (1998) (IF = 29.3). [PubMed link](#)
66. K. Bajou, A. Noel, R. D. Gerard, V. Masson, N. Brunner, C. Holst-Hansen, M. Skobe, N. E. Fusenig, P. CARMELIET, D. Collen & J. M. Foidart. Absence of host plasminogen activator inhibitor 1 prevents cancer invasion and vascularization. **Nat Med** 4: 923-8 (1998) (IF = 28.9). [PubMed link](#)
67. P. M. Farrehi, C. K. Ozaki, P. CARMELIET & W. P. Fay. Regulation of arterial thrombolysis by plasminogen activator inhibitor-1 in mice. **Circulation** 97: 1002-8 (1998) (IF = 11.6).
68. P. CARMELIET, L. Moons, M. Dewerchin, S. Rosenberg, J. M. Herbert, F. Lupu & D. Collen. Receptor-independent role of urokinase-type plasminogen activator in pericellular plasmin and matrix metalloproteinase proteolysis during vascular wound healing in mice. **J Cell Biol** 140: 233-45 (1998) (IF = 10.9).
69. V. A. Ploplis, E. L. French, P. CARMELIET, D. Collen & E. F. Plow. Plasminogen deficiency differentially affects recruitment of inflammatory cell populations in mice. **Blood** 91: 2005-9 (1998) (IF = 10.3).
70. L. R. Jalbert, E. D. Rosen, L. Moons, J. C. Chan, P. CARMELIET, D. Collen & F. J. Castellino. Inactivation of the gene for anticoagulant protein C causes lethal perinatal consumptive coagulopathy in mice. **J Clin Invest** 102: 1481-8 (1998) (IF = 10.1).
71. L. Moons, C. Shi, V. Ploplis, E. Plow, E. Haber, D. Collen & P. CARMELIET. Reduced transplant arteriosclerosis in plasminogen-deficient mice. **J Clin Invest** 102: 1788-97 (1998) (IF = 10.1).
72. G. C. Parry, J. H. Erlich, P. CARMELIET, T. Luther & N. Mackman. Low levels of tissue factor are compatible with development and hemostasis in mice. **J Clin Invest** 101: 560-9 (1998) (IF = 10.1).
73. D. J. Pinsky, H. Liao, C. A. Lawson, S. F. Yan, J. Chen, P. CARMELIET, D. J. Loskutoff & D. M. Stern. Coordinated induction of plasminogen activator inhibitor-1 (PAI-1) and inhibition of plasminogen activator gene expression by hypoxia promotes pulmonary vascular fibrin deposition. **J Clin Invest** 102: 919-28 (1998) (IF = 10.1).
74. H. R. Lijnen, B. Van Hoef, F. Lupu, L. Moons, P. CARMELIET & D. Collen. Function of the plasminogen/plasmin and matrix metalloproteinase systems after vascular injury in mice with targeted inactivation of fibrinolytic system genes. **Arterioscler Thromb Vasc Biol** 18: 1035-45 (1998) (IF = 7.1).
75. P. CARMELIET, L. Moons & D. Collen. Mouse models of angiogenesis, arterial stenosis, atherosclerosis and hemostasis. **Cardiovasc Res** 39: 8-33 (1998) (Review) (IF = 5.3).



76. P. CARMELIET & D. Collen. Vascular development and disorders: molecular analysis and pathogenic insights. **Kidney Int** 53: 1519-49 (1998) (Review) (IF = 4.9).
77. P. CARMELIET & D. Collen. Tissue factor. **Int J Biochem Cell Biol** 30: 661-7 (1998) (Review) (IF = 3.9).
78. L. R. Jalbert, E. D. Rosen, A. Lissens, P. CARMELIET, D. Collen & F. J. Castellino. Nucleotide structure and characterization of the murine gene encoding anticoagulant protein C. **Thromb Haemost** 79: 310-6 (1998) (IF = 3.1).
79. Z. Liang, A. Cooper, M. E. DeFord, P. CARMELIET, D. Collen, F. J. Castellino & E. D. Rosen. Cloning and characterization of a cDNA encoding murine coagulation factor X. **Thromb Haemost** 80: 87-91 (1998) (IF = 3.1).
80. P. CARMELIET & D. Collen. Development and disease in proteinase-deficient mice: role of the plasminogen, matrix metalloproteinase and coagulation system. **Thromb Res** 91: 255-85 (1998) (Review) (IF = 2.0).

## 1999

81. P. CARMELIET, M. G. Lampugnani, L. Moons, F. Breviario, V. Compornolle, F. Bono, G. Balconi, R. Spagnuolo, B. Oostuyse, M. Dewerchin, A. Zanetti, A. Angellilo, V. Mattot, D. Nuyens, E. Lutgens, F. Clotman, M. C. de Ruiter, A. Gittenberger-de Groot, R. Poelmann, F. Lupu, J. M. Herbert, D. Collen & E. Dejana. Targeted deficiency or cytosolic truncation of the VE-cadherin gene in mice impairs VEGF-mediated endothelial survival and angiogenesis. **Cell** 98: 147-57 (1999) (IF = 29.4). [PubMed link](#)
82. P. CARMELIET. Developmental biology. Controlling the cellular brakes. **Nature** 401: 657-8 (1999) (News and views) (IF = 29.3).
83. P. CARMELIET, Y. S. Ng, D. Nuyens, G. Theilmeier, K. Brusselmans, I. Cornelissen, E. Ehler, V. V. Kakkar, I. Stalmans, V. Mattot, J. C. Perriard, M. Dewerchin, W. Flameng, A. Nagy, F. Lupu, L. Moons, D. Collen, P. A. D'Amore & D. T. Shima. Impaired myocardial angiogenesis and ischemic cardiomyopathy in mice lacking the vascular endothelial growth factor isoforms VEGF164 and VEGF188. **Nat Med** 5: 495-502 (1999) (IF = 28.9). [PubMed link](#)
84. S. Heymans, A. Lutun, D. Nuyens, G. Theilmeier, E. Creemers, L. Moons, G. D. Dyspersin, J. P. Cleutjens, M. Shipley, A. Angellilo, M. Levi, O. Nube, A. Baker, E. Keshet, F. Lupu, J. M. Herbert, J. F. Smits, S. D. Shapiro, M. Baes, M. Borgers, D. Collen, M. J. Daemen & P. CARMELIET. Inhibition of plasminogen activators or matrix metalloproteinases prevents cardiac rupture but impairs therapeutic angiogenesis and causes cardiac failure. **Nat Med** 5: 1135-42 (1999) (with accompanying News and views) (IF = 28.9). [PubMed link](#)
85. J. C. Chan, P. CARMELIET, L. Moons, E. D. Rosen, Z. F. Huang, G. J. Broze, Jr., D. Collen & F. J. Castellino. Factor VII deficiency rescues the intrauterine lethality in mice associated with a tissue factor pathway inhibitor deficit. **J Clin Invest** 103: 475-82 (1999) (IF = 15.1).
86. Y. Zhu, P. CARMELIET & W. P. Fay. Plasminogen activator inhibitor-1 is a major determinant of arterial thrombolysis resistance. **Circulation** 99: 3050-5 (1999) (IF = 11.6).
87. N. Nagai, M. De Mol, H. R. Lijnen, P. CARMELIET & D. Collen. Role of plasminogen system components in focal cerebral ischemic infarction: a gene targeting and gene transfer study in mice. **Circulation** 99: 2440-4 (1999) (IF = 11.6).
88. E. M. Conway, S. Pollefeyt, J. Cornelissen, I. DeBaere, M. Steiner-Mosonyi, J. I. Weitz, H. Weiler-Guettler, P. CARMELIET & D. Collen. Structure-function analyses of thrombomodulin by gene-targeting in mice: the cytoplasmic domain is not required for normal fetal development. **Blood** 93: 3442-50 (1999) (IF = 10.3).
89. J. Erlich, G. C. Parry, C. Fearn, M. Muller, P. CARMELIET, T. Luther & N. Mackman. Tissue factor is required for uterine hemostasis and maintenance of the placental labyrinth during gestation. **Proc Natl Acad Sci U S A** 96: 8138-43 (1999) (IF = 10.2).
90. C. Shi, A. Patel, D. Zhang, H. Wang, P. CARMELIET, G. L. Reed, M. E. Lee, E. Haber & N. E. Sibinga. Plasminogen is not required for neointima formation in a mouse model of vein graft stenosis. **Circ Res** 84: 883-90 (1999) (IF = 9.4).

91. G. Hansson, P. CARMELIET & M. Pepper. In memoriam. Tribute to Werner Risau: December 18, 1953-December 13, 1998. **Arterioscler Thromb Vasc Biol** 19, 829 (1999) (Biography) (IF = 7.1).
92. P. Tabrizi, L. Wang, N. Seeds, J. G. McComb, S. Yamada, J. H. Griffin, P. CARMELIET, M. H. Weiss & B. V. Zlokovic. Tissue plasminogen activator (tPA) deficiency exacerbates cerebrovascular fibrin deposition and brain injury in a murine stroke model: studies in tPA-deficient mice and wild-type mice on a matched genetic background. **Arterioscler Thromb Vasc Biol** 19: 2801-6 (1999) (IF = 7.1).
93. A. Ny, G. Leonardsson, A. C. Hagglund, P. Hagglof, V. A. Ploplis, P. CARMELIET & T. Ny. Ovulation in plasminogen-deficient mice. **Endocrinology** 140: 5030-5 (1999) (IF = 5.3)
94. P. CARMELIET & D. Collen. Role of vascular endothelial growth factor and vascular endothelial growth factor receptors in vascular development. **Curr Top Microbiol Immunol** 237: 133-58 (1999) (Invited Review) (IF = 4.5).
95. H. R. Lijnen, F. Lupu, L. Moons, P. CARMELIET, D. Goulding & D. Collen. Temporal and topographic matrix metalloproteinase expression after vascular injury in mice. **Thromb Haemost** 81: 799-807 (1999) (IF = 2.0).
96. E. F. Plow, V. A. Ploplis, S. Busuttill, P. CARMELIET & D. Collen. A role of plasminogen in atherosclerosis and restenosis models in mice. **Thromb Haemost** 82 Suppl 1: 4-7 (1999) (IF = 2.0).
97. K. Kataoka, T. Asai, M. Taneda, S. Ueshima, O. Matsuo, R. Kuroda, P. CARMELIET & D. Collen. Nigral degeneration following striato-pallidal lesion in tissue type plasminogen activator deficient mice. **Neurosci Lett** 266, 220-2 (1999) (IF = 1.9).
98. E. F. Plow, V. A. Ploplis, P. CARMELIET & D. Collen. Plasminogen and cell migration in vivo. **Fibrinolysis and Proteolysis** 13: 49-53 (1999) (Invited review) (IF = 0.8).
99. P. CARMELIET. Basic Concepts of (Myocardial) Angiogenesis: Role of Vascular Endothelial Growth Factor and Angiopoietin. **Curr Interv Cardiol Rep** 1: 322-35 (1999) (Invited Review) (IF = n.a.).

## 2000

100. P. CARMELIET & R. K. Jain. Angiogenesis in cancer and other diseases. **Nature** 407: 249-57 (2000) (Invited Review) (IF = 29.3) (highlighted by (inter)-national press). [PubMed link](#)
101. P. CARMELIET. Developmental biology. One cell, two fates. **Nature** 408: 43, 45 (2000) (Invited News and views) (IF = 29.3).
102. P. CARMELIET. VEGF gene therapy: stimulating angiogenesis or angioma-genesis? **Nat Med** 6: 1102-3 (2000) (Invited News and views) (IF = 28.9). [PubMed link](#)
103. J. Li, M. Post, R. Volk, Y. Gao, M. Li, C. Metais, K. Sato, J. Tsai, W. Aird, R. D. Rosenberg, T. G. Hampton, F. Sellke, P. CARMELIET & M. Simons. PR39, a peptide regulator of angiogenesis. **Nat Med** 6: 49-55 (2000) (IF = 28.9). [PubMed link](#)
104. P. CARMELIET. Mechanisms of angiogenesis and arteriogenesis. **Nat Med** 6: 389-95 (2000) (Invited Review) (IF = 28.3). [PubMed link](#)
105. P. Uhrin, M. Dewerchin, M. Hilpert, P. Chrenek, C. Schofer, M. Zechmeister-Machhart, G. Kronke, A. Vales, P. CARMELIET, B. R. Binder & M. Geiger. Disruption of the protein C inhibitor gene results in impaired spermatogenesis and male infertility. **J Clin Invest** 106: 1531-9 (2000) (IF = 15.1).
106. P. CARMELIET. Proteinases in cardiovascular aneurysms and rupture: targets for therapy? **J Clin Invest** 105: 1519-20 (2000) (Invited Commentary) (IF = 15.1).
107. V. L. Butch, S. D. Redick, A. Scalia, M. Harmaty, P. CARMELIET & R. Rapoport. Characterization of the vasculogenic block in the absence of vascular endothelial growth factor-A. **Blood** 95: 1979-87 (2000) (IF = 10.3).
108. P. CARMELIET. Fibroblast growth factor-1 stimulates branching and survival of myocardial arteries: a goal for therapeutic angiogenesis? **Circ Res** 87: 176-8 (2000) (Invited editorial). (IF = 9.4).
109. Y. Tsuzuki, D. Fukumura, B. Oosthuysen, C. Koike, P. CARMELIET & R. K. Jain. Vascular endothelial growth factor (VEGF) modulation by targeting hypoxia-inducible factor-1alpha--> hypoxia response element--> VEGF cascade differentially regulates vascular response and growth rate in tumors. **Cancer Res** 60: 6248-52 (2000) (IF = 7.6).
110. P. Jacquemin, S. M. Durvieux, J. Jensen, C. Godfraind, G. Gradwohl, F. Guillemot, O. D. Madsen, P. CARMELIET, M. Dewerchin, D. Collen, G. G. Rousseau & F. P. Lemaigre. Transcription factor

- hepatocyte nuclear factor 6 regulates pancreatic endocrine cell differentiation and controls expression of the proendocrine gene *ngn3*. **Mol Cell Biol** 20: 4445-54 (2000) (IF = 7.1).
111. P. CARMELIET & D. Collen. Transgenic mouse models in angiogenesis and cardiovascular disease. **J Pathol** 190: 387-405 (2000) (Invited Review) (IF = 6.2).
112. M. Baes, S. Huyghe, P. CARMELIET, P. E. Declercq, D. Collen, G. P. Mannaerts & P. P. Van Veldhoven. Inactivation of the peroxisomal multifunctional protein-2 in mice impedes the degradation of not only 2-methyl-branched fatty acids and bile acid intermediates but also of very long chain fatty acids. **J Biol Chem** 275: 16329-36 (2000) (IF = 5.9).
113. E. Creemers, J. Cleutjens, J. Smits, S. Heymans, L. Moons, D. Collen, M. Daemen & P. CARMELIET. Disruption of the plasminogen gene in mice abolishes wound healing after myocardial infarction. **Am J Pathol** 156: 1865-73 (2000) (IF = 5.8).
114. M. Dewerchin, Z. Liang, L. Moons, P. CARMELIET, F. J. Castellino, D. Collen & E. D. Rosen. Blood coagulation factor X deficiency causes partial embryonic lethality and fatal neonatal bleeding in mice. **Thromb Haemost** 83: 185-90 (2000) (IF = 3.1).
115. K. Kataoka, T. Asai, M. Taneda, S. Ueshima, O. Matsuo, R. Kuroda, A. Kawabata & P. CARMELIET. Roles of urokinase type plasminogen activator in a brain stab wound. **Brain Res** 887: 187-90 (2000) (IF = 2.3).
116. P. CARMELIET & D. Collen. Molecular basis of angiogenesis. Role of VEGF and VE-cadherin. **Ann N Y Acad Sci** 902: 249-62; discussion 262-4 (2000) (Invited Review) (IF = 1.9).
117. P. CARMELIET. Gene targeting and gene transfer to unravel the molecular basis of the formation and disorders of blood vessels. **Verh K Acad Geneesk Belg** 62: 31-68 (2000) (Review) (IF = n.a.).
118. A. Lutun, M. Dewerchin, D. Collen & P. CARMELIET. The role of proteinases in angiogenesis, heart development, restenosis, atherosclerosis, myocardial ischemia, and stroke: insights from genetic studies. **Curr Atheroscler Rep** 2: 407-16 (2000) (Invited Review) (IF = n.a.).

## 2001

119. P. CARMELIET. Biomedicine. Clotting factors build blood vessels. **Science** 293: 1602-4 (2001) (Invited Perspective) (IF = 30.9). [PubMed link](#)
120. P. CARMELIET. Cardiovascular biology. Creating unique blood vessels. **Nature** 412: 868-9 (2001) (Invited News and views) (IF = 29.3). [PubMed link](#)
121. P. CARMELIET, L. Moons, A. Lutun, V. Vincenti, V. Compennolle, M. De Mol, Y. Wu, F. Bono, L. Devy, H. Beck, D. Scholz, T. Acker, T. DiPalma, M. Dewerchin, A. Noel, I. Stalmans, A. Barra, S. Blacher, T. Vandendriessche, A. Ponten, U. Eriksson, K. H. Plate, J. M. Foidart, W. Schaper, D. S. Charnock-Jones, D. J. Hicklin, J. M. Herbert, D. Collen & M. G. Persico. Synergism between vascular endothelial growth factor and placental growth factor contributes to angiogenesis and plasma extravasation in pathological conditions. **Nat Med** 7: 575-83 (2001) (IF = 28.9). [PubMed link](#)
122. A. Angelillo-Scherrer, P. de Frutos, C. Aparicio, E. Melis, P. Savi, F. Lupu, J. Arnout, M. Dewerchin, M. Hoylaerts, J. Herbert, D. Collen, B. Dahlback & P. CARMELIET. Deficiency or inhibition of Gas6 causes platelet dysfunction and protects mice against thrombosis. **Nat Med** 7: 215-21 (2001) (IF = 28.9) (highlighted by (inter)-national press). [PubMed link](#)
123. E. B. Brown, R. B. Campbell, Y. Tsuzuki, L. Xu, P. CARMELIET, D. Fukumura & R. K. Jain. In vivo measurement of gene expression, angiogenesis and physiological function in tumors using multiphoton laser scanning microscopy. **Nat Med** 7: 864-8 (2001) (IF = 28.9). [PubMed link](#)
124. O. Nicole, F. Docagne, C. Ali, I. Margail, P. CARMELIET, E. T. MacKenzie, D. Vivien & A. Buisson. The proteolytic activity of tissue-plasminogen activator enhances NMDA receptor-mediated signaling. **Nat Med** 7: 59-64 (2001) (IF = 28.9). [PubMed link](#)
125. D. Nuyens, M. Stengl, S. Dugarmaa, T. Rossenbacher, V. Compennolle, Y. Rudy, J. F. Smits, W. Flameng, C. E. Clancy, L. Moons, M. A. Vos, M. Dewerchin, K. Benndorf, D. Collen, E. Carmeliet & P. CARMELIET. Abrupt rate accelerations or premature beats cause life-threatening arrhythmias in mice with long-QT3 syndrome. **Nat Med** 7: 1021-7 (2001) (IF = 28.9). [PubMed link](#)
126. P. CARMELIET. Jeffrey Michael Isner 1947-2001. **Nat Med** 7: 1269 (2001) (Invited Obituary) (IF = 28.9).



127. B. Oosthuysen, L. Moons, E. Storkebaum, H. Beck, D. Nuyens, K. Brusselmans, J. Van Dorpe, P. Hellings, M. Gorselink, S. Heymans, G. Theilmeier, M. Dewerchin, V. Laudénbach, P. Vermylen, H. Raat, T. Acker, V. Vleminckx, L. Van Den Bosch, N. Cashman, H. Fujisawa, M. R. Drost, R. Sciôt, F. Bruyninckx, D. J. Hicklin, C. Ince, P. Gressens, F. Lupu, K. H. Plate, W. Robberecht, J. M. Herbert, D. Collen & P. CARMELIET. Deletion of the hypoxia-response element in the vascular endothelial growth factor promoter causes motor neuron degeneration. **Nat Genet** 28: 131-8 (2001) (with accompanying News and views in Nature Genetics and editorials in Science, Nature Medicine, Nature, Lancet; highlighted by (inter)-national press). (IF = 25.8). [PubMed link](#)
128. P. CARMELIET & E. M. Conway. Growing better blood vessels. **Nat Biotechnol** 19: 1019-20 (2001) (Invited News and views) (IF = 22.7). [PubMed link](#)
129. M. Levi, L. Moons, A. Bouche, S. D. Shapiro, D. Collen & P. CARMELIET. Deficiency of urokinase-type plasminogen activator-mediated plasmin generation impairs vascular remodeling during hypoxia-induced pulmonary hypertension in mice. **Circulation** 103: 2014-20 (2001) (IF = 11.6).
130. K. Bajou, V. Masson, R. D. Gerard, P. M. Schmitt, V. Albert, M. Praus, L. R. Lund, T. L. Frandsen, N. Brunner, K. Dano, N. E. Fusenig, U. Weidle, G. Carmeliet, D. Loskutoff, D. Collen, P. CARMELIET, J. M. Foidart & A. Noel. The plasminogen activator inhibitor PAI-1 controls in vivo tumor vascularization by interaction with proteases, not vitronectin. Implications for antiangiogenic strategies. **J Cell Biol** 152: 777-84 (2001) (IF = 10.9).
131. F. Lluís, J. Roma, M. Suelves, M. Parra, G. Anioarte, E. Gallardo, I. Illa, L. Rodriguez, S. M. Hughes, P. CARMELIET, M. Roig & P. Muñoz-Canoves. Urokinase-dependent plasminogen activation is required for efficient skeletal muscle regeneration in vivo. **Blood** 97: 1703-11 (2001) (IF = 10.3).
132. M. Ver Heyen, S. Heymans, G. Antoons, T. Reed, M. Periasamy, B. Awede, J. Lebacqz, P. Vangheluwe, M. Dewerchin, D. Collen, K. Sipido, P. CARMELIET & F. Wuytack. Replacement of the muscle-specific sarcoplasmic reticulum Ca(2+)-ATPase isoform SERCA2a by the nonmuscle SERCA2b homologue causes mild concentric hypertrophy and impairs contraction-relaxation of the heart. **Circ Res** 89: 838-46 (2001) (IF = 9.4).
133. Y. Dor, T. D. Camenisch, A. Itin, G. I. Fishman, J. A. McDonald, P. CARMELIET & E. Keshet. A novel role for VEGF in endocardial cushion formation and its potential contribution to congenital heart defects. **Development** 128: 1531-8 (2001) (IF = 7.6).
134. A. Kadambi, C. Mouta Carreira, C. O. Yun, T. P. Padera, D. E. Dolmans, P. CARMELIET, D. Fukumura & R. K. Jain. Vascular endothelial growth factor (VEGF)-C differentially affects tumor vascular function and leukocyte recruitment: role of VEGF-receptor 2 and host VEGF-A. **Cancer Res** 61: 2404-8 (2001) (IF = 7.6).
135. T. L. Frandsen, C. Holst-Hansen, B. S. Nielsen, I. J. Christensen, J. R. Nyengaard, P. CARMELIET & N. Brunner. 2000(uPA) in the growth of an experimental human breast cancer using a combined uPA gene-disrupted and immunodeficient xenograft model. **Cancer Res** 61: 532-7 (2001) (IF = 7.6).
136. V. Lambert, C. Munaut, A. Noel, F. Frankenne, K. Bajou, R. Gerard, P. CARMELIET, M. P. Defresne, J. M. Foidart & J. M. Rakic. Influence of plasminogen activator inhibitor type 1 on choroidal neovascularization. **FASEB J** 15: 1021-7 (2001) (IF = 7.1).
137. K. Brusselmans, F. Bono, P. Maxwell, Y. Dor, M. Dewerchin, D. Collen, J. M. Herbert & P. CARMELIET. Hypoxia-inducible factor-2alpha (HIF-2alpha) is involved in the apoptotic response to hypoglycemia but not to hypoxia. **J Biol Chem** 276: 39192-6 (2001) (IF = 5.9).
138. P. CARMELIET & A. Lutun. The emerging role of the bone marrow-derived stem cells in (therapeutic) angiogenesis. **Thromb Haemost** 86: 289-97 (2001) (Review) (IF = 3.1).
139. P. CARMELIET. What are the candidate pathologies for therapeutic angiogenesis. **Dialogues in Cardiovascular Medicine** 6: 173-181 (2001) (Invited Review) (IF = n.a.).
140. E. M. Conway, D. Collen & P. CARMELIET. Molecular mechanisms of blood vessel growth. **Cardiovasc Res** 49: 507-21 (2001) (Invited Review) (IF = 5.3).
141. J. M. Herbert, D. de Prost, V. Ollivier, E. Melis & P. CARMELIET. Tissue factor is not involved in the mitogenic activity of factor VIIa. **Biochem Biophys Res Commun** 281: 1074-7 (2001) (IF = 3.0).
142. C. Holst-Hansen, J. A. Low, R. W. Stephens, M. D. Johnson, P. CARMELIET, T. L. Frandsen, N. Brunner & R. B. Dickson. Increased stromal expression of murine urokinase plasminogen activator in a human breast cancer xenograft model following treatment with the matrix metalloproteinase inhibitor, batimastat. **Breast Cancer Res Treat** 68: 225-37 (2001) (IF = 4.6).

143. R. K. Jain & P. CARMELIET. Vessels of death or life. **Sci Am** 285, 38-45 (2001) (Review) (IF = 1.9).
144. A. Luttun & P. CARMELIET. Genetic studies on the role of proteinases and growth factors in atherosclerosis and aneurysm formation. **Ann N Y Acad Sci** 947: 124-32; discussion 132-3 (2001) (IF = 1.9).
145. E. Melis, L. Moons, M. De Mol, J. M. Herbert, N. Mackman, D. Collen, P. CARMELIET & M. Dewerchin. Targeted deletion of the cytosolic domain of tissue factor in mice does not affect development. **Biochem Biophys Res Commun** 286: 580-6 (2001) (IF = 3.0).
146. I. Rajantie, N. Ekman, K. Iljin, E. Arighi, Y. Gunji, J. Kaukonen, A. Palotie, M. Dewerchin, P. CARMELIET & K. Alitalo. Bmx tyrosine kinase has a redundant function downstream of angiotensin and vascular endothelial growth factor receptors in arterial endothelium. **Mol Cell Biol** 21: 4647-55 (2001) (IF = 7.1).
147. S. J. Van Cromphaut, M. Dewerchin, J. G. Hoenderop, I. Stockmans, E. Van Herck, S. Kato, R. J. Bindels, D. Collen, P. CARMELIET, R. Bouillon & G. Carmeliet. Duodenal calcium absorption in vitamin D receptor-knockout mice: functional and molecular aspects. **Proc Natl Acad Sci U S A** 98: 13324-9 (2001) (IF = 10.2).
148. Y. H. Yang, P. CARMELIET & J. A. Hamilton. Tissue-type plasminogen activator deficiency exacerbates arthritis. **J Immunol** 167: 1047-52 (2001) (IF = 6.4).
149. R. Yiou, V. Delmas, P. CARMELIET, R. K. Gherardi, G. Barlovatz-Meimon, D. K. Chopin, C. C. Abbou & J. P. Lefaucheur. The pathophysiology of pelvic floor disorders: evidence from a histomorphologic study of the perineum and a mouse model of rectal prolapse. **J Anat** 199: 599-607 (2001) (IF = 2.1).
150. J. L. Yu, J. W. Rak, P. CARMELIET, A. Nagy, R. S. Kerbel & B. L. Coomber. Heterogeneous vascular dependence of tumor cell populations. **Am J Pathol** 158: 1325-34 (2001) (IF = 5.8).

## 2002

151. F. Blasi & P. CARMELIET. uPAR: a versatile signalling orchestrator. **Nat Rev Mol Cell Biol** 3: 932-43 (2002) (Review) (IF = 29.8).
152. A. Luttun, M. Tjwa, L. Moons, Y. Wu, A. Angelillo-Scherrer, F. Liao, J. A. Nagy, A. Hooper, J. Priller, B. De Klerck, V. Compennolle, E. Daci, P. Bohlen, M. Dewerchin, J. M. Herbert, R. Fava, P. Matthys, G. Carmeliet, D. Collen, H. F. Dvorak, D. J. Hicklin & P. CARMELIET. Revascularization of ischemic tissues by PlGF treatment, and inhibition of tumor angiogenesis, arthritis and atherosclerosis by anti-Flt1. **Nat Med** 8: 831-40 (2002) (cover with News and views; editorials in Nature Cancer Reviews, Nature) (IF = 28.9). [PubMed link](#)
153. V. Compennolle, K. Brusselmans, T. Acker, P. Hoet, M. Tjwa, H. Beck, S. Plaisance, Y. Dor, E. Keshet, F. Lupu, B. Nemery, M. Dewerchin, P. Van Veldhoven, K. Plate, L. Moons, D. Collen & P. CARMELIET. Loss of HIF-2alpha and inhibition of VEGF impair fetal lung maturation, whereas treatment with VEGF prevents fatal respiratory distress in premature mice. **Nat Med** 8: 702-10 (2002) (cover with News and views; and editorials in Science, Nature, Lancet) (IF = 28.9). [PubMed link](#)
154. P. CARMELIET. Integrin indecision. **Nat Med** 8: 14-6 (2002) (Invited News and views) (IF = 28.9). [PubMed link](#)
155. K. Alitalo & P. CARMELIET. Molecular mechanisms of lymphangiogenesis in health and disease. **Cancer Cell** 1: 219-27 (2002) (Review) (IF = 18.7). [PubMed link](#)
156. I. Stalmans, Y. S. Ng, R. Rohan, M. Fruttiger, A. Bouche, A. Yuce, H. Fujisawa, B. Hermans, M. Shani, S. Jansen, D. Hicklin, D. J. Anderson, T. Gardiner, H. P. Hammes, L. Moons, M. Dewerchin, D. Collen, P. CARMELIET & P. A. D'Amore. Arteriolar and venular patterning in retinas of mice selectively expressing VEGF isoforms. **J Clin Invest** 109: 327-36 (2002) (IF = 15.1). [PubMed link](#)
157. M. Suelves, R. Lopez-Aleman, F. Lluís, G. Anierte, E. Serrano, M. Parra, P. CARMELIET & P. Munoz-Canoves. Plasmin activity is required for myogenesis in vitro and skeletal muscle regeneration in vivo. **Blood** 99: 2835-44 (2002) (IF = 10.3).
158. R. Pawlinski, A. Fernandes, B. Kehrlé, B. Pedersen, G. Parry, J. Erlich, R. Pyo, D. Gutstein, J. Zhang, F. Castellino, E. Melis, P. CARMELIET, G. Baretton, T. Luther, M. Taubman, E. Rosen & N. Mackman. Tissue factor deficiency causes cardiac fibrosis and left ventricular dysfunction. **Proc Natl Acad Sci U S A** 99: 15333-8 (2002) (IF = 10.2).

159. H. Kojima, H. Gu, S. Nomura, C. C. Caldwell, T. Kobata, P. CARMELIET, G. L. Semenza & M. V. Sitkovsky. Abnormal B lymphocyte development and autoimmunity in hypoxia-inducible factor 1alpha-deficient chimeric mice. **Proc Natl Acad Sci U S A** 99: 2170-4 (2002) (IF = 10.2).
160. Y. Dor, V. Djonov, R. Abramovitch, A. Itin, G. I. Fishman, P. CARMELIET, G. Goelman & E. Keshet. Conditional switching of VEGF provides new insights into adult neovascularization and pro-angiogenic therapy. **EMBO J** 21: 1939-47 (2002) (IF = 10.1).
161. V. Mattot, L. Moons, F. Lupu, D. Chernavsky, R. A. Gomez, D. Collen & P. CARMELIET. Loss of the VEGF(164) and VEGF(188) isoforms impairs postnatal glomerular angiogenesis and renal arteriogenesis in mice. **J Am Soc Nephrol** 13: 1548-60 (2002) (IF = 7.2).
162. V. de Waard, E. K. Arkenbout, P. CARMELIET, V. Lindner & H. Pannekoek. Plasminogen activator inhibitor 1 and vitronectin protect against stenosis in a murine carotid artery ligation model. **Arterioscler Thromb Vasc Biol** 22: 1978-83 (2002) (IF = 7.1).
163. A. Luttun, F. Lupu, E. Storkebaum, M. F. Hoylaerts, L. Moons, J. Crawley, F. Bono, A. R. Poole, P. Tipping, J. M. Herbert, D. Collen & P. CARMELIET. Lack of plasminogen activator inhibitor-1 promotes growth and abnormal matrix remodeling of advanced atherosclerotic plaques in apolipoprotein E-deficient mice. **Arterioscler Thromb Vasc Biol** 22: 499-505 (2002) (IF = 7.1).
164. L. Devy, S. Blacher, C. Grignet-Debrus, K. Bajou, V. Masson, R. D. Gerard, A. Gils, G. Carmeliet, P. CARMELIET, P. J. Declerck, A. Noel & J.M. Foidart. The pro- or antiangiogenic effect of plasminogen activator inhibitor 1 is dose dependent. **FASEB J** 16: 147-54 (2002) (IF = 7.1).
165. A. W. Rijneveld, M. Levi, S. Florquin, P. Speelman, P. CARMELIET & T. van Der Poll. Urokinase receptor is necessary for adequate host defense against pneumococcal pneumonia. **J Immunol** 168: 3507-11 (2002) (IF = 6.3).
166. H. Beck, T. Acker, A. W. Puschel, H. Fujisawa, P. CARMELIET & K. H. Plate. Cell type-specific expression of neuropilins in an MCA-occlusion model in mice suggests a potential role in post-ischemic brain remodeling. **J Neuropathol Exp Neurol** 6: 339-50 (2002) (IF = 4.7).
167. A. Luttun, G. Carmeliet & P. CARMELIET. Vascular progenitors: from biology to treatment. **Trends Cardiovasc Med** 12: 88-96 (2002) (Review) (IF = 4.7).
168. F. Docagne, O. Nicole, C. Gabriel, M. Fernandez-Monreal, S. Lesne, C. Ali, L. Plawinski, P. CARMELIET, E. T. MacKenzie, A. Buisson & D. Vivien. Smad3-dependent induction of plasminogen activator inhibitor-1 in astrocytes mediates neuroprotective activity of transforming growth factor-beta 1 against NMDA-induced necrosis. **Mol Cell Neurosci** 21: 634-44 (2002) (IF = 4.6).
169. P. CARMELIET & E. Storkebaum. Vascular and neuronal effects of VEGF in the nervous system: implications for neurological disorders. **Semin Cell Dev Biol** 13: 39-53 (2002) (Review) (IF = 4.5).
170. C. Maes, P. CARMELIET, K. Moermans, I. Stockmans, N. Smets, D. Collen, R. Bouillon & G. Carmeliet. Impaired angiogenesis and endochondral bone formation in mice lacking the vascular endothelial growth factor isoforms VEGF164 and VEGF188. **Mech Dev** 111: 61-73 (2002) (IF = 3.8).
171. A. Luttun, K. Brusselmans, H. Fukao, M. Tjwa, S. Ueshima, J. M. Herbert, O. Matsuo, D. Collen, P. CARMELIET & L. Moons. Loss of placental growth factor protects mice against vascular permeability in pathological conditions. **Biochem Biophys Res Commun** 295: 428-34 (2002) (IF = 3.0).
172. M. Baes, M. Dewerchin, A. Janssen, D. Collen & P. CARMELIET. Generation of Pex5-loxP mice allowing the conditional elimination of peroxisomes. **Genesis** 32: 177-8 (2002) (IF = 2.6).
173. A. Luttun, M. Tjwa & P. CARMELIET. Placental growth factor (PlGF) and its receptor Flt-1 (VEGFR-1): novel therapeutic targets for angiogenic disorders. **Ann N Y Acad Sci** 979: 80-93 (2002) (Review) (IF = 1.9).
174. A. Angelillo-Scherrer, D. Collen & P. CARMELIET. Gas6, une nouvelle protéine d'hémostase. **Hématologie** 8: 173-180 (2002) (IF = n.a.).
175. V. V. Masson, L. Devy, C. Grignet-Debrus, S. Bernt, K. Bajou, S. Blacher, G. Roland, Y. Chang, T. Fong, P. CARMELIET, J. M. Foidart & A. Noel. Mouse Aortic Ring Assay: A New Approach of the Molecular Genetics of Angiogenesis. **Biol Proced Online** 4: 24-31 (2002) (IF = n.a.).

**2003**

176. E. M. Conway & P. CARMELIET. Cardiovascular biology: signalling silenced. **Nature** 425: 139-41 (2003) (Invited News and views) (IF = 29.3). [PubMed link](#)
177. M. Autiero, J. Waltenberger, D. Communi, A. Kranz, L. Moons, D. Lambrechts, J. Kroll, S. Plaisance, M. De Mol, F. Bono, S. Kliche, G. Fellbrich, K. Ballmer-Hofer, D. Maglione, U. Mayr-Beyrle, M. Dewerchin, S. Dombrowski, D. Stanimirovic, P. Van Hummelen, C. Dehio, D. J. Hicklin, G. Persico, J. M. Herbert, M. Shibuya, D. Collen, E. M. Conway & P. CARMELIET. Role of PlGF in the intra- and intermolecular cross talk between the VEGF receptors Flt1 and Flk1. **Nat Med** 9: 936-43 (2003) (IF = 28.9). [PubMed link](#)
178. I. Stalmans, D. Lambrechts, F. De Smet, S. Jansen, J. Wang, S. Maity, P. Kneer, M. von der Ohe, A. Swillen, C. Maes, M. Gewillig, D. G. Molin, P. Hellings, T. Boetel, M. Haardt, V. Compennolle, M. Dewerchin, S. Plaisance, R. Vlietinck, B. Emanuel, A. C. Gittenberger-de Groot, P. Scambler, B. Morrow, D. A. Driscoll, L. Moons, C. V. Esguerra, G. Carmeliet, A. Behn-Krappa, K. Devriendt, D. Collen, S. J. Conway & P. CARMELIET. VEGF: a modifier of the del22q11 (DiGeorge) syndrome? **Nat Med** 9: 173-82 (2003) (IF = 28.9). [PubMed link](#)
179. P. CARMELIET. Angiogenesis in health and disease. **Nat Med** 9: 653-60 (2003) (Invited Review) (IF = 28.9). [PubMed link](#)
180. D. Lambrechts, E. Storkebaum, M. Morimoto, J. Del-Favero, F. Desmet, S. L. Marklund, S. Wyns, V. Thijs, J. Andersson, I. van Marion, A. Al-Chalabi, S. Bornes, R. Musson, V. Hansen, L. Beckman, R. Adolfsson, H. S. Pall, H. Prats, S. Vermeire, P. Rutgeerts, S. Katayama, T. Awata, N. Leigh, L. Lang-Lazdunski, M. Dewerchin, C. Shaw, L. Moons, R. Vlietinck, K. E. Morrison, W. Robberecht, C. Van Broeckhoven, D. Collen, P. M. Andersen & P. CARMELIET. VEGF is a modifier of amyotrophic lateral sclerosis in mice and humans and protects motoneurons against ischemic death. **Nat Genet** 34: 383-94 (2003) (with accompanying News and views; highlighted by (inter)-national press) (IF = 25.8). [PubMed link](#)
181. P. CARMELIET. Blood vessels and nerves: common signals, pathways and diseases. **Nat Rev Genet** 4: 710-20 (2003) (Invited Review) (IF = 19.2). [PubMed link](#)
182. A. Luttun & P. CARMELIET. Soluble VEGF receptor Flt1: the elusive preeclampsia factor discovered? **J Clin Invest** 111: 600-2 (2003) (News and Views) (IF = 15.1).
183. K. Brusselmans, V. Compennolle, M. Tjwa, M. S. Wiesener, P. H. Maxwell, D. Collen & P. CARMELIET. Heterozygous deficiency of hypoxia-inducible factor-2alpha protects mice against pulmonary hypertension and right ventricular dysfunction during prolonged hypoxia. **J Clin Invest** 111: 1519-27 (2003) (IF = 15.1).
184. M. Levi, J. Dorffler-Melly, P. Reitsma, H. Buller, S. Florquin, T. van der Poll & P. CARMELIET. Aggravation of endotoxin-induced disseminated intravascular coagulation and cytokine activation in heterozygous protein-C-deficient mice. **Blood** 101: 4823-7 (2003) (IF = 10.3).
185. H. Oura, J. Bertocini, P. Velasco, L. F. Brown, P. CARMELIET & M. Detmar. A critical role of placental growth factor in the induction of inflammation and edema formation. **Blood** 101: 560-7 (2003) (IF = 10.3).
186. A. W. Rijneveld, S. Florquin, P. Bresser, M. Levi, V. De Waard, R. Lijnen, J. S. Van Der Zee, P. Speelman, P. CARMELIET & T. Van Der Poll. Plasminogen activator inhibitor type-1 deficiency does not influence the outcome of murine pneumococcal pneumonia. **Blood** 102: 934-9 (2003) (IF = 10.3).
187. G. G. Deng, B. Martin-McNulty, D. A. Sukovich, A. Freay, M. Halks-Miller, T. Thinnes, D. J. Loskutoff, P. CARMELIET, W. P. Dole & Y. X. Wang. Urokinase-type plasminogen activator plays a critical role in angiotensin II-induced abdominal aortic aneurysm. **Circ Res** 92: 510-7 (2003) (IF = 9.4).
188. M. Dewerchin, J. P. Herault, G. Wallays, M. Petitou, P. Schaeffer, L. Millet, J. I. Weitz, L. Moons, D. Collen, P. CARMELIET & J. M. Herbert. Life-threatening thrombosis in mice with targeted Arg48-to-Cys mutation of the heparin-binding domain of antithrombin. **Circ Res** 93: 1120-6 (2003) (IF = 9.4).
189. F. Pipp, M. Heil, K. Issbrucker, T. Ziegelhoeffer, S. Martin, J. van den Heuvel, H. Weich, B. Fernandez, G. Golomb, P. CARMELIET, W. Schaper & M. Clauss. VEGFR-1-selective VEGF homologue PlGF is arteriogenic: evidence for a monocyte-mediated mechanism. **Circ Res** 92: 378-85 (2003) (IF = 9.4).
190. P. Brites, A. M. Motley, P. Gressens, P. A. Mooyer, I. Ploegaert, V. Everts, P. Evrard, P. CARMELIET, M. Dewerchin, L. Schoonjans, M. Duran, H. R. Waterham, R. J. Wanders & M. Baes. Impaired

- neuronal migration and endochondral ossification in Pex7 knockout mice: a model for rhizomelic chondrodysplasia punctata. **Hum Mol Genet** 12: 2255-67 (2003) (IF = 7.8).
191. C. Roca, L. Primo, D. Valdembrì, A. Cividalli, P. Declercq, P. CARMELIET, P. Gabriele & F. Bussolino. Hyperthermia inhibits angiogenesis by a plasminogen activator inhibitor 1-dependent mechanism. **Cancer Res** 63: 1500-7 (2003) (IF = 7.6).
192. A. Janssen, P. Gressens, M. Grabenbauer, E. Baumgart, A. Schad, I. Vanhorebeek, A. Brouwers, P. E. Declercq, D. Fahimi, P. Evrard, L. Schoonjans, D. Collen, P. CARMELIET, G. Mannaerts, P. Van Veldhoven & M. Baes. Neuronal migration depends on intact peroxisomal function in brain and in extraneuronal tissues. **J Neurosci** 23: 9732-41 (2003) (IF = 7.5).
193. A. R. Kitching, Y. Z. Kong, X. R. Huang, P. Davenport, K. L. Edgton, P. CARMELIET, S. R. Holdsworth & P. G. Tipping. Plasminogen activator inhibitor-1 is a significant determinant of renal injury in experimental crescentic glomerulonephritis. **J Am Soc Nephrol** 14: 1487-95 (2003) (IF = 7.2).
194. G. Zhang, H. Kim, X. Cai, J. M. Lopez-Guisa, C. E. Alpers, Y. Liu, P. CARMELIET & A. A. Eddy. Urokinase receptor deficiency accelerates renal fibrosis in obstructive nephropathy. **J Am Soc Nephrol** 14: 1254-71 (2003) (IF = 7.2).
195. G. Zhang, H. Kim, X. Cai, J. M. Lopez-Guisa, P. CARMELIET & A. A. Eddy. Urokinase receptor modulates cellular and angiogenic responses in obstructive nephropathy. **J Am Soc Nephrol** 14: 1234-53 (2003) (IF = 7.2).
196. A. Hertig, J. Berrou, Y. Allory, L. Breton, F. Commo, M. A. Costa De Beauregard, P. CARMELIET & E. Rondeau. Type 1 plasminogen activator inhibitor deficiency aggravates the course of experimental glomerulonephritis through overactivation of transforming growth factor beta. **Faseb J** 17: 1904-6 (2003) (IF = 7.1).
197. E. Deindl, T. Ziegelhoffer, S. M. Kanse, B. Fernandez, E. Neubauer, P. CARMELIET, K. T. Preissner & W. Schaper. Receptor-independent role of the urokinase-type plasminogen activator during arteriogenesis. **FASEB J** 17: 1174-6 (2003) (IF = 7.1).
198. S. J. Van Cromphaut, K. Rummens, I. Stockmans, E. Van Herck, F. A. Dijcks, A. G. Ederveen, P. CARMELIET, J. Verhaeghe, R. Bouillon & G. Carmeliet. Intestinal calcium transporter genes are upregulated by estrogens and the reproductive cycle through vitamin D receptor-independent mechanisms. **J Bone Miner Res** 18: 1725-36 (2003) (IF = 6.5).
199. A. Reijerkerk, L. O. Mosnier, O. Kranenburg, B. N. Bouma, P. CARMELIET, T. Drixler, J. C. Meijers, E. E. Voest & M. F. Geubbink. Amyloid endostatin induces endothelial cell detachment by stimulation of the plasminogen activation system. **Mol Cancer Res** 1: 561-8 (2003) (IF = 5.4).
200. A. Luttun & P. CARMELIET. De novo vasculogenesis in the heart. **Cardiovasc Res** 58: 378-89 (2003) (Invited Review) (IF = 5.3).
201. V. Compennolle, K. Brusselmans, D. Franco, A. Moorman, M. Dewerchin, D. Collen & P. CARMELIET. Cardia bifida, defective heart development and abnormal neural crest migration in embryos lacking hypoxia-inducible factor-1alpha. **Cardiovasc Res** 60: 569-79 (2003) (IF = 5.3).
202. L. Fabritz, P. Kirchhof, M. R. Franz, D. Nuyens, T. Rossenbacker, A. Ottenhof, W. Haverkamp, G. Breithardt, E. Carmeliet & P. CARMELIET. Effect of pacing and mexiletine on dispersion of repolarisation and arrhythmias in DeltaKQP SCN5A (long QT3) mice. **Cardiovasc Res** 57: 1085-93 (2003) (IF = 5.3).
203. C. J. Gruss, K. Satyamoorthy, C. Berking, J. Lininger, M. Nesbit, H. Schaidler, Z. J. Liu, M. Oka, M. Y. Hsu, T. Shirakawa, G. Li, T. Bogenrieder, P. CARMELIET, W. S. El-Deiry, S. L. Eck, J. S. Rao, A. H. Baker, J. T. Bennet, T. M. Crombleholme, O. Velazquez, J. Karmacharya, D. J. Margolis, J. M. Wilson, M. Detmar, M. Skobe, P. D. Robbins, C. Buck & M. Herlyn. Stroma formation and angiogenesis by overexpression of growth factors, cytokines and proteolytic enzymes in human skin grafted to SCID mice. **J Invest Dermatol** 120: 683-92 (2003) (IF = 4.4).
204. D. Scholz, H. Elsaesser, A. Sauer, C. Friedrich, A. Luttun, P. CARMELIET & W. Schaper. Bone marrow transplantation abolishes inhibition of arteriogenesis in placenta growth factor (PlGF)  $-/-$  mice. **J Mol Cell Cardiol** 35: 177-84 (2003) (IF = 3.9).
205. T. A. Drixler, J. M. Vogten, M. F. Geubbink, P. CARMELIET, E. E. Voest & I. H. Borel Rinkes. Plasminogen mediates liver regeneration and angiogenesis after experimental partial hepatectomy. **Br J Surg** 90: 1384-90 (2003) (IF = 3.7).



206. V. Lambert, C. Munaut, P. CARMELIET, R. D. Gerard, P. J. Declerck, A. Gils, C. Claes, J. M. Foidart, A. Noel & J. M. Rakic. Dose-dependent modulation of choroidal neovascularization by plasminogen activator inhibitor type I: implications for clinical trials. **Invest Ophthalmol Vis Sci** 44: 2791-7 (2003) (IF = 3.6).
207. J. M. Rakic, V. Lambert, L. Devy, A. Luttun, P. CARMELIET, C. Claes, L. Nguyen, J. M. Foidart, A. Noel & C. Munaut. Placental growth factor, a member of the VEGF family, contributes to the development of choroidal neovascularization. **Invest Ophthalmol Vis Sci** 44: 3186-93 (2003) (IF = 3.6).
208. J. M. Rakic, V. Lambert, C. Munaut, K. Bajou, K. Peyrollier, M. L. Alvarez-Gonzalez, P. CARMELIET, J. M. Foidart & A. Noel. Mice without uPA, tPA, or plasminogen genes are resistant to experimental choroidal neovascularization. **Invest Ophthalmol Vis Sci** 44: 1732-9 (2003) (IF = 3.6).
209. M. Autiero, A. Luttun, M. Tjwa & P. CARMELIET. Placental growth factor and its receptor, vascular endothelial growth factor receptor-1: novel targets for stimulation of ischemic tissue revascularization and inhibition of angiogenic and inflammatory disorders. **J Thromb Haemost** 1: 1356-70 (2003) (invited review) (IF = 3.1).
210. C. R. Molinas, R. Campo, M. Dewerchin, U. Eriksson, P. CARMELIET & P. R. Koninckx. Role of vascular endothelial growth factor and placental growth factor in basal adhesion formation and in carbon dioxide pneumoperitoneum-enhanced adhesion formation after laparoscopic surgery in transgenic mice. **Fertil Steril** 80 Suppl 2: 803-11 (2003) (IF = 3.1).
211. C. R. Molinas, R. Campo, O. A. Elkelani, M. M. Binda, P. CARMELIET & P. R. Koninckx. Role of hypoxia inducible factors 1alpha and 2alpha in basal adhesion formation and in carbon dioxide pneumoperitoneum-enhanced adhesion formation after laparoscopic surgery in transgenic mice. **Fertil Steril** 80 Suppl 2: 795-802 (2003) (IF = 3.1).
212. C. R. Molinas, O. Elkelani, R. Campo, A. Luttun, P. CARMELIET & P. R. Koninckx. Role of the plasminogen system in basal adhesion formation and carbon dioxide pneumoperitoneum-enhanced adhesion formation after laparoscopic surgery in transgenic mice. **Fertil Steril** 80: 184-92 (2003) (IF = 3.1).
213. T. Jin, A. Tarkowski, P. CARMELIET & M. Bokarewa. Urokinase, a constitutive component of the inflamed synovial fluid, induces arthritis. **Arthritis Res Ther** 5: R9-R17 (2003) (IF = 2.9)
214. M. Tjwa, A. Luttun, M. Autiero & P. CARMELIET. VEGF and PlGF: two pleiotropic growth factors with distinct roles in development and homeostasis. **Cell Tissue Res** 314: 5-14 (2003) (Invited Review). (IF = 2.4).
215. D. Collen, P. CARMELIET, C. Brunaud & L. Schoonjans. Cardiovascular stem cell research in interactions between the university and industry. **Verh K Acad Geneesk Belg** 65: 281-2 (2003) (Review) (IF = n.a.).
216. E. Melis, S. Heymans & P. CARMELIET Preventie van trombose: de nieuwkomer anti-Gas6-therapie versus gevestigde waarden. **Bloedvaten, Hart & Longen** 8: 40-44 (2003) (Review) (IF = n.a.).

## 2004

217. D. Lambrechts & P. CARMELIET. Sculpting heart valves with NFATc and VEGF. **Cell** 118: 532-4 (2004) (Review) (IF = 29.4). [PubMed link](#)
218. M. Azzouz, G. S. Ralph, E. Storkebaum, L. E. Walmsley, K. A. Mitrophanous, S. M. Kingsman, P. CARMELIET & N. D. Mazarakis. VEGF delivery with retrogradely transported lentivector prolongs survival in a mouse ALS model. **Nature** 429: 413-7 (2004) (IF = 29.3) (highlighted by (inter)-national press). [PubMed link](#)
219. D. Lambrechts & P. CARMELIET. Medicine: genetic spotlight on a blood defect. **Nature** 427: 592-4 (2004) (News and Views) (IF = 29.3). [PubMed link](#)
220. X. Lu, F. Le Noble, L. Yuan, Q. Jiang, B. De Lafarge, D. Sugiyama, C. Breant, F. Claes, F. De Smet, J. L. Thomas, M. Autiero, P. CARMELIET, M. Tessier-Lavigne & A. Eichmann. The netrin receptor UNC5B mediates guidance events controlling morphogenesis of the vascular system. **Nature** 432: 179-86 (2004) (IF = 29.3). [PubMed link](#)
221. M. Belting, M. I. Dorrell, S. Sandgren, E. Aguilar, J. Ahamed, A. Dorfleutner, P. CARMELIET, B. M. Mueller, M. Friedlander & W. Ruf. Regulation of angiogenesis by tissue factor cytoplasmic domain signaling. **Nat Med** 10: 502-9 (2004) (IF = 28.9). [PubMed link](#)

222. J. Auwerx, P. Avner, R. Baldock, A. Ballabio, R. Balling, M. Barbacid, A. Berns, A. Bradley, S. Brown, P. CARMELIET, P. Chambon, R. Cox, D. Davidson, K. Davies, D. Duboule, J. Forejt, F. Granucci, N. Hastie, M. H. de Angelis, I. Jackson, D. Kioussis, G. Kollias, M. Lathrop, U. Lendahl, M. Malumbres, H. von Melchner, W. Muller, J. Partanen, P. Ricciardi-Castagnoli, P. Rigby, B. Rosen, N. Rosenthal, B. Skarnes, A. F. Stewart, J. Thornton, G. Tocchini-Valentini, E. Wagner, W. Wahli & W. Wurst. The European dimension for the mouse genome mutagenesis program. **Nat Genet** 36: 925-7 (2004) (IF = 25.8).
223. A. Lutun, M. Autiero, M. Tjwa & P. CARMELIET. Genetic dissection of tumor angiogenesis: are PIGF and VEGFR-1 novel anti-cancer targets? **Biochim Biophys Acta** 1654: 79-94 (2004) (Review) (IF = 16.1).
224. C. Maes, I. Stockmans, K. Moermans, R. Van Looveren, N. Smets, P. CARMELIET, R. Bouillon & G. Carmeliet. Soluble VEGF isoforms are essential for establishing epiphyseal vascularization and regulating chondrocyte development and survival. **J Clin Invest** 113: 188-99 (2004) (IF = 15.1).
225. E. Storkebaum & P. CARMELIET. VEGF: a critical player in neurodegeneration. **J Clin Invest** 113: 14-8 (2004) (Invited Review) (IF = 15.1).
226. A. Lutun, E. Lutgens, A. Manderveld, K. Maris, D. Collen, P. CARMELIET & L. Moons. Loss of matrix metalloproteinase-9 or matrix metalloproteinase-12 protects apolipoprotein E-deficient mice against atherosclerotic media destruction but differentially affects plaque growth. **Circulation** 109: 1408-14 (2004) (IF = 11.1).
227. E.M. Conway & P. CARMELIET. A CLEVER molecule that regulates lymphocyte Trafficking. **Blood** 104: 13, 3840-3841 (2004) (Editorial) (IF = 10.3).
228. K. De Gendt, J. V. Swinnen, P. T. Saunders, L. Schoonjans, M. Dewerchin, A. Devos, K. Tan, N. Atanassova, F. Claessens, C. Lecureuil, W. Heyns, P. CARMELIET, F. Guillou, R. M. Sharpe & G. Verhoeven. A Sertoli cell-selective knockout of the androgen receptor causes spermatogenic arrest in meiosis. **Proc Natl Acad Sci U S A** 101: 1327-32 (2004) (IF = 10.2).
229. E. M. Conway & P. CARMELIET. The diversity of endothelial cells: a challenge for therapeutic angiogenesis. **Genome Biol** 5: 207 (2004) (Invited Review) (IF = 9.7).
230. T. J. Curiel, P. Cheng, P. Mottram, X. Alvarez, L. Moons, M. Evdemon-Hogan, S. Wei, L. Zou, I. Kryczek, G. Hoyle, A. Lackner, P. CARMELIET & W. Zou. Dendritic cell subsets differentially regulate angiogenesis in human ovarian cancer. **Cancer Res** 64: 5535-8 (2004) (IF = 7.6).
231. A. Van Eynde, M. Nuytten, M. Dewerchin, L. Schoonjans, S. Keppens, M. Beullens, L. Moons, P. CARMELIET, W. Stalmans & M. Bollen. The nuclear scaffold protein NIPP1 is essential for early embryonic development and cell proliferation. **Mol Cell Biol** 24: 5863-74 (2004) (IF = 7.0).
232. K. Bajou, C. Maillard, M. Jost, R. H. Lijnen, A. Gils, P. Declerck, P. CARMELIET, J. M. Foidart & A. Noel. Host-derived plasminogen activator inhibitor-1 (PAI-1) concentration is critical for in vivo tumoral angiogenesis and growth. **Oncogene** 23: 6986-90 (2004) (IF = 6.9).
233. E. Storkebaum, D. Lambrechts & P. CARMELIET. VEGF: once regarded as a specific angiogenic factor, now implicated in neuroprotection. **Bioessays** 26: 943-54 (2004) (Review) (IF = 6.7).
234. A. Lundkvist, A. Reichenbach, C. Betsholtz, P. CARMELIET, H. Wolburg & M. Pekny. Under stress, the absence of intermediate filaments from Muller cells in the retina has structural and functional consequences. **J Cell Sci** 117: 3481-8 (2004) (IF = 6.5).
235. L. Sharma, E. Melis, M. J. Hickey, C. D. Clyne, J. Erlich, L. M. Khachigian, P. Davenport, E. Morand, P. CARMELIET & P. G. Tipping. The cytoplasmic domain of tissue factor contributes to leukocyte recruitment and death in endotoxemia. **Am J Pathol** 165: 331-40 (2004) (IF = 5.8).
236. Y. H. Yang, P. Hall, G. Milenkovski, L. Sharma, P. Hutchinson, E. Melis, P. CARMELIET, P. Tipping & E. Morand. Reduction in arthritis severity and modulation of immune function in tissue factor cytoplasmic domain mutant mice. **Am J Pathol** 164: 109-17 (2004) (IF = 5.8).
237. D. Lambrechts, E. Storkebaum & P. CARMELIET. VEGF: necessary to prevent motoneuron degeneration, sufficient to treat ALS? **Trends Mol Med** 10: 275-82 (2004) (Invited Review) (IF = 5.5).
238. K. L. Edgton, R. M. Gow, D. J. Kelly, P. CARMELIET & A. R. Kitching. Plasmin is not protective in experimental renal interstitial fibrosis. **Kidney Int** 66: 68-76 (2004) (IF = 4.9).

239. O. Hennebert, S. Marret, P. CARMELIET, P. Gressens, A. Laquerriere & P. Leroux. Role of tissue-derived plasminogen activator (t-PA) in an excitotoxic mouse model of neonatal white matter lesions. **J Neuropathol Exp Neurol** 63: 53-63 (2004) (IF = 4.5).
240. A. Luttun & P. CARMELIET. Angiogenesis and lymphangiogenesis: highlights of the past year. **Curr Opin Hematol** 11: 262-71 (2004) (Review) (IF =4.5).
241. E. Padalko, D. Nuyens, A. De Palma, E. Verbeken, J. L. Aerts, E. De Clercq, P. CARMELIET & J. Neyts. The interferon inducer ampligen [poly(I)-poly(C12U)] markedly protects mice against coxsackie B3 virus-induced myocarditis. **Antimicrob Agents Chemother** 48: 267-74 (2004) (IF = 4.3).
242. P. CARMELIET. Manipulating angiogenesis in medicine. **J Intern Med** 255: 538-61 (2004) (Review) (IF = 4.0).
243. L. Van Den Bosch, E. Storkebaum, V. Vleminckx, L. Moons, L. Vanopdenbosch, W. Scheveneels, P. CARMELIET, W. Robberecht. Effects of vascular endothelial growth factor (VEGF) on motor neuron degeneration. **Neurobiology of Disease** 17: 21-8 (2004) (IF = 4.0).
244. D. Lambrechts & P. CARMELIET. Genetics in zebrafish, mice, and humans to dissect congenital heart disease: insights in the role of VEGF. **Curr Top Dev Biol** 62: 189-224 (2004) (Review) (IF = 3.9).
245. C. R. Molinas, M. Mercedes Binda, P. CARMELIET & P. R. Koninckx. Role of vascular endothelial growth factor receptor 1 in basal adhesion formation and in carbon dioxide pneumoperitoneum-enhanced adhesion formation after laparoscopic surgery in mice. **Fertil Steril** 82 Suppl 3: 1149-53 (2004) (IF = 3.1).
246. E. Fordel, E. Geuens, S. Dewilde, P. Rottiers, P. CARMELIET, J. Grooten & L. Moens. Cytoglobin expression is upregulated in all tissues upon hypoxia: an in vitro and in vivo study by real-time PCR. **Biochem Biophys Res Commun** 319: 342-8 (2004) (IF = 3.0).
247. A. Alam, J. P. Herault, P. Barron, B. Favier, P. Fons, N. Delesque-Touchard, I. Senegas, P. Laboudie, J. Bonnin, C. Cassan, P. Savi, B. Ruggeri, P. CARMELIET, F. Bono & J. M. Herbert. Heterodimerization with vascular endothelial growth factor receptor-2 (VEGFR-2) is necessary for VEGFR-3 activity. **Biochem Biophys Res Commun** 324: 909-15 (2004) (IF = 3.0).
248. T. Rossenbacker, S.J. Carroll, H. Liu, C. Kuiperi, T.J. de Ravel, K. Devriendt, P. CARMELIET, R.S. Kass and H. Heidbuchel. Novel pore mutation in SCN5A manifests as a spectrum of phenotypes ranging from atrial flutter, conduction disease, and Brugada syndrome to sudden cardiac death. **Heart Rhythm** 1: 610-5 (2004) (IF = 2.6).

## 2005

249. P. CARMELIET. Angiogenesis in life, disease and medicine. **Nature** 438: 932-6 (2005) (Review) (IF = 29.2). [PubMed link](#)
250. P. CARMELIET & M. Tessier-Lavigne. Common mechanisms of nerve and blood vessel wiring. **Nature** 436: 193-200 (2005) (Review) (IF = 29.2). [PubMed link](#)
251. A. Ny, M. Koch, M. Schneider, E. Neven, R.T. Tong, S. Maity, C. Fischer, S. Plaisance, D. Lambrechts, C. Heligon, S. Terclavers, M. Ciesiolka, R. Kalin, W.Y. Man, I. Senn, S. Wyns, F. Lupu, A. Brandli, K. Vleminckx, D. Collen, M. Dewerchin, E.M. Conway, L. Moons, R.K. Jain, & P. CARMELIET. A genetic *Xenopus laevis* tadpole model to study lymphangiogenesis. **Nat Med** 11: 998-1004 (2005) (IF = 28.9). [PubMed link](#)
252. M. Schneider, E.M. Conway & P. CARMELIET. Lymph makes you fat. **Nat Genet** 37: 1023-4 (2005) (News and views) (IF = 25.8). [PubMed link](#)
253. E. Storkebaum, D. Lambrechts, M. Dewerchin, M. P. Moreno-Murciano, S. Appelmans, H. Oh, P. Van Damme, B. Rutten, W. Y. Man, M. De Mol, S. Wyns, D. Manka, K. Vermeulen, L. Van Den Bosch, N. Mertens, C. Schmitz, W. Robberecht, E. M. Conway, D. Collen, L. Moons & P. CARMELIET. Treatment of motoneuron degeneration by intracerebro-ventricular delivery of VEGF in a rat model of ALS. **Nat Neurosci** 8: 85-92 (2005) (IF = 15.4) (highlighted by (inter)-national press). [PubMed link](#)
254. A. Angelillo-Scherrer, L. Burnier, N. Flores, P. Savi, M. DeMol, P. Schaeffer, J. M. Herbert, G. Lemke, S. P. Goff, G. K. Matsushima, H. S. Earp, C. Vesin, M. F. Hoylaerts, S. Plaisance, D. Collen, E. M. Conway, B. Wehrle-Haller & P. CARMELIET. Role of Gas6 receptors in platelet signaling during thrombus stabilization and implications for antithrombotic therapy. **J Clin Invest** 115: 237-46 (2005) (IF = 15.0).

255. X. Li, M. Tjwa, L. Moons, P. Fons, A. Noel, A. Ny, J. M. Zhou, J. Lennartsson, H. Li, A. Luttun, A. Ponten, L. Devy, A. Bouche, H. Oh, A. Manderveld, S. Blacher, D. Communi, P. Savi, F. Bono, M. Dewerchin, J. M. Foidart, M. Autiero, J. M. Herbert, D. Collen, C. H. Heldin, U. Eriksson & P. CARMELIET. Revascularization of ischemic tissues by PDGF-CC via effects on endothelial cells and their progenitors. **J Clin Invest** 115: 118-27 (2005) (IF = 15.0).
256. T. Rossenbacker, K. Mubagwa, R. J. Jongbloed, J. Vereecke, K. Devriendt, M. Gewillig, E. Carmeliet, D. Collen, H. Heidbuchel & P. CARMELIET. Novel mutation in the Per-Arnt-Sim domain of KCNH2 causes a malignant form of long-QT syndrome. **Circulation** 111: 961-8 (2005) (IF = 11.1).
257. R. Khurana\*, L. Moons, S. Shafi, A. Luttun, D. Collen, J. F. Martin, P. CARMELIET\* & I. C. Zachary\*. Placental Growth Factor Promotes Atherosclerotic Intimal Thickening and Macrophage Accumulation. **Circulation** 111: 2828-36 (2005) (IF = 11.1).
258. S. Heymans, B. Schroen, P. Vermeersch, H. Milting, F. Gao, A. Kassner, H. Gillijns, P. Herijgers, W. Flameng, P. CARMELIET, F. Van de Werf, Y. M. Pinto & S. Janssens. Increased cardiac expression of tissue inhibitor of metalloproteinase-1 and tissue inhibitor of metalloproteinase-2 is related to cardiac fibrosis and dysfunction in the chronic pressure-overloaded human heart. **Circulation** 112: 1136-44 (2005) (IF = 11.1).
259. S. M. Muller, G. Terszowski, C. Blum, C. Haller, V. Anquez, S. Kuschert, P. CARMELIET, H.G. Augustin & H.R. Rodewald. Gene targeting of VEGF-A in thymus epithelium disrupts thymus blood vessel architecture. **Proc Natl Acad Sci USA** 102: 10587-92 (2005) (IF = 10.2).
260. I. Ott, C. Michaelis, M. Schuermann, B. Steppich, I. Seitz, M. Dewerchin, D. Zohlnhofer, R. Wessely, M. Rudelius, A. Schomig & P. CARMELIET. Vascular remodeling in mice lacking the cytoplasmic domain of tissue factor. **Circ Res** 97: 293-8 (2005) (IF = 9.4).
261. A. Eichmann, F. Le Noble, M. Autiero & P. CARMELIET. Guidance of vascular and neural network formation. **Curr Opin Neurobiol** 15: 108-15 (2005) (Review) (IF = 8.5).
262. I. Kryczek, A. Lange, P. Mottram, X. Alvarez, P. Cheng, M. Hogan, L. Moons, S. Wei, L. Zou, V. Machelon, D. Emilie, M. Terrassa, A. Lackner, T. J. Curiel, P. CARMELIET & W. Zou. CXCL12 and vascular endothelial growth factor synergistically induce neoangiogenesis in human ovarian cancers. **Cancer Res** 65: 465-72 (2005) (IF = 7.6).
263. T. Acker, A. Diez-Juan, J. Aragones, M. Tjwa, K. Brusselmans, L. Moons, D. Fukumura, M.P. Moreno-Murciano, J.M. Herbert, A. Burger, J. Riedel, G. Elvert, I. Flamme, P.H. Maxwell, D. Collen, M. Dewerchin, R.K. Jain, K. Plate & P. CARMELIET. Genetic evidence for a tumor suppressor role of HIF-2alpha. **Cancer Cell** 8: 131-41 (2005) (IF = 7.6). [PubMed link](#)
264. M. Schneider, M. Tjwa & P. CARMELIET. A surrogate marker to monitor angiogenesis at last. **Cancer Cell** 7: 3-4 (2005) (Preview) (IF = 7.6). [PubMed link](#)
265. K. D. Cowden Dahl, B. H. Fryer, F. A. Mack, V. Compennolle, E. Maltepe, D. M. Adelman, P. CARMELIET & M. C. Simon. Hypoxia-inducible factors 1alpha and 2alpha regulate trophoblast differentiation. **Mol Cell Biol** 25: 10479-91 (2005) (IF = 7.1).
266. E. Maquoi, G. Voros, P. CARMELIET, D. Collen & H. R. Lijnen. Role of Gas-6 in adipogenesis and nutritionally induced adipose tissue development in mice. **Arterioscler Thromb Vasc Biol** 25: 1002-7 (2005) (IF = 7.0).
267. S. Heymans, F. Lupu, S. Terclavers, B. Vanwetswinkel, J. M. Herbert, A. Baker, D. Collen, P. CARMELIET & L. Moons. Loss or inhibition of uPA or MMP-9 attenuates LV remodeling and dysfunction after acute pressure overload in mice. **Am J Pathol** 166: 15-25 (2005) (IF = 5.8).
268. K. Brusselmans, F. Bono, D. Collen, J. M. Herbert, P. CARMELIET & M. Dewerchin. A novel role for vascular endothelial growth factor as an autocrine survival factor for embryonic stem cells during hypoxia. **J Biol Chem** 280: 3493-9 (2005) (IF = 5.8).
269. A. de Giorgio-Miller, S. Bottoms, G. Laurent, P. CARMELIET & S. Herrick. Fibrin-induced skin fibrosis in mice deficient in tissue plasminogen activator. **Am J Pathol** 167: 721-32 (2005) (IF = 5.8).
270. M. Autiero, F. De Smet, F. Claes & P. CARMELIET. Role of neural guidance signals in blood vessel navigation. **Cardiovasc Res** 65: 629-38 (2005) (Review) (IF = 5.3).
271. R. Renckens, J. J. Roelofs, V. de Waard, S. Florquin, H. R. Lijnen, P. CARMELIET & T. van der Poll. The role of plasminogen activator inhibitor type 1 in the inflammatory response to local tissue injury. **J Thromb Haemost** 3: 1018-25 (2005) (IF = 5.2).

272. S. Krag, C. C. Danielsen, P. CARMELIET, J. Nyengaard & L. Wogensen. Plasminogen activator inhibitor-1 gene deficiency attenuates TGF-beta1-induced kidney disease. **Kidney Int** 68: 2651-66 (2005) (IF = 4.9).
273. M. R. Taylor, S. Kikkawa, A. Diez-Juan, V. Ramamurthy, K. Kawakami, P. CARMELIET & S. E. Brouckerhoff. The Zebrafish *pob* Gene Encodes a Novel Protein Required for Survival of Red Cone Photoreceptor Cells. **Genetics** 170: 263-73 (2005) (IF = 4.3).
274. T. Rossenbacker, E. Schollen, C. Kuiperi, T. J. de Ravel, K. Devriendt, G. Matthijs, D. Collen, H. Heidbuchel & P. CARMELIET. Unconventional intronic splice site mutation in SCN5A associates with cardiac sodium channelopathy. **J Med Genet** 42(5): e29 (2005) (IF = 4.3).
275. D. Lambrechts, K. Devriendt, D.A. Driscoll, E. Goldmuntz, M. Gewillig, R. Vlietinck, D. Collen & P. CARMELIET. Low expression VEGF haplotype increases the risk for tetralogy of Fallot: a family based association study. **J Med Genet** 42: 519-22 (2005) (Letter) (IF = 4.3).
276. H. Roy, S. Bhardwaj, M. Babu, S. Jauhainen, K. H. Herzig, A. R. Bellu, H. J. Haisma, P. CARMELIET, K. Alitalo & S. Yla-Herttuala. Adenovirus-Mediated Gene Transfer of Placental Growth Factor to Perivascular Tissue Induces Angiogenesis via Upregulation of the Expression of Endogenous Vascular Endothelial Growth Factor-A. **Hum Gene Ther** 16: 1422-8 (2005) (IF = 4.0).
277. J. Krucken, M. A. Dkhil, J. V. Braun, R. M. Schroetel, M. El-Khadragy, P. CARMELIET, H. Mossmann & F. Wunderlich. Testosterone suppresses protective responses of the liver to blood-stage malaria. **Infect Immun** 73: 436-43 (2005) (IF = 3.9).
278. C. Maillard, M. Jost, M. U. Romer, N. Brunner, X. Houard, A. Lejeune, C. Munaut, K. Bajou, L. Melen, K. Dano, P. CARMELIET, N. E. Fusenig, J. M. Foidart & A. Noel. Host plasminogen activator inhibitor-1 promotes human skin carcinoma progression in a stage-dependent manner. **Neoplasia** 7: 57-66 (2005) (IF = 3.8).
279. O. Hennebert, V. Laudenbach, A. Laquerriere, C. Verney, P. CARMELIET, S. Marret & P. Leroux. Ontogenic study of the influence of tissue plasminogen activator (t-PA) in neonatal excitotoxic brain insult and the subsequent microglia/macrophage activation. **Neuroscience** 130: 697-712 (2005) (IF = 3.4).
280. E. Melis, L. Moons, J. Arnout, M.F. Hoylaerts, D. Collen, P. CARMELIET, M. Dewerchin. Thrombophilia in mice expressing tissue factor variant lacking its transmembrane and cytosolic domain. **Biochem Biophys Res Commun.** 333: 488-95 (2005) (IF = 3.0).
281. L. Zanetta, M. Corada, M. Grazia Lampugnani, A. Zanetti, F. Breviario, L. Moons, P. CARMELIET, M.S. Pepper & E. Dejana. Downregulation of vascular endothelial-cadherin expression is associated with an increase in vascular tumor growth and hemorrhagic complications. **Thromb Haemost** 93: 1041-6 (2005) (IF = 3.0).
282. P. CARMELIET. VEGF as a key mediator of angiogenesis in cancer. **Oncology** 69 Suppl 3: 4-10 (2005) (Review) (IF = 1.9).

## 2006

283. C. Ruiz de Almodovar, A. Luttmun & P. CARMELIET. An SDF-1 trap for myeloid cells stimulates angiogenesis. **Cell** 124: 18-21 (2006) (Review) (IF = 29.4). [PubMed link](#)
284. C. Fischer, P. CARMELIET & E. M. Conway. VEGF inhibitors make blood. **Nat Med** 12: 732-4 (2006) (News and Views) (IF = 28.8). [PubMed link](#)
285. S. Aerts, D. Lambrechts, S. Maity, P. Van Loo, B. Coessens, F. De Smet, L.C. Tranchevent, B. De Moor, P. Marynen, B. Hassan, P. CARMELIET & Y. Moreau. Gene prioritization through genomic data fusion. **Nat Biotechnol** 24: 537-44 (2006) (IF = 22.7). [PubMed link](#)
286. B. Le Bras, M. Barallobre, J. Homman-Ludiye, A. Ny, S. Wyns, T. Tammela, P. Haiko, M. J. Karkkainen, L. Yuan, M. Muriel, E. Chatzopoulou, C. Bréant, B. Zalc, P. CARMELIET, K. Alitalo, A. Eichmann & J.-L. Thomas. VEGF-C is a trophic factor for neural progenitors in the vertebrate embryonic brain. **Nat Neurosci** 9: 340-8 (2006) (IF = 15.4). [PubMed link](#)
287. C. Maes, L. Coenegrachts, I. Stockmans, E. Daci, A. Luttmun, A. Petryk, R. Goapalkrishnan, K. Moermans, N. Smets, C. M. Verfaillie, P. CARMELIET, R. Bouillon & G. Carmeliet. Placental growth



- factor mediates mesenchymal cell development, cartilage turnover, and bone remodeling during fracture repair. **J Clin Invest** 116: 1230-1242 (2006) (IF = 15.0). [PubMed link](#)
288. R. Masuyama, I. Stockmans, S. Torrekens, R. Van Looveren, C. Maes, P. CARMELIET, R. Bouillon & G. Carmeliet. Vitamin D receptor in chondrocytes promotes osteoclastogenesis and regulates FGF23 production in osteoblasts. **J Clin Invest** 116: 3150-9 (2006) (IF = 15.0).
289. Y. He, Y. Luo, S. Tang, I. Rajantie, P. Salven, M. Heil, R. Zhang, D. Luo, X. Li, H. Chi, J. Yu, P. CARMELIET, W. Schaper, A. J. Sinusas, W. C. Sessa, K. Alitalo & W. Min. Critical function of Bmx/Etk in ischemia-mediated arteriogenesis and angiogenesis. **J Clin Invest** 116: 2344-55 (2006) (IF = 15.0).
290. T. W. Chittenden, F. Claes, A. A. Lanahan, M. Autiero, R. T. Palac, E. V. Tkachenko, A. Elfenbein, C. Ruiz de Almodovar, E. Dedkov, R. Tomanek, W. Li, M. Westmore, J. P. Singh, A. Horowitz, M. J. Mulligan-Kehoe, K. L. Moodie, Z. W. Zhuang, P. CARMELIET & M. Simons. Selective regulation of arterial branching morphogenesis by synectin. **Dev Cell** 10: 783-95 (2006) (IF = 14.6). [PubMed link](#)
291. K. Yano, P. C. Liaw, J. M. Mullington, S. C. Shih, H. Okada, N. Bodyak, P. M. Kang, L. Toltl, B. Belikoff, J. Buras, B. T. Simms, J. P. Mizgerd, P. CARMELIET, S. A. Karumanchi & W. C. Aird. Vascular endothelial growth factor is an important determinant of sepsis morbidity and mortality. **J Exp Med** 203: 1447-58 (2006) (IF = 13.9).
292. M. Schneider, A. Ny, C. R. de Almodovar & P. CARMELIET. A new mouse model to study acquired lymphedema. **PLoS Med** 3(7): e264 (2006) (IF = 13.7).
293. F. De Smet, P. CARMELIET & M. Autiero. Fishing and frogging for anti-angiogenic drugs. **Nat Chem Biol** 2: 228-9 (2006) (News and views) (IF = 13.7).
294. M. Tjwa, P. CARMELIET & L. Moons. A novel transgenic rabbit model sheds light on the puzzling role of matrix metalloproteinase-12 in atherosclerosis. **Circulation** 113: 1929-32 (2006) (Editorial) (IF = 11.1).
295. S. Heymans, M. Pauschinger, A. De Palma, A. Kallwellis-Opara, S. Rutschow, M. Swinnen, D. Vanhoutte, F. Gao, R. Torpai, A. H. Baker, E. Padalko, J. Neyts, H. P. Schultheiss, F. Van de Werf, P. CARMELIET & Y. M. Pinto. Inhibition of urokinase-type plasminogen activator or matrix metalloproteinases prevents cardiac injury and dysfunction during viral myocarditis. **Circulation** 114: 565-73 (2006) (IF = 11.1).
296. C.A. Remme, A.O. Verkerk, D. Nuyens, A.C. van Ginneken, S. van Brunschot, C.N. Belterman, R. Wilders, M.A. van Roon, H.L. Tan, A.A. Wilde, P. CARMELIET, J.M. de Bakker, M.W. Veldkamp & C.R. Bezzina. Overlap syndrome of cardiac sodium channel disease in mice carrying the equivalent mutation of human SCN5A-1795insD. **Circulation** 114: 2584-94 (2006) (IF = 11.1).
297. S. Fredj, N. Lindegger, K. J. Sampson, P. CARMELIET & R. S. Kass. Altered Na<sup>+</sup> channels promote pause-induced spontaneous diastolic activity in long QT syndrome type 3 myocytes. **Circ Res** 99: 1225-32 (2006) (IF = 9.4).
298. H. R. Lijnen, V. Christiaens, I. Scroyen, G. Voros, M. Tjwa, P. CARMELIET & D. Collen. Impaired adipose tissue development in mice with inactivation of placental growth factor function. **Diabetes** 55: 2698-704 (2006) (IF = 8.0).
299. B. Li, E. E. Sharpe, A. Maupin, A. A. Teleron, A. Pyle, P. CARMELIET & P. P. Young. VEGF and PIGF promote adult vasculogenesis by enhancing EPC recruitment and vessel formation at site of tumor neovascularization. **FASEB J** 20: 1495-7 (IF = 7.0).
300. R. Renckens, J. J. Roelofs, S. Florquin, A. F. de Vos, J. M. Pater, H. R. Lijnen, P. CARMELIET, C. van 't Veer & T. van der Poll. Endogenous Tissue-Type Plasminogen Activator Is Protective during Escherichia coli-Induced Abdominal Sepsis in Mice. **J Immunol** 177: 1189-96 (2006) (IF = 6.4).
301. P. Rossignol, A. Luttun, J. L. Martin-Ventura, F. Lupu, P. CARMELIET, D. Collen, E. Angles-Cano & H. R. Lijnen. Plasminogen activation: a mediator of vascular smooth muscle cell apoptosis in atherosclerotic plaques. **J Thromb Haemost** 4: 664-70 (2006) (IF = 5.7).
302. D. Lambrechts, P. Lafuste, P. CARMELIET & E. M. Conway. Another angiogenic gene linked to amyotrophic lateral sclerosis. **Trends Mol Med** 12: 345-7 (2006) (IF = 5.5).
303. S. A. Viores, W. H. Xiao, S. Aslam, J. Shen, Y. Oshima, H. Nambu, H. Liu, P. CARMELIET & P. A. Campochiaro. Implication of the hypoxia response element of the vegf promoter in mouse models of retinal and choroidal neovascularization, but not retinal vascular development. **J Cell Physiol** 206: 749-58 (2006) (IF = 4.4).

304. A. Ny, M. Autiero & P. CARMELIET. Zebrafish and Xenopus tadpoles: Small animal models to study angiogenesis and lymphangiogenesis. **Exp Cell Res** 312: 684-93 (2005) (Review) (IF = 4.1).
305. P. Vangheluwe, M. Tjwa, A. Van Den Bergh, W. E. Louch, M. Beullens, L. Dode, P. CARMELIET, E. Kranias, P. Herijgers, K. R. Sipido, L. Raeymaekers & F. Wuytack. A SERCA2 pump with an increased Ca(2+) affinity can lead to severe cardiac hypertrophy, stress intolerance and reduced life span. **J Mol Cell Cardiol** 41: 308-17 (2006) (IF = 3.9).
306. J. A. Alva, A. C. Zovein, A. Monvoisin, T. Murphy, A. Salazar, N. L. Harvey, P. CARMELIET & M. L. Iruela-Arispe. VE-Cadherin-Cre-recombinase transgenic mouse: a tool for lineage analysis and gene deletion in endothelial cells. **Dev Dyn** 235: 759-67 (2006) (IF = 3.3).
307. D. M. Cochran, D. Fukumura, M. Ancukiewicz, P. CARMELIET & R. K. Jain. Evolution of oxygen and glucose concentration profiles in a tissue-mimetic culture system of embryonic stem cells. **Ann Biomed Eng** 34: 1247-58 (2006) (IF = 1.9).
308. D. Lambrechts & P. CARMELIET. VEGF at the neurovascular interface: Therapeutic implications for motor neuron disease. **Biochim Biophys Acta** 1762: 1109-21 (2006) (Review) (IF = n.a.).

## 2007

309. C. Fischer, B. Jonckx, M. Mazzone, S. Zacchigna, S. Loges, L. Pattarini, E. Chorianopoulos, L. Liesenborghs, M. Koch, M. De Mol, M. Autiero, S. Wyns, Z. Plaisance, L. Moons, N. van Rooijen, M. Giacca, J.M. Stassen, M. Dewerchin, D. Collen & P. CARMELIET. Anti-PlGF inhibits growth of VEGF(R)-inhibitor-resistant tumors without affecting healthy vessels. **Cell** 131: 463-75 (2007) (IF = 29.0) (highlighted by (inter)-national press). [PubMed link](#)
310. M. Mazzone, C. Ruiz de Almodovar & P. CARMELIET. Building in resistance to endothelial cell death. **Nat Genet** 39: 1308-9 (2007) (Comment) (IF = 24.2). [PubMed link](#)
311. D. Tirziu, E. Chorianopoulos, K. L. Moodie, R. T. Palac, Z. W. Zhuang, M. Tjwa, C. Roncal, U. Eriksson, Q. Fu, A. Efenbein, A. E. Hall, P. CARMELIET, L. Moons & M. Simons. Myocardial hypertrophy in the absence of external stimuli is induced by angiogenesis in mice. **J Clin Invest** 117: 3188-97 (2007) (IF = 15.7).
312. B. Larrivee, C. Freitas, M. Trombe, X. Lv, B. Delafarge, L. Yuan, K. Bouvree, C. Breant, R. Del Toro, N. Brechot, S. Germain, F. Bono, F. Dol, F. Claes, C. Fischer, M. Autiero, J. L. Thomas & P. CARMELIET, M. Tessier-Lavigne & A. Eichmann. Activation of the UNC5B receptor by Netrin-1 inhibits sprouting angiogenesis. **Genes Dev** 21: 2433-47 (2007) (IF = 15.1). [PubMed link](#)
313. D. Lambrechts, W. Robberecht & P. CARMELIET. Heterogeneity in motoneuron disease. **Trends Neurosci** 30: 536-44 (2007) (Review) (IF = 13.5).
314. D. Vanhoutte, M. W. Schellings, M. Gotte, M. Swinnen, V. Herias, M. K. Wild, D. Vestweber, E. Chorianopoulos, V. Cortes, A. Rigotti, M. A. Stepp, F. Van de Werf, P. CARMELIET, Y. M. Pinto & S. Heymans. Increased expression of syndecan-1 protects against cardiac dilatation and dysfunction after myocardial infarction. **Circulation** 115: 475-82 (2007) (IF = 11.6).
315. S. Tugues, G. Fernandez-Varo, J. Munoz-Luque, J. Ros, V. Arroyo, J. Rodes, S. L. Friedman, P. CARMELIET, W. Jimenez & M. Morales-Ruiz. Antiangiogenic treatment with sunitinib ameliorates inflammatory infiltrate, fibrosis, and portal pressure in cirrhotic rats. **Hepatology** 46: 1919-26 (2007) (IF = 10.4).
316. M. Suelves, B. Vidal, A. L. Serrano, M. Tjwa, J. Roma, R. Lopez-Aleman, A. Luttun, M. M. de Lagran, A. Diaz-Ramos, M. Jardi, M. Roig, M. Dierssen, M. Dewerchin, P. CARMELIET & P. Munoz-Canoves. uPA deficiency exacerbates muscular dystrophy in MDX mice. **J Cell Biol** 178: 1039-51 (2007) (IF = 10.1).
317. R. Renckens, J. J. Roelofs, P. I. Bonta, S. Florquin, C. J. de Vries, M. Levi, P. CARMELIET, C. van't Veer & T. van der Poll. Plasminogen activator inhibitor type 1 is protective during severe Gram-negative pneumonia. **Blood** 109: 1593-601 (2007) (IF = 10.1).
318. N. M. van den Akker, D. G. Molin, P. P. Peters, S. Maas, L. J. Wisse, R. van Brempt, C. J. van Munsteren, M. M. Bartelings, R. E. Poelmann, P. CARMELIET & A. C. Gittenberger-de Groot. Tetralogy of Fallot and Alterations in Vascular Endothelial Growth Factor-A Signaling and Notch Signaling in Mouse Embryos Solely Expressing the VEGF120 Isoform. **Circ Res** 100: 842-9 (2007) (IF = 9.4).

319. P. Van Damme, E. Bogaert, M. Dewil, N. Hersmus, D. Kiraly, W. Scheveneels, I. Bockx, D. Braeken, N. Verpoorten, K. Verhoeven, V. Timmerman, P. Herijgers, G. Callewaert, P. CARMELIET, L. Van Den Bosch & W. Robberecht. Astrocytes regulate GluR2 expression in motor neurons and their vulnerability to excitotoxicity. **Proc Natl Acad Sci U S A** 104: 14825-30 (2007) (IF = 9.4).
320. R. Lemmens, A. Van Hoecke, N. Hersmus, V. Geelen, I. D'hollander, V. Thijs, L. Van Den Bosch, P. CARMELIET & W. Robberecht. Overexpression of mutant superoxide dismutase 1 causes a motor axonopathy in the zebrafish. **Hum Mol Genet** 16: 2359-65 (2007) (IF = 8.1).
321. C. V. Esguerra, L. Nelles, L. Vermeire, A. Ibrahimi, A. D. Crawford, R. Derua, E. Janssens, E. Waelkens, P. CARMELIET, D. Collen & D. Huylebroeck. Ttrap is an essential modulator of Smad3-dependent Nodal signaling during zebrafish gastrulation and left-right axis determination. **Development** 134: 4381-93 (2007) (IF = 7.7).
322. P. Giacobini, A. Messina, S. Wray, C. Giampietro, T. Crepaldi, P. CARMELIET & A. Fasolo. Hepatocyte growth factor acts as a motogen and guidance signal for gonadotropin hormone-releasing hormone-1 neuronal migration. **J Neurosci** 27: 431-45 (2007) (IF = 7.5).
323. C. Tayade, D. Hilchie, H. He, Y. Fang, L. Moons, P. CARMELIET, R. A. Foster & B. A. Croy. Genetic deletion of placenta growth factor in mice alters uterine NK cells. **J Immunol** 178: 4267-75 (2007) (IF = 6.3).
324. K. H. Sonoda, T. Nakamura, H. A. Young, D. Hart, P. CARMELIET & J. Stein-Streilein. NKT cell-derived urokinase-type plasminogen activator promotes peripheral tolerance associated with eye. **J Immunol** 179: 2215-22 (2007) (IF = 6.3).
325. M. Jost, C. Maillard, J. Lecomte, V. Lambert, M. Tjwa, P. Blaise, M. L. Alvarez Gonzalez, K. Bajou, S. Blacher, P. Motte, C. Humblet, M. P. Defresne, M. Thiry, F. Frankenne, A. Gothot, P. CARMELIET, J. M. Rakic, J. M. Foidart & A. Noel. Tumoral and Choroidal Vascularization. Differential Cellular Mechanisms Involving Plasminogen Activator Inhibitor Type I. **Am J Pathol** 171: 1369-80 (2007) (IF = 5.9).
326. M. Lassila, K. Fukami, K. Jandeleit-Dahm, T. Semple, P. CARMELIET, M. E. Cooper & A. R. Kitching. Plasminogen activator inhibitor-1 production is pathogenetic in experimental murine diabetic renal disease. **Diabetologia** 50: 1315-26 (2007) (IF = 5.2).
327. M. Cacquevel, S. Launay, H. Castel, K. Benchenane, S. Cheenne, L. Buee, L. Moons, A. Delacourte, P. CARMELIET & D. Vivien. Ageing and amyloid-beta peptide deposition contribute to an impaired brain tissue plasminogen activator activity by different mechanisms. **Neurobiol Dis** 27: 164-73 (2007) (IF = 4.3).
328. V. Laudenbach, R. H. Fontaine, F. Medja, P. CARMELIET, D. J. Hicklin, J. Gallego, P. Leroux, S. Marret & P. Gressens. Neonatal hypoxic preconditioning involves vascular endothelial growth factor. **Neurobiol Dis** 26: 243-52 (2007) (IF = 4.3).
329. P. Leroux, O. Hennebert, H. Legros, V. Laudenbach, P. CARMELIET & S. Marret. Role of tissue-plasminogen activator (t-PA) in a mouse model of neonatal white matter lesions: Interaction with plasmin inhibitors and anti-inflammatory drugs. **Neuroscience** 146: 670-8 (2007) (IF = 3.4).
330. I. Buyschaert, P. CARMELIET & M. Dewerchin. Clinical and fundamental aspects of angiogenesis and anti-angiogenesis. **Acta Clin Belg** 62: 162-9 (2007) (Review) (IF = 0.6).

## 2008

331. P. CARMELIET & M. Baes. Metabolism and therapeutic angiogenesis. **N Engl J Med** 358: 2511-2 (2008) (IF = 52.6). [PubMed link](#)
332. C. Fischer, M. Mazzone, B. Jonckx & P. CARMELIET. FLT1 and its ligands VEGFB and PlGF: drug targets for anti-angiogenic therapy? **Nat Rev Cancer** 8: 942-56 (2008) (Review) (IF = 29.2). [PubMed link](#)
333. M. Mazzone & P. CARMELIET. Drug discovery: a lifeline for suffocating tissues. **Nature** 453: 1194-5 (2008) (News and Views) (IF = 28.7). [PubMed link](#)
334. C. Wei, C. C. Moller, M. M. Altintas, J. Li, K. Schwarz, S. Zacchigna, L. Xie, A. Henger, H. Schmid, M. P. Rastaldi, P. Cowan, M. Kretzler, R. Parrilla, M. Bendayan, V. Gupta, B. Nikolic, R. Kalluri, P. CARMELIET, P. Mundel & J. Reiser. Modification of kidney barrier function by the urokinase receptor. **Nat Med** 14: 55-63 (2008) (IF = 26.4). [PubMed link](#)

335. J. Aragones, M. Schneider, K. Van Geyte, P. Fraisl, T. Dresselaers, M. Mazzone, R. Dirx, S. Zacchigna, H. Lemieux, N. H. Jeoung, D. Lambrechts, T. Bishop, P. Lafuste, A. Diez-Juan, S. K. Harten, P. Van Noten, K. De Bock, C. Willam, M. Tjwa, A. Grosfeld, R. Navet, L. Moons, T. Vandendriessche, C. Deroose, B. Wijeyekoon, J. Nuyts, B. Jordan, R. Silasi-Mansat, F. Lupu, M. Dewerchin, C. Pugh, P. Salmon, L. Mortelmans, B. Gallez, F. Gorus, J. Buyse, F. Sluse, R. A. Harris, E. Gnaiger, P. Hespel, P. Van Hecke, F. Schuit, P. Van Veldhoven, P. Ratcliffe, M. Baes, P. Maxwell & P. CARMELIET. Deficiency or inhibition of oxygen sensor Phd1 induces hypoxia tolerance by reprogramming basal metabolism. **Nat Genet** 40: 170-80 (2008) (IF = 25.5). [PubMed link](#)
336. S. Zacchigna, D. Lambrechts & P. CARMELIET. Neurovascular signalling defects in neurodegeneration. **Nat Rev Neurosci** 9: 169-81 (2008) (Review) (IF = 24.5). [PubMed link](#)
337. A. Angelillo-Scherrer, L. Burnier, D. Lambrechts, R. J. Fish, M. Tjwa, S. Plaisance, R. Sugamele, M. DeMol, E. Martinez-Soria, P. H. Maxwell, G. Lemke, S. P. Goff, G. K. Matsushima, H. S. Earp, M. Chanson, D. Collen, S. Izui, M. Schapira, E. M. Conway & P. CARMELIET. Role of Gas6 in erythropoiesis and anemia in mice. **J Clin Invest** 118: 583-96 (2008) (IF = 16.9). [PubMed link](#)
338. M. Murakami, L. T. Nguyen, Z. W. Zhang, K. L. Moodie, P. CARMELIET, R. V. Stan & M. Simons. The FGF system has a key role in regulating vascular integrity. **J Clin Invest** 118: 3355-66 (2008) (IF = 16.9).
339. J. Fu, H. Gerhardt, J. M. McDaniel, B. Xia, X. Liu, L. Ivanciu, A. Ny, K. Hermans, R. Silasi-Mansat, S. McGee, E. Nye, T. Ju, M. I. Ramirez, P. CARMELIET, R. D. Cummings, F. Lupu & L. Xia. Endothelial cell O-glycan deficiency causes blood/lymphatic misconnections and consequent fatty liver disease in mice. **J Clin Invest** 118: 3725-37 (2008) (IF = 16.9).
340. C. Rolny, L. Capparuccia, A. Casazza, M. Mazzone, A. Vallario, A. Cignetti, E. Medico, P. CARMELIET, P. M. Comoglio & L. Tamagnone. The tumor suppressor semaphorin 3B triggers a prometastatic program mediated by interleukin 8 and the tumor microenvironment. **J Exp Med** 205: 1155-71 (2008) (IF = 15.6).
341. K. Yano, Y. Okada, G. Beldi, S. C. Shih, N. Bodyak, H. Okada, P. M. Kang, W. Luscinskas, S. C. Robson, P. CARMELIET, S. A. Karumanchi & W. C. Aird. Elevated levels of placental growth factor represent an adaptive host response in sepsis. **J Exp Med** 205: 2623-31 (2008) (IF = 15.6).
342. F. Bruyere, L. Melen-Lamalle, S. Blacher, G. Roland, M. Thiry, L. Moons, F. Frankenne, P. CARMELIET, K. Alitalo, C. Libert, J. P. Sleeman, J. M. Foidart & A. Noel. Modeling lymphangiogenesis in a three-dimensional culture system. **Nat Methods** 5: 431-7 (2008) (IF = 15.5). [PubMed link](#)
343. B. Vidal, A. L. Serrano, M. Tjwa, M. Suelves, E. Ardite, R. De Mori, B. Baeza-Raja, M. Martinez de Lagran, P. Lafuste, V. Ruiz-Bonilla, M. Jardi, R. Gherardi, C. Christov, M. Dierssen, P. CARMELIET, J. L. Degen, M. Dewerchin & P. Munoz-Canoves. Fibrinogen drives dystrophic muscle fibrosis via a TGFbeta/alternative macrophage activation pathway. **Genes Dev** 22: 1747-52 (2008) (IF = 14.8).
344. P. Fraisl, M. Baes & P. CARMELIET. Hungry for blood vessels: linking metabolism and angiogenesis. **Dev Cell** 14: 313-4 (2008) (Preview) (IF = 12.4). [PubMed link](#)
345. A. Ny, M. Koch, W. Vandeveld, M. Schneider, C. Fischer, A. Diez-Juan, E. Neven, I. Geudens, S. Maity, L. Moons, S. Plaisance, D. Lambrechts, P. CARMELIET & M. Dewerchin. Role of VEGF-D and VEGFR-3 in developmental lymphangiogenesis, a chemicogenetic study in *Xenopus* tadpoles. **Blood** 112: 1740-9 (2008) (IF = 10.9).
346. M. Tjwa, L. Bellido-Martin, Y. Lin, E. Lutgens, S. Plaisance, F. Bono, N. Delesque-Touchard, C. Herve, R. Moura, A. D. Billiau, C. Aparicio, M. Levi, M. Daemen, M. Dewerchin, F. Lupu, J. Arnout, J. M. Herbert, M. Waer, P. Garcia de Frutos, B. Dahlback, P. CARMELIET, M. F. Hoylaerts & L. Moons. Gas6 promotes inflammation by enhancing interactions between endothelial cells, platelets, and leukocytes. **Blood** 111: 4096-105 (2008) (IF = 10.9).
347. M. Tjwa, S. Janssens & P. CARMELIET. Plasmin therapy enhances mobilization of HPCs after G-CSF. **Blood** 112: 4048-50 (2008) (IF = 10.9).
348. P. Van Damme, A. Van Hoecke, D. Lambrechts, P. Vanacker, E. Bogaert, J. van Swieten, P. CARMELIET, L. Van Den Bosch & W. Robberecht. Progranulin functions as a neurotrophic factor to regulate neurite outgrowth and enhance neuronal survival. **J Cell Biol** 181: 37-41 (2008) (IF = 9.6).
349. M. D. Binder, H. S. Cate, A. L. Prieto, D. Kemper, H. Butzkueven, M. M. Gresle, T. Cipriani, V. G. Jokubaitis, P. CARMELIET & T. J. Kilpatrick. Gas6 deficiency increases oligodendrocyte loss and

- microglial activation in response to cuprizone-induced demyelination. **J Neurosci** 28: 5195-206 (2008) (IF = 7.5).
350. K. Poesen, D. Lambrechts, P. Van Damme, J. Dhondt, F. Bender, N. Frank, E. Bogaert, B. Claes, L. Heylen, A. Verheyen, K. Raes, M. Tjwa, U. Eriksson, M. Shibuya, R. Nuydens, L. Van Den Bosch, T. Meert, R. D'Hooge, M. Sendtner, W. Robberecht & P. CARMELIET. Novel role for vascular endothelial growth factor (VEGF) receptor-1 and its ligand VEGF-B in motor neuron degeneration. **J Neurosci** 28: 10451-9 (2008) (IF = 7.5).
351. X. Li, M. Tjwa, I. Van Hove, B. Enholm, E. Neven, K. Paavonen, M. Jeltsch, T. D. Juan, R. E. Sievers, E. Chorianopoulos, H. Wada, M. Vanwildemeersch, A. Noel, J. M. Foidart, M. L. Springer, G. von Degenfeld, M. Dewerchin, H. M. Blau, K. Alitalo, U. Eriksson, P. CARMELIET & L. Moons. Reevaluation of the role of VEGF-B suggests a restricted role in the revascularization of the ischemic myocardium. **Arterioscler Thromb Vasc Biol** 28: 1614-20 (2008) (IF = 7.2).
352. P. Hill, D. Shukla, M. G. Tran, J. Aragones, H. T. Cook, P. CARMELIET & P. H. Maxwell. Inhibition of hypoxia inducible factor hydroxylases protects against renal ischemia-reperfusion injury. **J Am Soc Nephrol** 19: 39-46 (2008) (IF = 7.1).
353. I. Buysschaert, T. Schmidt, C. Roncal, P. CARMELIET & D. Lambrechts. Genetics, epigenetics and pharmaco-(epi)genomics in angiogenesis. **J Cell Mol Med** 12: 2533-51 (2008) (Review) (IF = 6.8).
354. T. Bishop, D. Gallagher, A. Pascual, C. A. Lygate, J. P. de Bono, L. G. Nicholls, P. Ortega-Saenz, H. Oster, B. Wijeyekoon, A. I. Sutherland, A. Grosfeld, J. Aragones, M. Schneider, K. van Geyte, D. Teixeira, A. Diez-Juan, J. Lopez-Barneo, K. M. Channon, P. H. Maxwell, C. W. Pugh, A. M. Davies, P. CARMELIET & P. J. Ratcliffe. Abnormal sympathoadrenal development and systemic hypotension in PHD3<sup>-/-</sup> mice. **Mol Cell Biol** 28: 3386-400 (2008) (IF = 6.4).
355. O. Mikhaylova, M. L. Ignacak, T. J. Barankiewicz, S. V. Harbaugh, Y. Yi, P. H. Maxwell, M. Schneider, K. Van Geyte, P. CARMELIET, M. P. Revelo, M. Wyder, K. D. Greis, J. Meller & M. F. Czyzyk-Krzeska. The von Hippel-Lindau tumor suppressor protein and Egl-9-Type proline hydroxylases regulate the large subunit of RNA polymerase II in response to oxidative stress. **Mol Cell Biol** 28: 2701-17 (2008) (IF = 6.4).
356. N. M. van den Akker, V. Caolo, L. J. Wisse, P. P. Peters, R. E. Poelmann, P. CARMELIET, D. G. Molin & A. C. Gittenberger-de Groot. Developmental coronary maturation is disturbed by aberrant cardiac vascular endothelial growth factor expression and Notch signaling. **Cardiovasc Res** 78: 366-75 (2008) (IF = 6.1).
357. R. Renckens, J. J. Roelofs, M. E. Stegenga, S. Florquin, M. Levi, P. CARMELIET, C. Van't Veer & T. van der Poll. Transgenic tissue-type plasminogen activator expression improves host defense during Klebsiella pneumonia. **J Thromb Haemost** 6: 660-8 (2008) (IF = 5.9).
358. E. Lutgens, M. Tjwa, P. Garcia de Frutos, E. Wijnands, L. Beckers, B. Dahlback, M. J. Daemen, P. CARMELIET & L. Moons. Genetic loss of Gas6 induces plaque stability in experimental atherosclerosis. **J Pathol** 216: 55-63 (2008) (IF = 5.4).
359. C. Roncal, I. Buysschaert, E. Chorianopoulos, M. Georgiadou, O. Meilhac, M. Demol, J. B. Michel, S. Vinckier, L. Moons & P. CARMELIET. Beneficial effects of prolonged systemic administration of PIGF on late outcome of post-ischaemic myocardial performance. **J Pathol** 216: 236-44 (2008) (IF = 5.4).
360. L. Li, A. Lundkvist, D. Andersson, U. Wilhelmsson, N. Nagai, A. C. Pardo, C. Nodin, A. Stahlberg, K. Aprico, K. Larsson, T. Yabe, L. Moons, A. Fotheringham, I. Davies, P. CARMELIET, J. P. Schwartz, M. Pekna, M. Kubista, F. Blomstrand, N. Maragakis, M. Nilsson & M. Pekny. Protective role of reactive astrocytes in brain ischemia. **J Cereb Blood Flow Metab** 28: 468-81 (2008) (IF = 5.1).
361. P. Wolter, C. Stefan, B. Decallonne, H. Dumez, M. Bex, P. CARMELIET & P. Schoffski. The clinical implications of sunitinib-induced hypothyroidism: a prospective evaluation. **Br J Cancer** 99: 448-54 (2008) (IF = 4.6).
362. S. Zacchigna, C. Ruiz de Almodovar & P. CARMELIET. Similarities between angiogenesis and neural development: what small animal models can tell us. **Curr Top Dev Biol** 80: 1-55 (2008) (Review) (IF = 4.6).
363. M. Freitas-Andrade, P. CARMELIET, D. B. Stanimirovic & M. Moreno. VEGFR-2-mediated increased proliferation and survival in response to oxygen and glucose deprivation in PIGF knockout astrocytes. **J Neurochem** 107: 756-67 (2008) (IF = 4.5).



364. P. CARMELIET. Neuro-vascular link: from genetic insights to therapeutic perspectives. **Bull Mem Acad R Med Belg** 163: 445-51; discussion 451-442 (2008) (IF=N/A).

## 2009

365. M. Mazzone, D Dettori, R. Leite de Oliveira, S. Loges, Th. Schmidt, B. Jonckx, Y. Tian, A. A. Lanahan, P. Pollard, C. Ruiz de Almodovar, F. De Smet, S. Vinckier, J. Aragonés, A. Luttun, S. Wyns, B. Jordan, A. Pisacane, B. Gallez, M. G. Lampugnani, E. Dejana, M. Simons, P. Ratcliffe, P. Maxwell & P. CARMELIET. Heterozygous deficiency of PHD2 restores tumor oxygenation and inhibits metastasis via endothelial normalization. **Cell** 136: 839-51 (2009) (IF = 29.9) (highlighted by (inter)-national press). [PubMed link](#)
366. C. Ruiz de Almodovar, D. Lambrechts, M. Mazzone & P. CARMELIET. Role and therapeutic potential of VEGF in the nervous system. **Physiol Rev** 89: 607-48 (2009) (Review) (IF = 26.9). [PubMed link](#)
367. S. Loges, M. Mazzone, Ph. Hohensinner & P. CARMELIET. Silencing or fueling metastasis with VEGF inhibitors: anti-angiogenesis revisited. **Cancer Cell** 3: 167-70 (2009) (Invited Review) (IF = 23.8). [PubMed link](#)
368. P. Fraisl, J. Aragonés & P. CARMELIET. Inhibition of oxygen sensors as treatment of ischemic and inflammatory disease. **Nat Rev Drug Disc** 8: 139-52 (2009) (Review) (IF = 23.3). [PubMed link](#)
369. J. Aragonés, P. Fraisl, M. Baes & P. CARMELIET. Oxygen sensors at the crossroad of metabolism. **Cell Metab** 9: 11-22 (2009) (IF = 17.1). [PubMed link](#)
370. M. Tjwa, N. Sidenius, R. Moura, S. Jansen, K. Theunissen, L. Moons, A. Andolfo, M. De Mol, M. Dewerchin, L. Moons, F. Blasi, C. Verfaillie & P. CARMELIET. Membrane-anchored uPAR regulates the proliferation, marrow pool size, engraftment and mobilization of hematopoietic stem/progenitor cells. **J. Clin Invest** 119: 1008-18 (2009) (IF = 16.9). [PubMed link](#)
371. M. W. Schellings, D. Vanhoutte, M. Swinnen, J. P. Cleutjens, J. Debets, R. E. van Leeuwen, J. d'Hooge, F. Van de Werf, P. CARMELIET, Y. M. Pinto, E. H. Sage & S. Heymans. Absence of SPARC results in increased cardiac rupture and dysfunction after acute myocardial infarction. **J Exp Med** 206: 113-23 (2009) (IF = 15.6).
372. J. E. Lahtenvuo, M. T. Lahtenvuo, A. Kivela, C. Rosenlew, A. Falkevall, J. Klar, T. Heikura, T. T. Rissanen, E. Vahakangas, P. Korpisalo, B. Enholm, P. CARMELIET, K. Alitalo, U. Eriksson & S. Yla-Herttuala. Vascular endothelial growth factor-B induces myocardium-specific angiogenesis and arteriogenesis via vascular endothelial growth factor receptor-1- and neuropilin receptor-1-dependent mechanisms. **Circulation** 119: 845-56 (2009) (IF = 12.8).
373. M. Swinnen, D. Vanhoutte, G.C. Van Almen, N. Hamdani, M.W. Schellings, J. D'Hooge, J. Van der Velden, M.S. Weaver, E.H. Sage, P. Bornstein, F.K. Verheyen, T. VandenDriessche, M.K. Chuah, D. Westermann, W.J. Paulus, F. Van de Werf, B. Schroen, P. CARMELIET, Y.M. Pinto & S. Heymans. Absence of thrombospondin-2 causes age-related dilated cardiomyopathy. **Circulation** 120: 1585-97 (2009) (IF = 12.8).
374. P. Fraisl, M. Mazzone, T. Schmidt & P. CARMELIET. Regulation of angiogenesis by oxygen and metabolism. **Dev Cell** 16: 167-79 (2009) (Invited Review) (IF = 12.4). [PubMed link](#)
375. C. Van Steenkiste, A. Geerts, E. Vanheule, H. Van Vlierberghe, F. De Vos, K. Olievier, C. Casteleyn, D. Laukens, M. De Vos, J. M. Stassen, P. CARMELIET & I. Colle. Role of Placental Growth Factor in Mesenteric Neo-Angiogenesis in a Mouse Model of Portal Hypertension. **Gastroenterology** 137: 2112-24 (2009) (IF = 11.7).
376. M. Tjwa, L. Moons, C. Verfaillie & P. CARMELIET. Antibiotics may impair hematopoietic recovery after cytotoxic myeloablation. **Blood** 113: 1608-9 (2009) (IF = 10.9).
377. P. CARMELIET, F. De Smet, S. Loges & M. Mazzone. Branching morphogenesis and antiangiogenesis candidates: tip cells lead the way. **Nat Rev Clin Oncol** 6: 315-26 (2009) (Review) (IF = 10.8). [PubMed link](#)
378. C. D'Aniello, E. Lonardo, S. Iaconis, O. Guardiola, A. M. Liguoro, G. L. Liguori, M. Autiero, P. CARMELIET & G. Minchiotti. G Protein-Coupled Receptor APJ and Its Ligand Apelin Act Downstream of Cripto to Specify Embryonic Stem Cells Toward the Cardiac Lineage Through Extracellular Signal-Regulated Kinase/p70S6 Kinase Signaling Pathway. **Circ Res** 105: 231-8 (2009) (IF = 9.9).

379. I. Segura, F. De Smet, P. J. Hohensinner, C. R. Almodovar & P. CARMELIET, The neurovascular link in health and disease: an update. **Trends Mol Med** 15: 439-51 (2009) (Review) (IF = 9.6).
380. C. L. Simpson, R. Lemmens, K. Miskiewicz, W. J. Broom, V. K. Hansen, P. W. van Vught, J. E. Landers, P. Sapp, L. Van Den Bosch, J. Knight, B. M. Neale, M. R. Turner, J. H. Veldink, R. A. Ophoff, V. B. Tripathi, A. Beleza, M. N. Shah, P. Proitsi, A. Van Hoecke, P. CARMELIET, H. R. Horvitz, P. N. Leigh, C. E. Shaw, L. H. van den Berg, P. C. Sham, J. F. Powell, P. Verstreken, R. H. Brown, Jr. W. Robberecht & A. Al-Chalabi. Variants of the elongator protein 3 (ELP3) gene are associated with motor neuron degeneration. **Hum Mol Genet** 18: 472-81 (2009) (IF = 7.8).
381. S. Zacchigna, H. Oh, M. Wilsch-Bräuninger, E. Missol-Kolka, J. Jaszai, S. Jansen, N. Tanimoto, F. Tonagel, M. Seeliger, W. B. Huttner, D. Corbeil, M. Dewerchin, S. Vinckier, L. Moons & P. CARMELIET. Loss of the cholesterol-binding protein prominin-1/CD133 causes disk dysmorphogenesis and photoreceptor degeneration. **J.Neurosc** 29: 2297-308 (2009) (IF = 7.5).
382. J. K. Park, S. Theuer, T. Kirsch, C. Lindschau, U. Klinge, A. Heuser, R. Plehm, M. Todiras, P. CARMELIET, H. Haller, F. C. Luft, D. N. Muller & A. Fiebeler. Growth Arrest Specific Protein 6 Participates in DOCA-Induced Target-Organ Damage. **Hypertension** 54: 359-64 (2009) (IF = 7.4).
383. F. De Smet, I. Segura, K. De Bock, P. J. Hohensinner & P. CARMELIET. Mechanisms of vessel branching: filopodia on endothelial tip cells lead the way. **Arterioscler Thromb Vasc Biol** 29: 639-49 (2009) (Review) (IF = 7.2).
384. S. Loges, T. Schmidt & P. CARMELIET. "Antimyoangiogenic" therapy for cancer by inhibiting PlGF. **Clin Cancer Res** 15: 3648-53 (2009) (Review) (IF = 6.5).
385. S. Loges, C. Roncal & P. CARMELIET. Development of targeted angiogenic medicine. **J Thromb Haemost** 7: 21-33 (2009) (Review) (IF = 5.9).
386. B. S. Pedroja, L. E. Kang, A. O. Imas, P. CARMELIET & A. M. Bernstein. Plasminogen Activator Inhibitor-1 Regulates Integrin  $\alpha$ v $\beta$ 3 Expression and Autocrine TGF $\beta$  Signaling. **J Biol Chem** 284: 20708-17 (2009) (IF = 5.5).
387. M. Tjwa, R. Moura, L. Moons, S. Plaisance, M. De Mol, S. Jansen, M. Dewerchin, C. Verfaillie & P. CARMELIET. Fibrinolysis-independent role of plasmin and its activators in the haematopoietic recovery after myeloablation. **J Cell Mol Med** 13: 4587-95 (2009) (IF = 5.2).
388. M. Koch, D. Dettori, A. Van Nuffelen, J. Souffreau, L. Marconcini, G. Wallays, L. Moons, F. Bruyere, S. Oliviero, A. Noel, J. M. Foidart. P. CARMELIET & M. Dewerchin. VEGF-D deficiency in mice does not affect embryonic or postnatal lymphangiogenesis but reduces lymphatic metastasis. **J Pathol** 219: 356-64 (2009) (IF = 5.1).
389. K. De Bock, F. De Smet, R. Leite De Oliveira, K. Anthonis & P. CARMELIET. Endothelial oxygen sensors regulate tumor vessel abnormalization by instructing pericyte endothelial cells. **J Mol Med** 87: 561-9 (2009) (Review) (IF = 4.4).
390. A. Tintu, E. Rouwet, S. Verlohren, J. Brinkmann, S. Ahmad, F. Crispi, M. van Bilsen, P. CARMELIET, A. C. Staff, M. Tjwa, I. Cetin, E. Gratacos, E. Hernandez-Andrade, L. Hofstra, M. Jacobs, W. H. Lamers, I. Morano, E. Safak, A. Ahmed & F. le Noble. Hypoxia induces dilated cardiomyopathy in the chick embryo: mechanism, intervention, and long-term consequences. **PLoS ONE** 4: e5155 (2009) (IF = 4.3).
391. A. Van den Bergh, P. Vangheluwe, A. Vanderper, P. CARMELIET, F. Wuytack, S. Janssens, W. Flameng, P. Holvoet & P. Herijgers. Food-restriction in obese dyslipidaemic diabetic mice partially restores basal contractility but not contractile reserve. **Eur J Heart Fail** 11: 1118-25 (2009) (IF = 3.4).
392. D. Lambrechts, K. Poesen, R. Fernandez-Santiago, A. Al-Chalabi, R. Del Bo, P.W. Van Vught, S. Khan, S.L. Marklund, A. Brockington, I. van Marion, J. Anneser, C. Shaw, A.C. Ludolph, N.P. Leigh, G.P. Comi, T. Gasser, P.J. Shaw, K.E. Morrison, P.M. Andersen, L.H. Van den Berg, V. Thijs, T. Siddique, W. Robberecht & P. CARMELIET. Meta-analysis of vascular endothelial growth factor variations in amyotrophic lateral sclerosis: increased susceptibility in male carriers of the -2578AA genotype. **J Med Genet** 46: 840-6 (2009) (IF = 3.4).
393. S. L. Cheng, H. C. Wang, C. J. Yu, P. N. Tsao, P. CARMELIET, S. J. Cheng & P. C. Yang. Prevention of elastase-induced emphysema in placenta growth factor knock-out mice. **Respir Res** 10: 115 (2009) (IF=3.4)

394. S. Vanhaesebrouck, H. Daniels, L. Moons, C. Vanhole, P. CARMELIET & F. De Zegher. Oxygen-induced retinopathy in mice: amplification by neonatal IGF-I deficit and attenuation by IGF-I administration. **Pediatr Res** 65: 307-10 (2009) (IF = 2.8).

## 2010

395. T. Schmidt & P. CARMELIET. Blood-vessel formation: Bridges that guide and unite. **Nature** 465: 697-9 (2010) (News and Views) (IF = 34.5). [Pubmed Link](#) .
396. S. Van de Veire, I. Stalmans, F. Heindryckx, H. Oura, A. Tijeras-Raballand, T. Schmidt, S. Loges, I. Albrecht, B. Jonckx, S. Vinckier, C. Van Steenkiste, S. Tugues, C. Rolny, M. De Mol, D. Dettori, P. Hainaud, L. Coenegrachts, J. O. Contreres, T. Van Bergen, H. Cuervo, W. H. Xiao, C. Le Henaff, I. Buyschaert, B. Kharabi Masouleh, A. Geerts, T. Schomber, P. Bonnin, V. Lambert, J. Haustraete, S. Zacchigna, J. M. Rakic, W. Jimenez, A. Noel, M. Giacca, I. Colle, J. M. Foidart, G. Tobelem, M. Morales-Ruiz, J. Vilar, P. Maxwell, S. A. Vinores, G. Carmeliet, M. Dewerchin, L. Claesson-Welsh, E. Dupuy, H. Van Vlierberghe, G. Chrisofori, M. Mazzone, M. Detmar, D. Collen & P. CARMELIET. Further pharmacological and genetic evidence for the efficacy of PIGF inhibition in cancer and eye disease. **Cell** 141: 178-90 (2010) (IF = 31.3). [PubMed link](#)
397. I.Z. Jaffe, B.G. Newfell, M. Aronovitz, N.N. Mohammad, A.P. McGraw, R.E. Perreault, P. CARMELIET, A. Ehsan & M.E. Mendelsohn. Placental growth factor mediates aldosterone-dependent vascular injury in mice. **J Clin Invest** 120: 3891-900 (2010) (IF = 15.4).
398. M. Bry, R. Kivela, T. Holopainen, A. Anisimov, T. Tammela, J. Soronen, J. Silvola, A. Saraste, M. Jeltsch, P. Korpisalo, P. CARMELIET, K.B. Lemstrom, M. Shibuya, S. Yla-Herttuala, L. Alhonen, E. Mervaala, L.C. Andersson, J. Knuuti & K. Alitalo. Vascular endothelial growth factor-B acts as a coronary growth factor in transgenic rats without inducing angiogenesis, vascular leak, or inflammation. **Circulation** 122: 1725-33 (2010) (IF = 14.8).
399. E. Storkebaum, C. Ruiz de Almodovar, M. Meens, S. Zacchigna, M. Mazzone, G. Vanhoutte, S. Vinckier, K. Miskiewicz, K. Poesen, D. Lambrechts, G. M. J. Janssen, G. E. Fazzi, P. Verstreken, J. Haigh, P.M. Schiffers, H. Rohrer, A. Van der Linden, J.G.R. De Mey & P. CARMELIET. Impaired autonomic regulation of resistance arteries in mice with low vascular endothelial growth factor upon vascular endothelial growth factor trap delivery. **Circulation** 122: 273-81 (2010) (IF = 14.8). [Pubmed Link](#)
400. A. Quaegebeur, I. Segura & P. CARMELIET. Pericytes: blood-brain barrier safeguards against neurodegeneration? **Neuron** 68: 321-3 (2010) (Preview) (IF = 13,2). [Pubmed Link](#)
401. M.M. Tambuwala, E.P. Cummins, C.R. Lenihan, J. Kiss, M. Stauch, C.C. Scholz, P. Fraisl, F. Lasitschka, M. Mollenhauer, S.P. Saunders, P.H. Maxwell, P. CARMELIET, P.G. Fallon, M. Schneider & C.T. Taylor. Loss of prolyl hydroxylase-1 protects against colitis through reduced epithelial cell apoptosis and increased barrier function. **Gastroenterology** 139: 2093-101 (2010) (IF = 12.9).
402. M. Schneider, K. Van Geyte, P. Fraisl, J. Kiss, J. Aragones, M. Mazzone, H. Mairbaur, K. De Bock, N. H. Jeoung, M. Mollenhauer, M. Georgiadou, T. Bishop, C. Roncal, A. Sutherland, B. Jordan, B. Gallez, J. Weitz, R. A. Harris, P. Maxwell, M. Baes, P. Ratcliffe & P. CARMELIET. Loss or silencing of the PHD1 prolyl hydroxylase protects livers of mice against ischemia/reperfusion injury. **Gastroenterology** 138: 1143-54 e1141-42 (2010) (IF=12.9).
403. A.A. Lanahan, K. Hermans, F. Claes, J. S. Kerley-Hamilton, Z. Zhuang, F. Giordano, P. CARMELIET & M. Simons. VEGF receptor 2 endocytic trafficking regulates arterial morphogenesis. **Dev Cell** 18: 713-24 (2010) (IF = 12.8).
404. P. Saharinen, H. Helotera, J. Miettinen, C. Norrmen, G. D'Amico, M. Jeltsch, T. Langenberg, W. Vandeveld, A. Ny, M. Dewerchin, P. CARMELIET & K. Alitalo. Claudin-like protein 24 interacts with the VEGFR-2 and VEGFR-3 pathways and regulate lymphatic vessel development. **Genes Dev** 24: 875-80 (2010) (IF = 12.0). [Pubmed Link](#)
405. K. Hermans, F. Claes, W. Vandeveld, W. Zheng, I. Geudens, F. Orsenigo, F. De Smet, E. Gjini, K. Anthonis, B. Ren, D. Kerjaschki, M. Autiero, A. Ny, M. Simons, M. Dewerchin, S. Schulte-Merker, E. Dejana, K. Alitalo & P. CARMELIET. Role of synectin in lymphatic development in zebrafish and frogs. **Blood** 116: 3356-66 (2010) (IF = 10.9). [Pubmed Link](#)

406. S. Loges, T. Schmidt, M. Tjwa, K. Van Geyte, D. Lievens, E. Lutgens, D. Vanhoutte, D. Borgel, S. Plaisance, M. Hoylaerts, A. Lutun, M. Dewerchin, B. Jonckx & P. CARMELIET. Malignant cells fuel tumor growth by educating infiltrating leukocytes to produce the mitogen Gas6. **Blood** 115: 2264-73 (2010) (IF = 10.9).
407. L. Burnier, F. Saller, L. Kadi, A.C. Brisset, R. Sugamele, L. Baudino, F. Bono, J.M. Herbert, P. CARMELIET, M. Schapira, S. Izui & A. Angelillo-Scherrer. Gas6 deficiency in recipient mice of allogeneic transplantation alleviates hepatic graft-versus-host disease. **Blood** 115: 3390-7 (2010) (IF = 10.9).
408. C. Maes, S. Goossens, S. Bartunkova, B. Drogat, L. Coenegrachts, I. Stockmans, K. Moermans, O. Nyabi, K. Haigh, M. Naessens, L. Haenebalcke, J. P. Tuckermann, M. Tjwa, P. CARMELIET, V. Mandic, J. P. David, A. Behrens, A. Nagy, G. Carmeliet & J. J. Haigh. Increased skeletal VEGF enhances beta-catenin activity and results in excessively ossified bones. **EMBO J** 29: 424-41 (2010) (IF = 10.1).
409. N. Azoitei, G.V. Pusapati, A. Kleger, P. Moller, R. Kufer, F. Genze, M. Wagner, J. van Lint, P. CARMELIET, G. Adler & T. Seufferlein. Protein kinase D2 is a crucial regulator of tumour cell-endothelial cell communication in gastrointestinal tumours. **Gut** 59: 1316-30 (2010) (IF = 9.3).
410. C. Ruiz de Almodovar, C. Coulon, P. A. Salin, E. Knevels, N. Chounlamountri, K. Poesen, K. Hermans, D. Lambrechts, K. Van Geyte, J. Dhondt, T. Dresselaers, J. Renaud, J. Aragones, S. Zacchigna, I. Geudens, D. Gall, S. Stroobants, M. Mutin, K. Dassonville, E. Storkebaum, B. F. Jordan, U. Eriksson, L. Moons, R. D'Hooge, J. J. Haigh, M. F. Belin, S. Schiffmann, P. Van Hecke, B. Gallez, S. Vinckier, A. Chedotal, J. Honnorat, N. Thomasset, P. CARMELIET & C. Meissirel. Matrix-binding vascular endothelial growth factor (VEGF) isoforms guide granule cell migration in the cerebellum via VEGF receptor Flk1. **J Neurosci** 30: 15052-66 (2010) (IF = 7.8).
411. L. Coenegrachts, C. Maes, S. Torrekens, R. Van Looveren, M. Mazzone, T.A. Guise, R. Bouillon, J.M. Stassen, P. CARMELIET & G. Carmeliet. Anti-placental growth factor reduces bone metastasis by blocking tumor cell engraftment and osteoclast differentiation. **Cancer Res** 70: 6537-47 (2010) (IF = 7.5).
412. C. Coulon, M. Georgiadou, C. Roncal, K. De Bock, T. Langenberg & P. CARMELIET. From vessel sprouting to normalization: role of the prolyl hydroxylase domain protein/hypoxia-inducible factor oxygen-sensing machinery. **Arterioscler Thromb Vasc Biol** 30: 2331-6 (2010) (IF = 7.2).
413. I. Geudens, R. Herpers, K. Hermans, I. Segura, C. Ruiz de Almodovar, J. Bussmann, F. De Smet, W. Vandeveld, B.M. Hogan, A. Siekmann, F. Claes, J.C. Moore, A.S. Pistocchi, S. Loges, M. Mazzone, G. Mariggi, F. Bruyere, F. Cotelli, D. Kerjaschki, A. Noel, J.M. Foidart, H. Gerhardt, A. Ny, T. Langenberg, N.D. Lawson, H.J. Duckers, S. Schulte-Merker, P. CARMELIET & M. Dewerchin. Role of delta-like-4/Notch in the formation and wiring of the lymphatic network in zebrafish. **Arterioscler Thromb Vasc Biol** 30: 1695-702 (2010) (IF = 7.2).
414. B. Costa, D. Dettori, A. Lorenzato, C. Bardella, N. Coltella, C. Martino, C. Cammarata, P. CARMELIET, M. Olivero & M.F. Di Renzo. Fumarase tumor suppressor gene and MET oncogene cooperate in upholding transformation and tumorigenesis. **FASEB J** 24: 2680-8 (2010) (IF = 7.0).
415. A. Vanden Bosch, T. Raemaekers, S. Denayer, S. Torrekens, N. Smets, K. Moermans, M. Dewerchin, P. CARMELIET & G. Carmeliet. NuSAP is essential for chromatin-induced spindle formation during early embryogenesis. **J Cell Sci** 123: 3244-55 (2010) (IF = 6.1).
416. J. Le Dall, B. Ho-Tin-Noe, L. Louedec, O. Meilhac, C. Roncal, P. CARMELIET, S. Germain, J. B. Michel & X. Houard. Immaturity of microvessels in haemorrhagic plaques is associated with proteolytic degradation of angiogenic factors. **Cardiovasc Res** 85: 184-93 (2010) (IF = 6.0).
417. C. Roncal, I. Buyschaert, N. Gerdes, M. Georgiadou, O. Ovchinnikova, C. Fischer, J.M. Stassen, L. Moons, D. Collen, K. De Bock, G.K. Hansson & P. CARMELIET. Short-term delivery of anti-PIGF antibody delays progression of atherosclerotic plaques to vulnerable lesions. **Cardiovasc Res** 86: 29-36 (2010) (IF = 6.0).
418. J.M. Cosemans, R. van Kruchten, S. Olieslagers, L.J. Schurgers, F.K. Verheyen, I.C. Munnix, J. Waltenberger, A. Angelillo-Scherrer, M.F. Hoylaerts, P. CARMELIET & J.W. Heemskerk. Potentiating role of Gas6 and Tyro3, Axl and Mer (TAM) receptors in human and murine platelet activation and thrombus stabilization. **J Thromb Haemost** 8: 1797-808 (2010) (IF = 6.0).
419. L. Fabritz, D. Damke, M. Emmerich, S. Kaufmann, K. Theis, A. Blana, L. Fortmuller, S. Laakmann, S. Hermann, E. Aleynikhenko, J. Steinfurt, D. Volkery, B. Riemann, U. Kirchhefer, M.R. Franz, G.

- Breithardt, E. Carmeliet, M. Schafers, S.K. Maier, P. CARMELIET & P. Kirchhof. Autonomic modulation and antiarrhythmic therapy in a model of long QT syndrome type 3. **Cardiovasc Res** 87: 60-72 (2010) (IF = 5.9).
420. P. Hindryckx, A. Waeytens, D. Laukens, H. Peeters, J. Van Huysse, L. Ferdinande, P. CARMELIET & M. De Vos. Absence of placental growth factor blocks dextran sodium sulfate-induced colonic mucosal angiogenesis, increases mucosal hypoxia and aggravates acute colonic injury. **Lab Invest** 90: 566-76 (2010) (IF = 4.6).
421. A. Blana, S. Kaese, L. Fortmuller, S. Laakmann, D. Damke, K.V. Bragt, J. Eckstein, I. Piccini, U. Kirchhefer, S. Nattel, G. Breithardt, P. CARMELIET, E. Carmeliet, U. Schotten, S. Verheule, P. Kirchhof & L. Fabritz. Knock-in gain-of-function sodium channel mutation prolongs atrial action potentials and alters atrial vulnerability. **Heart Rhythm** 7: 1862-9 (2010) (IF = 4.5).
422. C.E. Pierreux, S. Cordi, A.C. Hick, Y. Achouri, C. Ruiz de Almodovar, P.P. Prevot, P.J. Courtoy, P. CARMELIET & F.P. Lemaigre. Epithelial: Endothelial cross-talk regulates exocrine differentiation in developing pancreas. **Dev Biol** 347: 216-27 (2010) (IF = 4.4).
423. A. Quaegebeur & P. CARMELIET. Oxygen sensing: a common crossroad in cancer and neurodegeneration. **Curr Top Microbiol Immunol** 345: 71-103 (2010) (Review) (IF = 4.1).
424. A. Brockington, P. R. Heath, H. Holden, P. Kasher, F. L. Bender, F. Claes, D. Lambrechts, M. Sendtner, P. CARMELIET & P. J. Shaw. Downregulation of genes with a function in axon outgrowth and synapse formation in motor neurones of the VEGF delta/delta mouse model of amyotrophic lateral sclerosis. **BMC Genomics** 11: 203 (2010) (IF = 3.9).
425. A. Debeer, L. Sbragia, K. Vrancken, A. Hendriks, X. Roubliova, J. Jani, G. Naulaers, P. CARMELIET & J. Deprest. Antenatal fetal VEGF therapy to promote pulmonary maturation in a preterm rabbit model. **Early Hum Dev** 86: 99-105 (2010) (IF = 2.1).
426. S. Loges, T. Schmidt & P. CARMELIET. Mechanisms of Resistance to Anti- Angiogenic Therapy and Development of Third-Generation Anti-Angiogenic Drug Candidates. **Genes & Cancer** 1: 12–25 (2010) (Review) (IF = n.a.)

## 2011

427. H. K. Eltzschig & P. CARMELIET. Hypoxia and Inflammation. **New Engl J Med** 364: 656-65 (2011) (Review) (IF = 53.4). [Pubmed Link](#)
428. P. CARMELIET & R.K. Jain. Molecular mechanisms and clinical applications of angiogenesis. **Nature** 473: 298-307 (2011) (Review) (IF = 36.1). [Pubmed Link](#)
429. B. Beck, G. Driessens, S. Goossens, K. K. Youssef, A. Kuchnio, A. Caauwe, P. A. Sotiropoulou, S. Loges, G. Lapouge, A. Candi, G. Mascré, B. Drogat, S. Dekoninck, J. J. Haigh, P. CARMELIET & C. Blanpain. A vascular niche and a VEGF-Nrp1 loop regulate the initiation and stemness of skin tumours. **Nature** 478: 399-403 (2011) (IF = 36.1).
430. M. Potente, H. Gerhardt & P. CARMELIET. Basic and therapeutic aspects of angiogenesis. **Cell** 146: 873-87 (2011) (Review) (IF = 34.9). [PubMed Link](#)
431. P. CARMELIET & R.K. Jain. Principles and mechanisms of vessel normalization for cancer and other angiogenic diseases. **Nat Rev Drug Discov** 10: 417-27 (2011) (Review) (IF = 28.7). [Pubmed Link](#)
432. C. Rolny<sup>o</sup>, M. Mazzone<sup>o</sup>, S. Tugues, D. Laoui, I. Johansson, C. Coulon, M. L. Squadrito, I. Segura, X. Li, E. Knevels, S. Costa, S. Vinckier, T. Dresselaer, P. Akerud, M. De Mol, H. Salomaki, M. Phillipson, S. Wyns, E. Larsson, I. Buyschaert, J. Botling, U. Himmelreich, J. A. Van Ginderachter, M. De Palma, M. Dewerchin, L. Claesson-Welsh & P. CARMELIET. HRG inhibits tumor growth and metastasis by inducing macrophage polarization and vessel normalization through downregulation of PIGF. **Cancer Cell** 19: 31-44 (2011) (IF = 26.9) [Pubmed Link](#)
433. T. Schmidt<sup>o</sup>, B. Kharabi Masouleh<sup>o</sup>, S. Loges<sup>o</sup>, S. Cauwenberghs, P. Fraisl, C. Maes, B. Jonckx, K. De Keersmaecker, M. Kleppe, M. Tjwa, T. Schenk, S. Vinckier, R. Fragoso, M. De Mol, K. Beel, S. Dias, C. Verfaillie, R.E. Clark, T.H. Brümmendorf, P. Vandenberghe, S. Rafii, T. Holyoake, A. Hochhaus, J. Cools, M. Karin, G. Carmeliet, M. Dewerchin & P. CARMELIET. Loss or inhibition of stromal-derived PIGF prolongs survival of mice with imatinib-resistant Bcr-Abl1(+) leukemia. **Cancer Cell** 19: 740-53 (2011) (IF = 26.9). [Pubmed Link](#)



434. J. Adam, E. Hatipoglu, L. O'Flaherty, N. Ternette, N. Sahgal, H. Lockstone, D. Baban, E. Nye, G. W. Stamp, K. Wolhuter, M. Stevens, R. Fischer, *P. CARMELIET*, P. H. Maxwell, C. W. Pugh, N. Frizzell, T. Soga, B. M. Kessler, M. El-Bahrawy, P. J. Ratcliffe & P. J. Pollard. Renal cyst formation in Fh1-deficient mice is independent of the Hif/Phd pathway: role of Nrf2 signaling and fumarate mediated succination of KEAP1. **Cancer Cell** 20: 524-37 (2011) (IF = 26.9).
435. E. Van Cutsem, D. Lambrechts, H. Prenen, R.K. Jain & *P. CARMELIET*. Lessons from the adjuvant bevacizumab trial on colon cancer: what next? **J Clin Oncol** 29: 1-4 (2011) (Editorial) (IF = 19.9). [Pubmed Link](#)
436. N. Takahashi, T. Kuwaki, S. Kiyonaka, T. Numata, D. Kozai, Y. Mizuno, S. Yamamoto, S. Naito, E. Knevels, *P. CARMELIET*, T. Oga, S. Kaneko, S. Suga, T. Nokami, J. Yoshida & Y. Mori. TRPA1 underlies a sensing mechanism for O<sub>2</sub>. **Nat Chem Biol** 7: 701-11 (2011) (IF = 15.8).
437. E. Storkebaum, A. Quaegebeur, M. Vikkula & *P. CARMELIET*. Cerebrovascular disorders: molecular insights and therapeutic opportunities. **Nat Neurosci** 14: 1390-7 (2011) (Review) (IF = 14.2)
438. S. R. Walmsley, E. R. Chilvers, A. A. Thompson, K. Vaughan, H. M. Marriott, L. C. Parker, G. Shaw, S. Parmar, M. Schneider, I. Sabroe, D. H. Dockrell, M. Milo, C. T. Taylor, R. S. Johnson, C. W. Pugh, P. J. Ratcliffe, P. H. Maxwell, *P. CARMELIET* & M. K. Whyte. Prolyl hydroxylase 3 (PHD3) is essential for hypoxic regulation of neutrophilic inflammation in humans and mice. **J Clin Invest** 121: 1053-63 (2011) (IF = 14.1).
439. C. Ruiz de Almodovar, P.J. Fabre, E. Knevels, C. Coulon, I. Segura, P.C. Haddick, L. Aerts, N. Delattin, G. Strasser, W.J. Oh, C. Lange, S. Vinckier, J. Haigh, C. Fouquet, C. Gu, K. Alitalo, V. Castellani, M. Tessier-Lavigne, A. Chédotal, F. Charron & *P. CARMELIET*. VEGF mediates commissural axon chemoattraction through its receptor Flk1. **Neuron** 70: 966-78. (2011) (IF = 14.0). [Pubmed Link](#)
440. A. Quaegebeur, C. Lange & *P. CARMELIET*. The neurovascular link in health and disease: molecular mechanisms and therapeutic implications. **Neuron** 71: 406-24 (2011) (Review) (IF = 14.0). [Pubmed Link](#)
441. M. Ghassibe-Sabbagh, L. Desmyter, T. Langenberg, F. Claes, O. Boute, B. Bayet, P. Pellerin, K. Hermans, L. Backx, M.A. Mansilla, S. Imoehl, S. Nowak, K.U. Ludwig, C. Baluardo, M. Ferrian, P.A. Mossey, M. Noethen, M. Dewerchin, G. Francois, N. Revencu, R. Vanwijck, J. Hecht, E. Mangold, J. Murray, M. Rubini, J.R. Vermeesch, H.A. Poirel, *P. CARMELIET* & M. Vikkula. FAF1, a gene that is disrupted in cleft palate and has conserved function in zebrafish. **Am J Hum Genet** 88: 150-61 (2011) (IF = 11.6).
442. M. Rehn, A. Olsson, K. Reckzeh, E. Diffner, *P. CARMELIET*, G. Landberg & J. Cammenga. Hypoxic induction of vascular endothelial growth factor regulates murine hematopoietic stem cell function in the low-oxygenic niche. **Blood** 118: 1534-43 (2011) (IF = 10.9).
443. C. V. Steenkiste, J. Ribera, A. Geerts, M. Pauta, S. Tugues, C. Casteleyn, L. Libbrecht, K. Olivier, B. Schroyen, H. Reynaert, L. A. van Grunsven, B. Blomme, S. Coulon, F. Heindryckx, M. De Vos, J. M. Stassen, S. Vinckier, J. Altamirano, R. Bataller, *P. CARMELIET*, H. Van Vlierberghe, I. Colle & M. Morales-Ruiz. Inhibition of placental growth factor activity reduces the severity of fibrosis, inflammation, and portal hypertension in cirrhotic mice. **Hepatology** 53: 1629-40 (2011) (IF = 10.8).
444. K. De Bock, M. Mazzone & *P. CARMELIET*. Anti-angiogenic therapy, hypoxia and metastasis: risky liaisons, or not? **Nat Rev Clin Oncol** 8: 393-404 (2011) (Review) (IF = 10.7). [Pubmed Link](#)
445. C. Meissirel, C. Ruiz de Almodovar, E. Knevels, C. Coulon, N. Chounlamountri, I. Segura, P. de Rossi, S. Vinckier, K. Anthonis, B. Deléglise, M. de Mol, C. Ali, K. Dassonville, E. Loyens, J. Honnorat, Y. Michotte, V. Rogemond, I. Smolders, T. Voets, D. Vivien, P. Vanden Berghe, L. Van Den Bosch, W. Robberecht, A. Chédotal, S. Oliviero, M. Dewerchin, D. Schmucker, N. Thomasset, P. Salin & *P. CARMELIET*. VEGF modulates NMDA receptors activity in cerebellar granule cells through Src-family kinases before synapse formation. **Proc Natl Acad Sci U S A** 108: 13782-7 (2011) (IF = 9.7).
446. F. Accornero, J.H. van Berlo, M.J. Benard, J.N. Lorenz, *P. CARMELIET* & J.D. Molkentin. Placental growth factor regulates cardiac adaptation and hypertrophy through a paracrine mechanism. **Circ Res** 109: 272-80 (2011) (IF = 9.5).
447. K. De Bock, S. Cauwenberghs & *P. CARMELIET*. Vessel abnormalization: another hallmark of cancer? Molecular mechanisms and therapeutic implications. **Curr Opin Genet Dev** 21: 73-9 (2011) (Review) (IF = 9.3).

448. A. Casazza, X. Fu, I. Johansson, L. Capparuccia, F. Andersson, A. Giustacchini, M.L. Squadrito, M.A. Venneri, M. Mazzone, E. Larsson, *P. CARMELIET*, M. De Palma, L. Naldini, L. Tamagnone & C. Rolny. Systemic and targeted delivery of semaphorin 3A inhibits tumor angiogenesis and progression in mouse tumor models. **Arterioscler Thromb Vasc Biol** 31: 741-9 (2011) (IF = 7.2).
449. S. Kutschera, H. Weber, A. Weick, F. De Smet, G. Genove, M. Takemoto, C. Prahst, M. Riedel, C. Mikelis, S. Baulande, C. Champseix, P. Kummerer, E. Conseiller, M. C. Multon, M. Heroult, R. Bicknell, *P. CARMELIET*, C. Betsholtz & H.G. Augustin. Differential endothelial transcriptomics identifies semaphorin 3G as a vascular class 3 semaphorin. **Arterioscler Thromb Vasc Biol** 31: 151-9 (2011) (IF = 7.2).
450. G. Wallays, D. Nuyens, R. Silasi-Mansat, J. Souffreau, Z. Callaerts-Vegh, A. Van Nuffelen, L. Moons, R. D'Hooge, F. Lupu, *P. CARMELIET*, D. Collen & M. Dewerchin. Notch3 Arg170Cys knock-in mice display pathologic and clinical features of the neurovascular disorder cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy. **Arterioscler Thromb Vasc Biol** 31: 2881-8 (2011) (IF = 7.2).
451. J. Dhondt, E. Peeraer, A. Verheyen, R. Nuydens, I. Buyschaert, K. Poesen, K. Van Geyte, M. Beerens, M. Shibuya, J.J. Haigh, T. Meert, *P. CARMELIET* & D. Lambrechts. Neuronal FLT1 receptor and its selective ligand VEGF-B protect against retrograde degeneration of sensory neurons. **FASEB J** 25: 1461-73 (2011) (IF = 6.5).
452. A. de Rieux, B. Ucakar, B.P. Mupendwa, D. Colau, O. Feron, *P. CARMELIET* & V. Preat. 3D systems delivering VEGF to promote angiogenesis for tissue engineering. **J Control Release** 150: 272-8 (2011) (IF = 6.5).
453. A. Peeters, P. Fraisl, S. van den Berg, E. Ver Loren van Themaat, A. Van Kampen, M. H. Rider, H. Takemori, K. Willems van Dijk, P. P. Van Veldhoven, *P. CARMELIET* & M. Baes. Carbohydrate metabolism is perturbed in peroxisome deficient hepatocytes due to mitochondrial dysfunction, AMP-activated protein kinase (AMPK) activation and peroxisome proliferator-activated receptor {gamma} coactivator 1alpha (PGC-1alpha) suppression. **J Biol Chem** 286: 42162-79 (2011) (IF = 5.5).
454. G.C. van Almen, M. Swinnen, P. Carai, W. Verhesen, J.P. Cleutjens, J. D'Hooge, F.K. Verheyen, Y.M. Pinto, B. Schroen, *P. CARMELIET* & S. Heymans. Absence of thrombospondin-2 increases cardiomyocyte damage and matrix disruption in doxorubicin-induced cardiomyopathy. **J Mol Cell Cardiol** 51: 318-28 (2011) (IF = 5.4).
455. S. Soomro, T. Langenberg, A. Mahringer, V.B. Konkimalla, C. Horwedel, P. Holenya, A. Brand, C. Cetin, G. Fricker, M. Dewerchin, *P. CARMELIET*, E.M. Conway, H. Jansen & T. Efferth. Design of novel artemisinin-like derivatives with cytotoxic and anti-angiogenic properties. **J Cell Mol Med** 15: 1122-35 (2011) (IF = 5.1).
456. L. Chaballe, P. Close, M. Sempels, S. Delstanche, J. Fanielle, L. Moons, *P. CARMELIET*, J. Schoenen, A. Chariot & R. Franzen. Involvement of placental growth factor in Wallerian degeneration. **Glia** 59: 379-96 (2011) (IF = 5.1).
457. H. Iwasaki, A. Kawamoto, M. Tjwa, M. Horii, S. Hayashi, A. Oyamada, T. Matsumoto, S. Suehiro, *P. CARMELIET* & T. Asahara. PIGF repairs myocardial ischemia through mechanisms of angiogenesis, cardioprotection and recruitment of myo-angiogenic competent marrow progenitors. **PLoS One** 6: e24872 (2011) (IF = 4.1).
458. H. Huang, S. Van de Veire, M. Dalal, R. Parlier, RD Semba, *P. CARMELIET* & S.A. Vinore. Reduced retinal neovascularization, vascular permeability, and apoptosis in ischemic retinopathy in the absence of prolyl hydroxylase-1 due to the prevention of hyperoxia-induced vascular obliteration. **Invest Ophthalmol Vis Sci** 52: 7565-73 (2011) (IF = 4.0).
459. S. Labied, S. Blacher, *P. CARMELIET*, A. Noel, F. Frankenne, J.M. Foidart & C. Munaut. Transient reduction of placental angiogenesis in PAI-1 deficient mice. **Physiol Genomics** 43: 188-98 (2011) (IF = 3.9).
460. E. Storkebaum & *P. CARMELIET*. Paracrine control of vascular innervation in health and disease. **Acta Physiol** 203: 61-86 (2011) (Review) (IF = 3.1).
461. L.H. Anderson, C.A. Boulanger, G.H. Smith, *P. CARMELIET* & C.J. Watson. Stem cell marker prominin-1 regulates branching morphogenesis, but not regenerative capacity, in the mammary gland. **Dev Dynam** 240: 674-81 (2011) (IF = 2.8).

462. T. Schmidt & P. CARMELIET (2011). "Angiogenesis: a target in solid tumors, also in leukemia?". **Hematology Am Soc Hematol Educ Program** 2011: 1-8 (Review) (IF = n.a.).
463. S. Van de Veire, T. Van Bergen, E. Vandewalle, P. CARMELIET, L. Moons & I. Stalmans. The role of the VEGF-isoforms in pathological choroidal/retinal angiogenesis. **Bull Soc Belge Ophtalmol** 55: 317 (2011) (IF = n.a.).
464. X.L. Aranguren, M. Beerens, W. Vandavelde, M. Dewerchin, P. CARMELIET & A. Lutun. Transcription factor COUP-TFII is indispensable for venous and lymphatic development in zebrafish and *Xenopus laevis*. **Biochem Biophys Res Commun** 410: 121-6 (2011) (IF = n.a.).

## 2012

465. P. CARMELIET & B. De Strooper. Alzheimer's disease: A breach in the blood-brain barrier. **Nature** 485: 451-2 (2012) (News and Views) (IF = 36.1). [Pubmed Link](#)
466. R. K. Jain & P. CARMELIET. SnapShot: Tumor Angiogenesis. **Cell** 149(6): 1408 e1401 (2012) (IF = 32.4). [Pubmed Link](#)
467. R. Leite de Oliveira, S. Deschoemaeker, A. T. Henze, K. Debackere, V. Finisguerra, Y. Takeda, C. Roncal, D. Dettori, E. Tack, Y. Jonsson, L. Veschini, A. Peeters, A. Anisimov, M. Hofmann, K. Alitalo, M. Baes, J. D'Hooge, P. CARMELIET & M. Mazzone. Gene-targeting of PHD2 improves tumor response to chemotherapy and prevents side-toxicity. **Cancer Cell** 22: 263-77 (2012) (IF = 26.6). [Pubmed Link](#)
468. D. Lambrechts, B. Claes, P. Delmar, J. Reumers, M. Mazzone, B. T. Yesilyurt, R. Devlieger, C. Verslype, S. Tejpar, H. Wildiers, S. de Haas, P. CARMELIET, S. J. Scherer & E. Van Cutsem. VEGF pathway genetic variants as biomarkers of treatment outcome with bevacizumab: an analysis of data from the AVITA and AVOREN randomised trials. **Lancet Oncol** 13: 724-33 (2012) (IF = 17.8). [Pubmed Link](#)
469. P. CARMELIET, B.W. Wong & K. De Bock. Treating diabetes by blocking a vascular growth factor. **Cell metabolism** 5: 553-5 (2012) (Preview) (IF = 13.7). [Pubmed Link](#)
470. B. Detry, C. Erpicum, J. Paupert, S. Blacher, C. Maillard, F. Bruyere, H. Pendeville, T. Remacle, V. Lambert, C. Balsat, S. Ormenese, F. Lamaye, E. Janssens, L. Moons, D. Cataldo, F. Kridelka, P. CARMELIET, M. Thiry, J. M. Foidart, I. Struman & A. Noel. Matrix metalloproteinase-2 governs lymphatic vessel formation as an interstitial collagenase. **Blood** 119: 5048-56 (2012) (IF = 10.6).
471. Y. Qi, X. Tian, J. Liu, Y. Han, A. M. Graham, M. C. Simon, J. M. Penninger, P. CARMELIET & S. Li. Bnip3 and AIF cooperate to induce apoptosis and cavitation during epithelial morphogenesis. **J Cell Biol** 198: 103-14 (2012) (IF = 10.3).
472. O. Guardiola, P. Lafuste, S. Brunelli, S. Iaconis, T. Touvier, P. Mourikis, K. De Bock, E. Lonardo, G. Andolfi, A. Bouche, G. L. Liguori, M. M. Shen, S. Tajbakhsh, G. Cossu, P. CARMELIET & G. Minchiotti. Cripto regulates skeletal muscle regeneration and modulates satellite cell determination by antagonizing myostatin. **Proc Natl Acad Sci U S A** 47: E3231-40 (2012) (IF = 9.7).
473. A. Verheyen, E. Peeraer, R. Nuydens, J. Dhondt, K. Poesen, I. Pintelon, A. Daniels, J. P. Timmermans, T. Meert, P. CARMELIET & D. Lambrechts. Systemic anti-vascular endothelial growth factor therapies induce a painful sensory neuropathy. **Brain** 135: 2629-41 (2012) (IF = 9.5).
474. M. F. Corsten, A. Papageorgiou, W. Verhesen, P. Carai, M. Lindow, S. Obad, G. Summer, S. L. Coort, M. Hazebroek, R. van Leeuwen, M. J. Gijbels, E. Wijnands, E. A. Biessen, M. P. De Winther, F. R. Stassen, P. CARMELIET, S. Kauppinen, B. Schroen & S. Heymans. MicroRNA profiling Identifies microRNA-155 as an adverse mediator of cardiac injury and dysfunction during acute viral myocarditis. **Circ Res** 111: 415-25 (2012) (IF = 9.5).
475. F. Heindryckx, A. Kuchnio, C. Casteleyn, S. Coulon, K. Olievier, I. Colle, A. Geerts, L. Libbrecht, P. CARMELIET & H. Van Vlierberghe. Effect of prolyl hydroxylase domain-2 haplodeficiency on the hepatocarcinogenesis in mice. **J Hepatol** 57: 61-8 (2012) (IF = 9.3).

476. N. van Gastel, S. Torrekens, S. J. Roberts, K. Moermans, J. Schrooten, P. CARMELIET, A. Lutun, F. P. Luyten & G. Carmeliet. Engineering Vascularized Bone: Osteogenic and Pro-Angiogenic Potential of Murine Periosteal Cells. **Stem Cells** 30: 2460-71 (2012) (IF = 7.8).
477. A. P. Papageorgiou, M. Swinnen, D. Vanhoutte, T. Vandendriessche, M. Chuah, D. Lindner, W. Verhesen, B. de Vries, J. D'Hooge, E. Lutgens, D. Westermann, P. CARMELIET & S. Heymans. Thrombospondin-2 prevents cardiac injury and dysfunction in viral myocarditis through the activation of regulatory T-cells. **Cardiovasc Res** 94: 115-24 (2012) (IF = 6.1).
478. Y. Jung, Y. Shiozawa, J. Wang, N. McGregor, J. Dai, S. I. Park, J. E. Berry, A. M. Havens, J. Joseph, J. K. Kim, L. Patel, P. CARMELIET, S. Daignault, E. T. Keller, L. K. McCauley, K. J. Pienta & R. S. Taichman. Prevalence of prostate cancer metastases after intravenous inoculation provides clues into the molecular basis of dormancy in the bone marrow microenvironment. **Neoplasia** 14: 429-39 (2012) (IF = 5.9).
479. J. Kiss, M. Mollenhauer, S. R. Walmsley, J. Kirchberg, P. Radhakrishnan, T. Niemietz, J. Dudda, G. Steinert, M. K. Whyte, P. CARMELIET, M. Mazzone, J. Weitz & M. Schneider. Loss of the Oxygen Sensor PHD3 Enhances the Innate Immune Response to Abdominal Sepsis. **J Immunol** 189: 1955-65 (2012) (IF = 5.8).
480. M. Dewerchin & P. CARMELIET. PIGF: A Multitasking Cytokine with Disease-Restricted Activity. **Cold Spring Harb Perspect Med** 2(8) pii: a011056 (2012) (IF = 5.4).
481. A. Carlier, L. Geris, K. Bentley, G. Carmeliet, P. CARMELIET & H. Van Oosterwyck. MOSAIC: a multiscale model of osteogenesis and sprouting angiogenesis with lateral inhibition of endothelial cells. **PLoS Comput Biol** 10: e1002724 (2012) (IF = 5.2).
482. E. Cho, K. J. Lee, J. W. Seo, C. J. Byun, S. J. Chung, D. C. Suh, P. CARMELIET, J. Y. Koh, J. S. Kim & J. Y. Lee. Neuroprotection by urokinase plasminogen activator in the hippocampus. **Neurobiol Dis** 46: 215-24 (2012) (IF = 5.1).
483. M. Freitas-Andrade, P. CARMELIET, C. Charlebois, D. B. Stanimirovic & M. J. Moreno. PIGF knockout delays brain vessel growth and maturation upon systemic hypoxic challenge. **J Cereb Blood Flow Metab** 32: 663-75 (2012) (IF = 4.5).
484. S. Bobic, S. Seys, V. De Vooght, I. Callebaut, V. Hox, C. Doms, S. Vinckier, B. Jonckx, J. M. Saint-Remy, J. M. Stassen, D. M. Bullens, J. L. Ceuppens, P. CARMELIET & P. W. Hellings. Placental Growth Factor Contributes to Bronchial Neutrophilic Inflammation and Edema in Allergic Asthma. **Am J Respir Cell Mol Biol** 46: 781-9 (2012) (IF = 4.4).
485. L. Nikitidou, I. Kanter-Schlifke, J. Dhondt, P. CARMELIET, D. Lambrechts & M. Kokaia. VEGF receptor-2 (Flk-1) overexpression in mice counteracts focal epileptic seizures. **PLoS One** 7: e40535 (2012) (IF = 4.1).
486. K. Martens, A. Bottelbergs, A. Peeters, F. Jacobs, M. Espeel, P. CARMELIET, P. P. Van Veldhoven & M. Baes. Peroxisome deficient aP2-Pex5 knockout mice display impaired white adipocyte and muscle function concomitant with reduced adrenergic tone. **Mol Genet Metab** 4: 735-47 (2012) (IF = 3.2).
487. K. S. Rohrberg, R. K. Olesen, P. Pfeiffer, M. Ladekarl, H. Pappot, I. J. Christensen, G. Hoyer-Hansen, M. Sorensen, B. G. Skov, I. Buysschaert, P. CARMELIET & U. Lassen. Phase II trial of erlotinib and bevacizumab in patients with advanced upper gastrointestinal cancers. **Acta Oncol** 51: 234-42 (2012) (IF = 3.1).
488. F. Heindryckx, E. Bogaerts, S.H. Coulon, H. Devlies, A.M. Geerts, L. Libbrecht, J.M. Stassen, P. CARMELIET, I.O. Colle & H.R. Van Vlierberghe. Inhibition of the placental growth factor decreases burden of cholangiocarcinoma and hepatocellular carcinoma in a transgenic mouse model. **Eur J Gastroenterol Hepatol** 24: 1020-32 (2012) (IF = 2.1).

## 2013

489. K. De Bock, M. Georgiadou, S. Schoors, A. Kuchnio, B.W. Wong, A.R. Cantelmo, A. Quaegebeur, B. Ghesquière, S. Cauwenberghs, G. Eelen, L.K. Phng, I Betz, B. Tembuyser, K. Brepoels, J. Welti, I. Geudens, I. Segura, B. Cruys, F. Bifari, I. Decimo, R. Blanco, S. Wyns, J. Vangindertael, S. Rocha, R. Collins, S. Munck, D. Daelemans, H. Imamura, R. Devlieger, M. Rider, P. P. Van Veldhoven, F. Schuit, R. Bartrons, J. Hofkens, P. Fraisl, S. Telang, R. J. DeBerardinis, L. Schoonjans, S. Vinckier, J. Chesney, H. Gerhardt, M. Dewerchin & P. CARMELIET. Role of PFKFB3-driven glycolysis in vessel

- sprouting. **Cell** 154: 651-63 (2013) (IF = 34.8). (Highlighted by featured editorials in Nature, Science, Nature Rev Cell Mol Biol, Embo Mol Med, Cell Cycle, and by national and international press). [PubMed link](#)
490. M. Snuderl, A. Batista, N. D. Kirkpatrick, C. Ruiz de Almodovar, L. Riedemann, E. C. Walsh, R. Anolik, Y. Huang, J. D. Martin, W. Kamoun, E. Knevels, T. Schmidt, C. T. Farrar, B. J. Vakoc, N. Mohan, E. Chung, S. Roberge, T. Peterson, B. H. Zhelyazkova, S. Yip, M. Hasselblatt, C. Rossig, E. Niemeyer, N. Ferrara, M. Klagsbrun, D. G. Duda, D. Fukumura, L. Xu, *P. CARMELIET* & R. K. Jain. Targeting placental growth factor/neuropilin 1 pathway inhibits growth and spread of medulloblastoma. **Cell** 152: 1065-76 (2013) (IF = 34.8) (highlighted by (inter)-national press). [Pubmed Link](#)
491. F. Bono, F. De Smet, C. Herbert, K. De Bock, M. Georgiadou, P. Fons, M. Tjwa, C. Alcouffe, A. Ny, M. Bianciotto, B. Jonckx, M. Murakami, A. Lanahan, C. Michielsen, D. Sibrac, F. Dol-Gleizes, M. Mazzone, S. Zacchigna, J. P. Herault, C. Fischer, P. Rigon, C. Ruiz de Almodovar, F. Claes, I. Blanc, K. Poesen, J. Zhang, I. Segura, G. Gueguen, M. F. Bordes, D. Lambrechts, R. Broussy, M. van de Wouwer, C. Michaux, T. Shimada, I. Jean, S. Blacher, A. Noel, P. Motte, E. Rom, J. M. Rakic, S. Katsuma, P. Schaeffer, A. Yayon, A. Van Schepdael, H. Schwalbe, F. Gervasio, G. Carmeliet, J. Rozensky, M. Dewerchin, M. Simons, A. Christopoulos, J. M. Herbert & *P. CARMELIET*. Inhibition of tumor angiogenesis and growth by a small-molecule multi-FGF receptor blocker with allosteric properties. **Cancer Cell** 23: 477-88 (2013) (IF = 28.2) (Highlighted by featured editorials in Nature SciBX ((Science Business exchange)), Nat Chem Biol and Cancer Discovery). [Pubmed Link](#)
492. C. Herbert, U. Schieborr, K. Saxena, J. Juraszek, F. De Smet, C. Alcouffe, M. Bianciotto, G. Saladino, D. Sibrac, D. Kudlinzki, S. Sreeramulu, A. Brown, P. Rigon, JP. Herault, G. Lassalle, T.L. Blundell, F. Rousseau, A. Gils<sup>1</sup>, J. Schymkowitz, P. Tompa, J.M. Herbert, *P. CARMELIET*, F. L. Gervasio, H. Schwalbe & F. Bono. Molecular mechanism of SSR128129E, an extracellularly acting small-molecule allosteric inhibitor of FGF receptor signaling. **Cancer Cell** 23: 489-501 (2013) (IF = 28.2) Highlighted by featured editorials in Nature SciBX (Science Business exchange), Nat Chem Biol and Cancer Discovery). [Pubmed Link](#)
493. D. Lambrechts, H. J. Lenz, S. de Haas, *P. CARMELIET* & S. J. Scherer. Markers of response for the antiangiogenic agent bevacizumab. **J Clin Oncol** 31: 1219-30 (2013) (Review) (IF = 18.4). [Pubmed Link](#)
494. F. Langlet, BE. Levin, SS Luquet, M. Mazonne, A. Messina, AA. Dunn-Meynell, E Balland, A. Lacombe, D. Mazur, *P. CARMELIET*, SG. Bouret, V. Prevot & B. Dehouck. Tancytic VEGF-A boosts blood-hypothalamus barrier plasticity and access of metabolic signals to the arcuate nucleus in response to fasting . **Cell Metab** 17: 607-17 (2013) (IF = 13.7). [Pubmed Link](#)
495. K. De Bock, M. Georgiadou & *P. CARMELIET*. Role of endothelial cell metabolism in vessel sprouting. **Cell Metab** 18: 634-47 (2013) (Review) (IF = 13.7). [Pubmed Link](#)
496. K. Khoufache, F. Berri, W. Nacken, A. B. Vogel, M. Delenne, E. Camerer, S. R. Coughlin, *P. CARMELIET*, B. Lina, G. F. Rimmelzwaan, O. Planz, S. Ludwig & B. Riteau. PAR1 contributes to influenza A virus pathogenicity in mice. **J Clin Invest** 123: 206-14 (2013) (IF = 13.1).
497. F. Van Hauwermeiren, M. Armaka, N. Karagianni, K. Kranidioti, R.E. Vandenbroucke, S. Loges, M. Van Roy, J. Staelens, L. Puimege, A. Palagani, W.V. Berghe, P. Victoratos, *P. CARMELIET*, C. Libert & G. Kollias. Safe TNF-based antitumor therapy following p55TNFR reduction in intestinal epithelium. **J Clin Invest** 123: 2590-603 (2013) (IF = 13.1).
498. J. Welti, S. Loges, S. Dimmeler & *P. CARMELIET*. Recent molecular discoveries in angiogenesis and antiangiogenic therapies in cancer. **J Clin Invest** 123: 3190-200 (Invited review) (IF = 13.1). [Pubmed Link](#)
499. S. Coulon, V. Legry, F. Heindryckx, C. Van Steenkiste, C. Casteleyn, K. Olivevier, L. Libbrecht, *P. CARMELIET*, B. Jonckx, J. M. Stassen, H. Van Vlierberghe, I. Leclercq, I. Colle & A. Geerts. Role of vascular endothelial growth factor in the pathophysiology of nonalcoholic steatohepatitis in two rodent models. **Hepatology** 57: 1793-805 (2013) (IF = 11.7).
500. B. W. Wong, A. Kuchnio, U. Bruning & *P. CARMELIET*. Emerging novel functions of the oxygen-sensing prolyl hydroxylase domain enzymes. **Trends Biochem Sci** 1: 3-11 (2013) (Review) (IF = 10.8). [Pubmed Link](#)
501. D. Vanhoutte, G. C. van Almen, L. N. Van Aelst, J. Van Cleemput, W. Droogne, Y. Jin, F. Van de Werf, *P. CARMELIET*, J. Vanhaecke, A. P. Papageorgiou & S. Heymans. Matricellular proteins and



- matrix metalloproteinases mark the inflammatory and fibrotic response in human cardiac allograft rejection. **Eur Heart** 34: 1930-41 (2013) (IF = 10.5).
502. M. Martin, I. Geudens, J. Bruyr, M. Potente, A. Bleuart, M. Lebrun, N. Simonis, C. Deroanne, J.C. Twizere, P. Soubeyran, P. Peixoto, D. Mottet, V. Janssens, W.K. Hofmann, F. Claes, P. CARMELIET, R. Kettmann, H. Gerhardt & F. Dequiedt. PP2A regulatory subunit B $\alpha$  controls endothelial contractility and vessel lumen integrity via regulation of HDAC7. **Embo J** 32: 2491-503 (2013) (IF = 9.8).
503. K. Arndt, T. Grinenko, N. Mende, D. Reichert, M. Portz, T. Ripich, P. CARMELIET, D. Corbeil & C. Waskow. CD133 is a modifier of hematopoietic progenitor frequencies but is dispensable for the maintenance of mouse hematopoietic stem cells. **Proc Natl Acad Sci U S A** 110: 5582-87 (2013) (IF = 9.7).
504. F. Heindryckx, S. Coulon, E. Terrie, C. Casteleyn, J. M. Stassen, A. Geerts, L. Libbrecht, J. Allemeersch, P. CARMELIET, I. Colle & H. Van Vlierberghe. The placental growth factor as a target against hepatocellular carcinoma in a diethylnitrosamine-induced mouse model. **J Hepatol** 58: 319-28 (2013) (IF = 9.3).
505. F. Berri, G.F. Rimmelzwaan, M. Hanss, E. Albina, M.L. Foucault-Grunenwald, V.B. Le, S.E. Vogelzang-van Trierum, P. Gil, E. Camerer, D. Martinez, B. Lina, R. Lijnen, P. CARMELIET & B. Riteau. Plasminogen controls inflammation and pathogenesis of influenza virus infections via fibrinolysis. **PLoS Path** 9 pii: e1003229 (2013) (IF = 9.1).
506. I. Ben-Batalla, A. Schultze, M. Wroblewski, R. Erdmann, M. Heuser, J.S. Waizenegger, K. Riecken, M. Binder, D. Schewe, S. Sawall, V. Witzke, M. Cubas-Cordova, M. Janning, J. Wellbrock, B. Fehse, C. Hagel, J. Krauter, A. Ganser, J.B. Lorens, W. Fiedler, P. CARMELIET, K. abPantel, C. Bokemeyer & S. Loges. Axl, a prognostic and therapeutic target in acute myeloid leukemia mediates paracrine crosstalk of leukemia cells with bone marrow stroma. **Blood** 122: 2443-52 (2013) (IF = 9.1).
507. G. Eelen, B. Cruys, J. Welti, K. De Bock & P. CARMELIET. Control of vessel sprouting by genetic and metabolic determinants. **Trends Endocrin Metab** 24: 589-96 (2013) (Review) (IF = 8.9). [Pubmed Link](#)
508. R. Luca, M. Aversa, F. Zalfa, M. Vecchi, F. Bianchi, G. La Fata, F. Del Nonno, R. Nardacci, M. Bianchi, P. Nuciforo, S. Munck, P. Parrella, R. Moura, E. Signori, R. Alston, A. Kuchnio, M. G. Farace, V. M. Fazio, M. Piacentini, B. De Strooper, T. Achsel, G. Neri, P. Neven, D. G. Evans, P. CARMELIET, M. Mazzone & C. Bagni. The fragile X protein binds mRNAs involved in cancer progression and modulates metastasis. **EMBO Mol Med** 5: 1523-36 (2013) (IF = 7.8).
509. T. L. Walker, A. Wierick, A. M. Sykes, B. Waldau, D. Corbeil, P. CARMELIET & G. Kempermann. Prominin-1 Allows Prospective Isolation of Neural Stem Cells from the Adult Murine Hippocampus. **J Neurosci** 33(7): 3010-24 (2013) (IF = 7.1).
510. P. CARMELIET & C.R. de Almodovar. VEGF ligands and receptors: implications in neurodevelopment and neurodegeneration. **Cell Mol Life Sci** 70: 1763-78 (2013) (Review) (IF = 6.6).
511. S. Verheijden, A. Bottelbergs, O. Krysko, D.V. Krysko, L. Beckers, S. De Munter, P.P. Van Veldhoven, S. Wyns, W. Kulik, K.A. Nave, M.S. Ramer, P. CARMELIET, C.M. Kassmann & M. Baes. Peroxisomal multifunctional protein-2 deficiency causes neuroinflammation and degeneration of Purkinje cells independent of very long chain fatty acid accumulation. **Neurobiol Dis** 58: 258-69 (2013) (IF = 5.6).
512. V. J. Henry, M. Lecointre, V. Laudenbach, C. Ali, R. Macrez, A. Jullienne, V. Berezowski, P. CARMELIET, D. Vivien, S. Marret, B. J. Gonzalez & P. Leroux. High t-PA release by neonate brain microvascular endothelial cells under glutamate exposure affects neuronal fate. **Neurobiol Dis** 50: 201-8 (2013) (IF = 5.4).
513. A. Lelli, A. Gervais, C. Colin, C. Cheret, C. Ruiz de Almodovar, P. CARMELIET, K.H. Krause, S. Boillee & M. Mallat, The NADPH oxidase Nox2 regulates VEGFR1/CSF-1R-mediated microglial chemotaxis and promotes early postnatal infiltration of phagocytes in the subventricular zone of the mouse cerebral cortex. **Glia** 61: 1542-55 (2013) (IF = 5.1).
514. H. Kalakech, S. Tamareille, S. Pons, D. Godin-Ribuot, P. CARMELIET, A. Furber, V. Martin, A. Berdeaux, B. Ghaleh & F. Prunier. Role of hypoxia inducible factor-1 $\alpha$  in remote limb ischemic preconditioning. **J Mol Cel Cardiol** 65C: 98-104 (2013) (IF = 5.1).
515. R. Quintens, S. Singh, K. Lemaire, K. De Bock, M. Granvik, A. Schraenen, I.O. Vroegrijk, V. Costa, P. Van Noten, D. Lambrechts, S. Lehnert, L. Van Lommel, L. Thorrez, G. De Faudeur, J.A. Romijn,

- J.M. Shelton, L. Scorrano, H.R. Lijnen, P.J. Voshol, P. CARMELIET, P.P. Mammen & F. Schuit. Mice deficient in the respiratory chain gene *Cox6a2* are protected against high-fat diet-induced obesity and insulin resistance. **PLoS one** 8: e56719 (2013) (IF = 3.5).
516. P.L. Omouendze, V.J. Henry, B. Porte, N. Dupre, P. CARMELIET, B.J. Gonzalez, S. Marret & P. Leroux. Hypoxia-ischemia or excitotoxin-induced tissue plasminogen activator- dependent gelatinase activation in mice neonate brain microvessels. **PLoS one** 8: e71263 (2013) (IF = 3.5).
517. A. Verheyen, E. Peeraer, D. Lambrechts, K. Poesen, P. CARMELIET, M. Shibuya, I. Pintelon, J.P. Timmermans, R. Nuydens & T. Meert. Therapeutic potential of VEGF and VEGF-derived peptide in peripheral neuropathies. **Neuroscience** 244: 77-89 (2013) (IF = 3.4).
518. A. McGraw, J. Bagley, W. S. Chen, C. Galayda, H. Nickerson, A. Armani, M. Caprio, P. CARMELIET & I. Jaffe. Aldosterone increases early atherosclerosis and promotes plaque inflammation through a placental growth factor-dependent mechanism. **J Am Heart Assoc** 2: e000018 (2013) (IF = 2.8).
519. A. Ny, W. Vandeveld, P. Hohensinner, M. Beerens, I. Geudens, A. Diez-Juan, K. Brepoels, S. Plaisance, P.A. Krieg, T. Langenberg, S. Vinckier, A. Lutun, P. CARMELIET & M. Dewerchin, A transgenic *Xenopus laevis* reporter model to study lymphangiogenesis. **Biol Open** 2: 882-90 (2013) (IF = 2.4).

## 2014

520. B. Ghesquière, B. Wong, A. Kuchnio & P. CARMELIET. Metabolism of stromal and immune cells in health and disease. **Nature** 511: 167-76 (2014) (Review) (IF = 42.3). [Pubmed Link](#)
521. F. De Smet, A. Christopoulos & P. CARMELIET, Allosteric targeting of receptor tyrosine kinases. **Nat Biotechnol** 32: 1113-20 (2014) (IF = 32.4). [Pubmed Link](#)
522. H. Maes, A. Kuchnio, A. Peric, S. Moens, K. Nys, K. De Bock, A. Quaegebeur, S. Schoors, M. Georgiadou, J. Wouters, S. Vinckier, H. Vankelecom, M. Garmyn, A. C. Vion, F. Radtke, C. Boulanger, H. Gerhardt, E. Dejana, M. Dewerchin, B. Ghesquiere, W. Annaert, P. Agostinis & P. CARMELIET. Tumor vessel normalization by chloroquine independent of autophagy. **Cancer Cell** 26: 190-206 (2014) (IF = 28.1) (highlighted by (inter)-national press). [Pubmed Link](#)
523. K. Bajou, S. Herkenne, V. L. Thijssen, S. D'Amico, N. Q. Nguyen, A. Bouche, S. Tabruyn, M. Srahna, J. Y. Carabin, O. Nivelles, C. Paques, I. Cornelissen, M. Lion, A. Noel, A. Gils, S. Vinckier, P. J. Declerck, A. W. Griffioen, M. Dewerchin, J. A. Martial, P. CARMELIET & I. Struman. PAI-1 mediates the antiangiogenic and fibrinolytic activity of 16K prolactin. **Nat Med** 7: 741-7 (2014) (IF = 24.3).
524. S. Schoors, K. De Bock, A. R. Cantelmo, M. Georgiadou, B. Ghesquière, S. Cauwenberghs, A. Kuchnio, B.W. Wong, A. Quaegebeur, J. Goveia, F. Bifari, X. Wang, R. Blanco, B. Tembuyser, I. Cornelissen, A. Bouche, S. Vinckier, S. Diaz-Moralli, H. Gerhardt, S. Telang, M. Cascante, J. Chesney, M. Dewerchin & P. CARMELIET. Partial and transient reduction of glycolysis by PFKFB3-blockade reduces pathological angiogenesis. **Cell Metab** 19: 37-48 (2014) (IF = 13.7). [Pubmed Link](#)
525. H. Maes, A. Kuchnio, P. CARMELIET & P. Agostinis, How to teach an old dog new tricks: Autophagy-independent action of chloroquine on the tumor vasculature. **Autophagy** 10: 2082-4 (2014) (IF = 11.4).
526. J. Goveia, A. Zecchin, F.M. Rodriguez, S. Moens, P.C. Stapor & P. CARMELIET. Endothelial cell differentiation by SOX17: promoting the tip cell or stalking its neighbor instead? **Circ Res** 115: 205-7 (2014) (Comment Editorial) (IF = 11.1).
527. A.T. Henze, B.K. Garvalov, S. Seidel, A.M. Cuesta, M. Ritter, A. Filatova, F. Foss, H. Dopeso, C.L. Essmann, P.H. Maxwell, G. Reifenberger, P. CARMELIET, A. Acker-Palmer & T. Acker. Loss of PHD3 allows tumours to overcome hypoxic growth inhibition and sustain proliferation through EGFR. **Nat Commun** 5: 5582 (2014) (IF = 10.7).
528. M. Manetti, I. Rosa, A.F. Milia, S. Guiducci, P. CARMELIET, L. Ibba-Manneschi & M. Matucci-Cerinic. Inactivation of urokinase-type plasminogen activator receptor (uPAR) gene induces dermal and pulmonary fibrosis and peripheral microvasculopathy in mice: a new model of experimental scleroderma? **Ann Rheum Dis** 73: 1700-9 (2014) (IF = 9.1).
529. D. Laoui, E. Van Overmeire, G. Di Conza, C. Aldeni, J. Keirsse, Y. Morias, K. Movahedi, I. Houbracken, E. Schouppe, Y. Elkrim, O. Karroum, B. Jordan, P. CARMELIET, C. Gysemans, P. De Baetselier, M. Mazzone & J.A. Van Ginderachter. Tumor hypoxia does not drive differentiation of

- tumor-associated macrophages but rather fine-tunes the M2-like macrophage population. **Cancer Res** 74: 24-30 (2014) (IF = 8.6).
530. F. Morfoisse, A. Kuchnio, C. Frainay, A. Gomez-Brouchet, MB Delisle, S. Marzi, A. C. Helfer, F. Hantelys, F. Pujol, J. Guillermet-Guibert, C. Bousquet, M. Dewerchin, S. Pyronnet, A.C. Prats, P. CARMELIET & B. Garmy-Susini. Hypoxia induces VEGF-C expression in metastatic tumor cells via a HIF-1alpha-independent translation-mediated mechanism. **Cell Rep** 6: 155-67 (2014) (IF = 8.3). [Pubmed Link](#)
531. G. Mountzios, G. Pentheroudakis & P. CARMELIET. Bevacizumab and micrometastases: Revisiting the preclinical and clinical rollercoaster. **Pharmacol Ther** 141: 117-24 (2014) (Review) (IF = 7.8).
532. J. Goveia, P.C. Stapor & P. CARMELIET. Principles of targeting endothelial cell metabolism to treat angiogenesis and endothelial cell dysfunction in disease. **EMBO Mol Med** 6: 1105-20 (2014) (Review) (IF = 7.8).
533. F. De Smet, B. Tembuysen, A. Lenard, F. Claes, J. Zhang, C. Michielsens, A. Van Schepdael, J.M. Herbert, F. Bono, M. Affolter, M. Dewerchin & P. CARMELIET. Fibroblast growth factor signaling affects vascular outgrowth and is required for the maintenance of blood vessel integrity. **Chem Biol** 21: 1310-7 (2014) (IF = 6.6).
534. S.B. Oh, C.J. Byun, J.H. Yun, D.G. Jo, P. CARMELIET, J.Y. Koh & J.Y. Lee. Tissue plasminogen activator arrests Alzheimer's disease pathogenesis. **Neurobiol Aging** 35: 511-9 (2014) (IF = 6.2).
535. S. Bobic, V. Hox, I. Callebaut, S. Vinckier, B. Jonckx, J.M. Stassen, M. Jorissen, P. Gevaert, P. CARMELIET, C. Bachert, J.L. Ceuppens & P.W. Hellings. Vascular endothelial growth factor receptor 1 expression in nasal polyp tissue. **Allergy** 69: 237-45 (2014) (IF = 5.9).
536. P.C. Stapor, X. Wang, J. Goveia, S. Moens & P. CARMELIET. Angiogenesis revisited – role and therapeutic potential of targeting endothelial metabolism. **J. Cell Sci** 127: 4331-41 (2014) (Review) (IF = 5.9).
537. S. Moens, J. Goveia, P.C. Stapor, A.R. Cantelmo & P. CARMELIET. The multifaceted activity of VEGF in angiogenesis - Implications for therapy responses. **Cytokine Growth Factor Rev** 25: 473-82 (2014) (Review) (IF = 5.4).
538. S. Schoors; A.R. Cantelmo, M. Georgiadou, P. Stapor, X. Wang, A. Quaegebeur, S. Cauwenberghs, B.W. Wong, F. Bifari, I. Decimo, L. Schoonjans, K. De Bock, M. Dewerchin & P. CARMELIET. Incomplete and transitory decrease of glycolysis: A new paradigm for anti-angiogenic therapy? **Cell Cycle** 13:16-22 (2014) (IF = 5.3). [Pubmed Link](#)
539. D. Lambrechts, M. Moisse, P. Delmar, D.W. Miles, N. Leighl, B. Escudier, E. Van Cutsem, A.T. Bansal, P. CARMELIET, S.J. Scherer, S. de Haas & C. Pallaud. Genetic markers of bevacizumab-induced hypertension. **Angiogenesis** 17: 685-94 (2014) (IF = 4.8).
540. S. de Haas, P. Delmar, A.T. Bansal, M. Moisse, D.W. Miles, N. Leighl, B. Escudier, E. Van Cutsem, P. CARMELIET, S.J. Scherer, C. Pallaud & D. Lambrechts. Genetic variability of VEGF pathway genes in six randomized phase III trials assessing the addition of bevacizumab to standard therapy. **Angiogenesis** 17: 909-20 (2014) (IF = 4.8).
541. C. d'Audigier, B. Gautier, A. Yon, J. M. Alili, C. L. Guerin, S. M. Evrard, A. Godier, S. Haviari, M. Reille-Serroussi, F. Huguenot, B. Dizier, N. Inguibert, D. Borgel, I. Bieche, C. Boisson-Vidal, C. Roncal, P. CARMELIET, M. Vidal, P. Gaussem & D.M. Smadja. Targeting VEGFR1 on endothelial progenitors modulates their differentiation potential. **Angiogenesis** 17: 603-16 (2014) (IF = 4.8)
542. P. Leroux, P.L. Omouendze, V. Roy, N. Dourmap, B.J. Gonzalez, C. Brasse-Lagnel, P. CARMELIET, I. Leroux-Nicollet & S. Marret. Age-dependent neonatal intracerebral hemorrhage in plasminogen activator inhibitor 1 knockout mice. **J Neuropathol Exp Neurol** 73: 387-402 (2014) (IF = 4.3).
543. M. Dewerchin & P. CARMELIET. Placental growth factor in cancer. **Expert Opin Ther Targets** 18: 1339-54 (2014) (Review) (IF = 4.1).
544. C. Rico, A. Dodelet-Devillers, M. Paquet, M. Tsoi, E. Lapointe, P. CARMELIET & D. Boerboom. HIF1 activity in granulosa cells is required for FSH-regulated Vegfa expression and follicle survival in mice. **Biol Reprod** 90: 135-9 (2014) (IF = 3.4).
545. M.T. Ratsep, P. CARMELIET, M.A. Adams & B.A. Croy, Impact of placental growth factor deficiency on early mouse implant site angiogenesis. **Placenta** 35: 772-5 (2014) (IF = 3.3).

546. A. des Rieux, P. De Berdt, E. Ansorena, B. Ucakar, J. Damien, O. Schakman, E. Audouard, C. Bouzin, D. Auhl, T. Simon-Yarza, O. Feron, M.J. Blanco-Prieto, P. CARMELIET, C. Bailly, F. Clotman & V. Preat. Vascular endothelial growth factor-loaded injectable hydrogel enhances plasticity in the injured spinal cord. **J Biomed Mater Res Part A** 102: 2345-55 (2014) (IF = 2.8).
547. D. Verdegem, S. Moens, P. Stapor & P. CARMELIET, Endothelial cell metabolism: parallels and divergences with cancer cell metabolism. **Cancer Metab** 2: 19 (2014) (Review) (IF = n.a.).

## 2015

548. S. Schoors, U. Bruning, R. Missiaen, K.C. Queiroz, G. Borgers, I. Elia, A. Zecchin, A.R. Cantelmo, S. Christen, J. Goveia, W. Heggermont, L. Godde, S. Vinckier, P.P. Van Veldhoven, G. Eelen, L. Schoonjans, H. Gerhardt, M. Dewerchin, M. Baes, K. De Bock, B. Ghesquiere, S.Y. Lunt, S.M. Fendt & P. CARMELIET. Fatty acid carbon is essential for dNTP synthesis in endothelial cells. **Nature** 520: 192-197 (2015) (IF = 42.3) (Full Article, with News & Views in Nature, listed as a "highly cited" publication by Web of Science) (highlighted by (inter)-national press). [Pubmed Link](#)
549. G. Coppiello, M. Collantes, M.S. Sirerol-Piquer, S. Vandewijngaert, S. Schoors, M. Swinnen, I. Vandersmissen, P. Herijgers, B. Topal, J. van Loon, J. Goffin, F. Prosper, P. CARMELIET, J.M. Garcia-Verdugo, S. Janssens, I. Penuelas, X.L. Aranguren & A. Lutun. Meox2/Tcf15 Heterodimers Program the Heart Capillary Endothelium for Cardiac Fatty Acid Uptake. **Circulation** 131: 815-26 (2015) (IF = 14.9).
550. G. Eelen, P. de Zeeuw, M. Simons & P. CARMELIET. Endothelial cell metabolism in normal and diseased vasculature. **Circ Res** 116: 1231-44 (2015) (Review) (IF = 11.1) (listed as a "highly cited" publication by Web of Science).
551. M. Simons, K. Alitalo, B. Annex, H.G. Augustin, C. Beam, B.C. Berk, T. Byzova, P. CARMELIET, W. Chilian, J.P. Cooke, G. E. Davis, A. Eichmann, M.L. Iruela-Arispe, E. Keshet, A.J. Sinusas, C. Ruhrberg, Y.J. Woo, S. Dimmeler & American Heart Association Council on Basic Cardiovascular, S. Council on Cardiovascular & Anesthesia. State-of-the-Art Methods for Evaluation of Angiogenesis and Tissue Vascularization: A Scientific Statement from the American Heart Association. **Circ Res** 116: e99-132 (2015) (Review) (IF = 11.1).
552. H. Huang, J. He, D. Johnson, Y. Wei, Y. Liu, S. Wang, G. A. Luty, E. J. Duh, P. CARMELIET & R. D. Semba. Deletion of placental growth factor prevents diabetic retinopathy and is associated with Akt activation and HIF1 $\alpha$ -VEGF pathway inhibition. **Diabetes** 64: 200-12 (2015) (IF=8.7).
553. A. Kuchnio, S. Moens, U. Bruning, K. Kuchnio, B. Cruys, B. Thienpont, M. Broux, A. A. Ungureanu, R. Leite de Oliveira, F. Bruyere, H. Cuervo, A. Manderveld, A. Carton, J. R. Hernandez-Fernaud, S. Zanivan, C. Bartic, J. M. Foidart, A. Noel, S. Vinckier, D. Lambrechts, M. Dewerchin, M. MazzoneA. & P. CARMELIET. The cancer cell oxygen sensor PHD2 promotes metastasis via activation of cancer-associated fibroblasts. **Cell Rep** 12: 992-1005 (2015) (IF = 8.3) (highlighted by (inter)-national press). [Pubmed Link](#)
554. G.B. Ferreira, A.S. Vanherwegen, G. Eelen, A.C. Gutierrez, L. Van Lommel, K. Marchal, L. Verlinden, A. Verstuylf, T. Nogueira, M. Georgiadou, F. Schuit, D.L. Eizirik, C. Gysemans, P. CARMELIET, L. Overbergh & C. Mathieu. Vitamin D3 Induces Tolerance in Human Dendritic Cells by Activation of Intracellular Metabolic Pathways. **Cell Rep** 10: 711-25 (2015) (IF = 8.3).
555. A. Zecchin, P.C. Stapor, J. Goveia & P. CARMELIET. Metabolic pathway compartmentalization: an underappreciated opportunity? **Curr Opin Biotechnol** 34: 73-81 (2015) (Review) (IF = 8.0).
556. S. Herkenne, C. Paques, O. Nivelles, M. Lion, K. Bajou, T. Pollenus, M. Fontaine, P. CARMELIET, J.A. Martial, N.Q. Nguyen & I. Struman, The interaction of uPAR with VEGFR2 promotes VEGF-induced angiogenesis. **Sci Signal** 8(403): ra117 (2015) (IF = 6.3).
557. A. Kuchnio, M. Dewerchin & P. CARMELIET. The PHD2 oxygen sensor paves the way to metastasis. **Oncotarget** 6: 35149-50 (2015) Editorial (IF = 6.3).
558. K.K. Chereddy, A. Lopes, S. Koussoroplis, V. Payen, C. Moia, H. Zhu, P. Sonveaux, P. CARMELIET, A. des Rieux, G. Vandermeulen & V. Preat. Combined effects of PLGA and vascular endothelial growth factor promote the healing of non-diabetic and diabetic wounds. **Nanomedicine** 11: 1975-84 (2015) (IF = 5.4).



559. A. Peeters, A.B. Shinde, R. Dirx, J. Smet, K. De Bock, M. Espeel, I. Vanhorebeek, A. Vanlander, R. Van Coster, P. CARMELIET, M. Fransen, P.P. Van Veldhoven & M. Baes. Mitochondria in peroxisome-deficient hepatocytes exhibit impaired respiration, depleted DNA, and PGC-1alpha independent proliferation. **Biochim Biophys Acta** 1853: 285-98 (2015) (IF = 5.3).
560. J.K. Manesia, Z. Xu, D. Broekaert, R. Boon, A. van Vliet, G. Eelen, T. Vanwelden, S. Stegen, N. Van Gastel, A. Pascual-Montano, S.M. Fendt, G. Carmeliet, P. CARMELIET, S. Khurana & C.M. Verfaillie. Highly proliferative primitive fetal liver hematopoietic stem cells are fueled by oxidative metabolic pathways. **Stem Cell Res** 15: 715-21 (2015) (IF = 5.3).
561. J. Kalucka, R. Missiaen, M. Georgiadou, S. Schoors, C. Lange, K. De Bock, M. Dewerchin & P. CARMELIET. Metabolic control of the cell cycle. **Cell Cycle** 14: 3379-88 (2015) (Review) (IF = 4.5).
562. A.R. Cantelmo, A. Brajic & P. CARMELIET. Endothelial Metabolism Driving Angiogenesis: Emerging Concepts and Principles. **Cancer J** 21: 244-9 (2015) (Review) (IF = 4.2).
563. A. Zecchin, G. Borgers & P. CARMELIET. Endothelial cells and cancer cells: metabolic partners in crime? **Cur Opin Hematol** 22: 234-42 (2015) (Review) (IF = 4.0).
564. L. Lieben, L. Verlinden, R. Masuyama, S. Torrekens, K. Moermans, L. Schoonjans, P. CARMELIET & G. Carmeliet. Extra-intestinal calcium handling contributes to normal serum calcium levels when intestinal calcium absorption is suboptimal. **Bone** 81: 502-12 (2015) (IF = 3.9).
565. P. de Zeeuw, B.W. Wong & P. CARMELIET. Metabolic Adaptations in Diabetic Endothelial Cells. **Circ J** 79: 934-41 (2015) (Review) (IF = 3.6).
566. K.L. Aasa, B. Zavan, R.L. Luna, P.G. Wong, N.M. Ventura, M.Y. Tse, P. CARMELIET, M.A. Adams, S.C. Pang & B.A. Croy. Placental Growth Factor Influences Maternal Cardiovascular Adaptation to Pregnancy in Mice. **Biol Reprod** 92: 44, 1-10 (2015) (IF = 3.4).
567. S. Vandekeere, M. Dewerchin & P. CARMELIET. Angiogenesis revisited: an overlooked role of endothelial cell metabolism in vessel sprouting. **Microcirculation** 22: 509-17 (2015) (Review) (IF = 2.5).

## 2016

568. K. Wilhelm, K. Happel, G. Eelen, S. Schoors, M.F. Oellerich, R. Lim, B. Zimmermann, I.M. Aspalter, C.A. Franco, T. Boettger, T. Braun, M. Fruttiger, K. Rajewsky, C. Keller, J.C. Bruning, H. Gerhardt, P. CARMELIET & M. Potente. FOXO1 couples metabolic activity and growth state in the vascular endothelium. **Nature** 529: 216-20 (2016) (IF = 42.3) (Listed as "highly cited paper" on Web of Science) (Highlighted by national and international press). [Pubmed Link](#)
569. B. Thienpont, J. Steinbacher, H. Zhao, F. D'Anna, A. Kuchnio, A. Ploumakis, B. Ghesquière, L. Van Dyck, B. Boeckx, L. Schoonjans, E. Hermans, F. Amant, V. N. Kristensen, K.P. Koh, M. Mazzone, M. Coleman, T. Carell, P. CARMELIET & D. Lambrechts. Tumor hypoxia causes DNA hypermethylation by reducing TET activity. **Nature** 537: 63-8 (2016) (IF = 42.3) (Highlighted by national and international press). [Pubmed Link](#)
570. R. Gallardo, M. Ramakers, F. De Smet, F. Claes, L. Khodaparast, J.R. Couceiro, T. Langenberg, M. Siemons, S. Nyström, L.J. Young, R.F. Laine, L. Young, E. Radaelli, I. Benilova, M. Kumar, A. Staes, M. Desager, M. Beerens, P. Vandervoort, A. Luttun, K. Gevaert, G. Bormans, M. Dewerchin, J. Van Eldere, P. CARMELIET, G. Vande Velde, C. Verfaillie, C.F. Kaminski, B. De Strooper, P. Hammarström, K.P. Nilsson, L. Serpell, J. Schymkowitz & F. Rousseau. De novo design of a biologically active amyloid. **Science** 354: 6313 (2016) (IF = 34.6).
571. A.R. Cantelmo, L.C. Conradi, A. Brajic, J. Goveia, J. Kalucka, A. Pircher, P. Chaturvedi, J. Hol, B. Thienpont, L.A. Teuwen, S. Schoors, B. Boeckx, J. Vriens, A. Kuchnio, K. Veys, B. Cruys, L. Finotto, L. Treppe, T.E. Stav-Noraas, F. Bifari, P. Stapor, I. Decimo, K. Kampen, K. De Bock, G. Haraldsen, L. Schoonjans, T. Rabelink, G. Eelen, B. Ghesquière, J. Rehman, D. Lambrechts, A.B. Malik, M. Dewerchin & P. CARMELIET. Inhibition of the glycolytic activator PFKFB3 in endothelium induces tumor vessel normalization, impairs metastasis, and improves chemotherapy. **Cancer Cell** 30: 968-85 (2016) (IF = 27.4) (Highlighted by Preview in Cancer Cell and by national and international press). [Pubmed Link](#)
572. C. Herbert, U. Schieborr, K. Saxena, J. Juraszek, F. De Smet, C. Alcouffe, M. Bianciotto, G. Saladino, D. Sibrac, D. Kudlinzki, S. Sreeramulu, A. Brown, P. Rigon, J.P. Hérault, G. Lassalle, T.L. Blundell, F.



- Rousseau, A. Gils, J. Schymkowitz, P. Tompa, JM. Herbert, P. CARMELIET, FL. Gervasio, H. Schwalbe & F. Bono. Molecular Mechanism of SSR128129E, an Extracellularly Acting, Small-Molecule, Allosteric Inhibitor of FGF Receptor Signaling. **Cancer Cell** 30: 176-78 (2016) (corrigendum) (IF = 27.4).
573. L. Treppe, L.C. Conradi, U. Harjes & P. CARMELIET. Manipulating Angiogenesis by targeting endothelial metabolism: hitting the engine rather than the drivers - a new perspective? **Pharmacol Rev** 68: 872-87 (2016) (Review) (IF = 18.4). [Pubmed Link](#)
574. C. Lange, E. Storkebaum, C.R. de Almodovar, M. Dewerchin & P. CARMELIET. Vascular endothelial growth factor: a neurovascular target in neurological diseases. **Nat Rev Neurol** 12: 439-54 (Review) (2016) (IF = 18.4). [Pubmed Link](#)
575. S. Rafii & P. CARMELIET. VEGF-B Improves Metabolic Health through Vascular Pruning of Fat. **Cell Metab** 23(4): 571-3 (2016) (Review) (IF = 16.7).
576. M.M. Wouters, D. Balemans, S. Van Wanrooy, J. Dooley, V. Cibert-Goton, Y.A. Alpizar, E.E. Valdez-Morales, Y. Nasser, P.P. Van Veldhoven, W. Vanbrabant, S. Van der Merwe, R. Mols, B. Ghesquiere, C. Cirillo, I. Kortekaas, P. CARMELIET, W.E. Peetermans, S. Vermeire, P. Rutgeerts, P. Augustijns, P.W. Hellings, A. Belmans, S. Vanner, D.C. Bulmer, K. Talavera, P. Vanden Berghe, A. Liston & G.E. Boeckxstaens. Histamine Receptor H1-mediated Sensitization of TRPV1 Mediates Visceral Hypersensitivity and Symptoms in Patients With Irritable Bowel Syndrome. **Gastroenterology** 150: 875-87 e79 (2016) (IF = 16.7).
577. S. Stegen, N. van Gastel, G. Eelen, B. Ghesquiere, F. D'Anna, B. Thienpont, J. Goveia, S. Torrekens, R. Van Looveren, F.P. Luyten, P.H. Maxwell, B. Wielockx, D. Lambrechts, S.M. Fendt, P. CARMELIET & G. Carmeliet. HIF-1alpha promotes glutamine-mediated redox homeostasis and glycogen-dependent bioenergetics to support postimplantation bone cell survival. **Cell Metab** 23: 265-79 (2016) (IF = 16.7). [Pubmed Link](#)
578. A. Quaegebeur, I. Segura, R. Schmieder, D. Verdegem, I. Decimo, F. Bifari, T. Dresselaers, G. Eelen, D. Ghosh, S.M. Davidson, S. Schoors, D. Broekaert, B. Cruys, K. Govaerts, C. De Legher, A. Bouche, L. Schoonjans, M.S. Ramer, G. Hung, G. Bossaert, D.W. Cleveland, U. Himmelreich, T. Voets, R. Lemmens, C.F. Bennett, W. Robberecht, K. De Bock, M. Dewerchin, B. Ghesquiere, S.M. Fendt & P. CARMELIET. Deletion or Inhibition of the Oxygen Sensor PHD1 Protects against Ischemic Stroke via Reprogramming of Neuronal Metabolism. **Cell Metab** 23: 280-91 (2016) (IF = 16.7) (Highlighted by national and international press). [Pubmed Link](#)
579. M. Wenes, M. Shang, M. Di Matteo, J. Goveia, R. Martin-Perez, J. Serneels, H. Prenen, B. Ghesquiere, P. CARMELIET & M. Mazzone. Macrophage Metabolism Controls Tumor Blood Vessel Morphogenesis and Metastasis. **Cell Metab** 24: 701-15 (2016) (IF = 16.7) (Highlighted by Preview in Cell Metab and by national and international press).
580. E. Marsch, J.A. Demandt, T.L. Theelen, B.M. Tullemans, K. Wouters, M.R. Boon, T.H. van Dijk, M.J. Gijbels, L.J. Dubois, S.J. Meex, M. Mazzone, G. Hung, E.A. Fisher, E.A. Biessen, M.J. Daemen, P.C. Rensen, P. CARMELIET, A.K. Groen & J.C. Sluimer. Deficiency of the oxygen sensor prolyl hydroxylase 1 attenuates hypercholesterolaemia, atherosclerosis, and hyperglycaemia. **Eur Heart J** 37(39): 2993-97 (2016) (IF = 15.2).
581. M.S. Eiyimo Mwa Mpollo, E.B. Brandt, S.K. Shanmukhappa, P.I. Arumugam, S. Tiwari, A. Loberg, D. Pillis, T. Rizvi, M. Lindsey, B. Jonck, P. CARMELIET, V.K. Kalra, T.D. Le Cras, N. Ratner, M. Wills-Karp, G.K. Hershey & P. Malik. Placenta growth factor augments airway hyperresponsiveness via leukotrienes and IL-13. **J Clin Invest** 126: 571-84 (2016) (IF = 13.3).
582. B. Cruys, B.W. Wong, A. Kuchnio, D. Verdegem, AR. Cantelmo, LC Conradi, S Vandekeere, A. Bouché, I Cornelissen, S. Vinckier, R.M. Merks, E Dejana, H. Gerhardt, M. Dewerchin, K. Bentley & P. CARMELIET. Glycolytic regulation of cell rearrangement in angiogenesis. **Nat Commun** 7: 12240 (2016) (IF = 11.4).
583. C. Lange, M. Turrero Garcia, I. Decimo, F. Bifari, G. Eelen, A. Quaegebeur, R. Boon, H. Zhao, B. Boeckx, J. Chang, C. Wu, F. Le Noble, D. Lambrechts, M. Dewerchin, C.J. Kuo, W.B. Huttner & P. CARMELIET. Relief of hypoxia by angiogenesis promotes neural stem cell differentiation by targeting glycolysis. **EMBO J** 35: 924-41 (2016) (IF = 10.4) (highlighted by (inter)-national press).
584. R. Jones, K. McDonald, J. A. Willson, B. Ghesquiere, D. Sammut, E. Daniel, A. J. Harris, A. Lewis, R. Thompson, R. S. Dickinson, T. Plant, F. Murphy, P. Sadiku, B. G. Keevil, P. CARMELIET, M. K.

- Whyte, J. Newell-Price & S. R. Walmsley. Mutations in Succinate Dehydrogenase B (*SDHB*) enhance neutrophil survival independent of HIF-1 $\alpha$  expression. **Blood** 127: 2641-4 (2016) (IF = 10.4).
585. M. Manetti, I. Rosa, M. Fazi, S. Guiducci, P. CARMELIET, L. Ibba-Manneschi & M. Matucci-Cerinic. Systemic sclerosis-like histopathological features in the myocardium of uPAR-deficient mice. **Ann Rheum Dis** 75: 474-8 (2016) (IF = 10.3).
586. U. Harjes, C. Verfaillie & P. CARMELIET. Endothelial Barrier and Metabolism: New Kids on the Block Regulating Bone Marrow Vascular Niches. **Dev Cell** 37: 210-12 (2016) (Preview) (IF = 9.7).
587. J. Incio, J. Tam, N.N. Rahbari, P. Suboj, D.T. McManus, S.M. Chin, T.D. Vardam, A. Batista, S. Babykutty, K. Jung, A. Khachatryan, T. Hato, J.A. Ligibel, I.E. Krop, S.B. Puchner, C.L. Schlett, U. Hoffmann, M. Ancukiewicz, M. Shibuya, P. CARMELIET, R. Soares, D.G. Duda, R.K. Jain & D. Fukumura. PIGF/VEGFR-1 Signaling Promotes Macrophage Polarization and Accelerated Tumor Progression in Obesity. **Clin Cancer Res** 22(12): 2993-3004 (2016) (IF = 8.7).
588. J. Goveia, A. Pircher, L.C. Conradi, J. Kalucka, V. Lagani, M. Dewerchin, G. Eelen, R. J. DeBerardinis, I. Wilson & P. CARMELIET. Meta-analysis of clinical metabolic profiling studies in cancer: challenges and opportunities. **EMBO Mol Med** 8: 1134-42 (2016) (IF = 8.5).
589. I. Segura, C. Lange, E. Knevels, A. Moskalyuk, R. Pulizzi, G. Eelen, T. Chaze, C. Tudor, C. Boulegue, M. Holt, D. Daelemans, M. Matondo, B. Ghesquiere, M. Giugliano, C. Ruiz de Almodovar, M. Dewerchin & P. CARMELIET. The Oxygen Sensor PHD2 Controls Dendritic Spines and Synapses via Modification of Filamin A. **Cell Rep** 14: 2653-67 (2016) (IF=8.3).
590. S. Diaz-Moralli, E. Aguilar, S. Marin, J.F. Coy, M. Dewerchin, M.R. Antoniewicz, O Meca-Cortès, L. Notebaert, B. Ghesquière, G. Eelen, T.M. Thomson, P. CARMELIET & M. Cascante. A key role for transketolase-like 1 in tumor metabolic reprogramming. **Oncotarget** 7(32): 51875-97 (2016) (IF = 6.3).
591. Y. Jung, A.M. Decker, J. Wang, E. Lee, L.A. Kana, K. Yumoto, F.C. Cackowski, J. Rhee, P. CARMELIET, L. Buttitta, T.M. Morgan & R.S. Taichman. Endogenous GAS6 and Mer receptor signaling regulate prostate cancer stem cells in bone marrow. **Oncotarget** 7(18): 25698-711 (2016) (IF = 6.3).
592. U. Harjes, J. Kalucka & P. CARMELIET. Targeting fatty acid metabolism in cancer and endothelial cells. **Crit Rev Oncol Hematol** 97: 15-21 (2016) (Review) (IF = 5.0).
593. S. Stegen, S. Deprez, G. Eelen, S. Torrekens, R. Van Looveren, J. Goveia, B. Ghesquiere, P. CARMELIET & G. Carmeliet. Adequate hypoxia inducible factor 1 $\alpha$  signaling is indispensable for bone regeneration. **Bone** 87: 176-86 (2016) (IF = 3.9).
594. A. Pircher, L. Treppe, N. Bodrug & P. CARMELIET. Endothelial cell metabolism: A novel player in atherosclerosis? Basic principles and therapeutic opportunities. **Atherosclerosis** 253: 247-57 (2016) (Review) (IF = 3.9).
595. D. Verdegem, D. Lambrechts, P. CARMELIET & B. Ghesquière. Improved metabolite identification with MIDAS and MAGMa through MS/MS spectral dataset-driven parameter optimization. **Metabolomics** 12: 98 (2016) (IF = 3.7).
596. R.L. Luna, V.R. Kay, M.T. Ratsep, K. Khalaj, M. Bidarimath, N. Peterson, P. CARMELIET, A. Jin & B.A. Croy. Placental growth factor deficiency is associated with impaired cerebral vascular development in mice. **Mol Hum Reprod** 22(2): 130-42 (2016) (IF = 3.7).
597. Y.P. Vandewynckel, D. Laukens, L. Devisscher, E. Bogaerts, A. Paridaens, A. Van den Bussche, S. Raevens, X. Verhelst, C. Van Steenkiste, B. Jonckx, L. Libbrecht, A. Geerts, P. CARMELIET & H. Van Vlierberghe. Placental growth factor inhibition modulates the interplay between hypoxia and unfolded protein response in hepatocellular carcinoma. **BMC Cancer** 16(1): 9 (2016) (IF = 3.4).
598. T. Santos-Ferreira, M. Volkner, O. Borsch, J. Haas, P. Cimalla, P. Vasudevan, P. CARMELIET, D. Corbeil, S. Michalakis, E. Koch, M.O. Karl & M. Ader. Stem Cell-Derived Photoreceptor Transplants Differentially Integrate Into Mouse Models of Cone-Rod Dystrophy. **Invest Ophthalmol Vis Sci** 57(7): 3509-20 (2016) (IF = 3.4).
599. T. Santos-Ferreira, M. Volkner, O. Borsch, J. Haas, P. Cimalla, P. Vasudevan, P. CARMELIET, D. Corbeil, S. Michalakis, E. Koch, M.O. Karl & M. Ader. Author Response: Possibility of Cytoplasmic Transportation Between Donor-Host Cell Following Photoreceptor Transplantation. **Invest Ophthalmol Vis Sci** 57(13): 5336-7 (2016) (IF = 3.4).
600. S.F. Fitzpatrick, Z. Fabian, B. Schaible, C.R. Lenihan, T. Schwarzl, J. Rodriguez, X. Zheng, Z. Li, M.M. Tambuwala, D.G. Higgins, Y. O'Meara, C. Slattery, M.C. Manresa, P. Fraisl, U. Bruning, M.

- Baes, P. CARMELIET, G. Doherty, A. von Kriegsheim, E.P. Cummins & C.T. Taylor, Prolyl hydroxylase-1 regulates hepatocyte apoptosis in an NF-kappaB-dependent manner. **Biochem Biophys Res Commun** 474(3): 579-86 (2016) (IF = 2.9).
601. N. Kaesler, S. Immendorf, C. Ouyang, M. Herfs, N. Drummen, P. CARMELIET, C. Vermeer, J. Floege, T. Kruger & G. Schlieper. Gas6 protein: its role in cardiovascular calcification. **BMC Nephrol** 17(1): 52 (2016) (IF = 1.69).
602. E. Bogaerts, A. Paridaens, X. Verhelst, P. CARMELIET, A. Geerts, H. Van Vlierberghe & L. Devisscher. Effect of prolyl hydroxylase domain 2 haplodeficiency on liver progenitor cell characteristics in early mouse hepatocarcinogenesis. **EXCLI J** 15: 687-98 (2016) (IF = 1.2).
603. R. Missiaen, S. Schoors, M. Dewerchin & P. CARMELIET. Het endotheelcel metabolisme: een nieuw aangrijpingspunt voor de onderdrukking van pathologische bloedvatvorming. **Oncohematology** 9: 8-12 (2016) (Review) (IF = n.a.).
604. H. Maes, A. Kuchnio, P. CARMELIET & P. Agostinis. Chloroquine anticancer activity is mediated by autophagy-independent effects on the tumor vasculature. **Mol Cell Oncol** 3(1): e970097 (2016) (Review) (IF = n.a.).

## 2017

605. P. Yu, K. Wilhelm, A. Dubrac, J.K. Tung, T.C. Alves, J.S. Fang, Y. Xie, J. Zhu, Z. Chen, F. De Smet, J. Zhang, S.W. Jin, L. Sun, H. Sun, R.G. Kibbey, K.K. Hirschi, N. Hay, P. CARMELIET, T.W. Chittenden, A. Eichmann, M. Potente, & M. Simons. FGF-dependent metabolic control of vascular development. **Nature** 545(7653): 224-8 (2017) (IF = 41.5). [Pubmed Link](#)
606. B.W. Wong, X. Wang, A. Zecchin, B. Thienpont, I. Cornelissen, J. Kalucka, M. García-Caballero, R. Missiaen, H. Huang, U. Brünig, S. Blacher, S. Vinckier, J. Gouveia, M. Knobloch, H. Zhao, C. Dierkes, C. Shi, R. Hägerling, V. Moral-Dardé, S. Wyns, M. Lippens, S. Jessberger, S.-M. Fendt, A. Lutun, A. Noel, F. Kiefer, B. Ghesquière, L. Moons, L. Schoonjans, M. Dewerchin, G. Eelen, D. Lambrechts & P. CARMELIET. The role of fatty acid beta-oxidation in lymphangiogenesis. **Nature** 542, 49-54 (2017) (IF = 41.5) (Highlighted by national and international press). [Pubmed Link](#)
607. F. Bifari, I. Decimo, A. Pino, E. Llorens-Bobadilla, S. Zhao, C. Lange, G. Panuccio, B. Boeckx, B. Thienpont, S. Vinckier, S. Wyns, A. Bouche, D. Lambrechts, M. Giugliano, M. Dewerchin, A. Martin-Villalba & P. CARMELIET. Neurogenic Radial Glia-like Cells in Meninges Migrate and Differentiate into Functionally Integrated Neurons in the Neonatal Cortex. **Cell Stem Cell** 20(3): 360-73 e67(2017) (IF = 23.2) (Highlighted by national and international press) (featured cover article). [Pubmed Link](#)
608. W. A. Heggermont, A. P. Papageorgiou, A. Quaegebeur, S. Deckx, P. Carai, W. Verhesen, G. Eelen, S. Schoors, R. van Leeuwen, S. Alekseev, I. Elzenaar, S. Vinckier, P. Pokreisz, A. S. Walravens, R. Gijssbers, C. Van Den Haute, A. Nickel, B. Schroen, M. van Bilsen, S. Janssens, C. Maack, Y. Pinto, P. CARMELIET & S. Heymans. Inhibition of MicroRNA-146A and Overexpression of its Target Dihydrolipoyl Succinyltransferase Protect Against Pressure-Overload Induced Cardiac Hypertrophy and Dysfunction. **Circulation** 136(8): 747-61 (2017) (IF = 18.8).
609. P. Caruso, B. Dunmore, K. Schlosser, S. Schoors, C. Dos Santos, C. Perez-Iratxeta, J. Lavoie, H. Zhang, L. Long, A. Flockton, M. Frid, P. Upton, A. D'Alessandro, C. Hadinnapola, F. Kiskin, M. Taha, L. Hurst, M. Ormiston, A. Hata, K. Stenmark, P. CARMELIET, D. Stewart & N. Morrell. Identification of microRNA-124 as a major regulator of enhanced endothelial cell glycolysis in pulmonary arterial hypertension via PTBP1 (Polypyrimidine Tract Binding Protein) and Pyruvate Kinase M2. **Circulation** 136(25): 2451-67 (2017) (IF = 18.8).
610. J. Kalucka, L.A. Teuwen, V. Geldhof & P. CARMELIET. How to Cross the Lymphatic Fence: Lessons from Solute Transport. **Circ Res** 120(9): 1376-8 (2017) (Editorial) (IF = 15.2).
611. M. Potente & P. CARMELIET. The link between angiogenesis and endothelial metabolism. **Annu Rev Physiol** 79: 43-66 (2017) (Review) (IF = 14.3).
612. A.R. van Vliet, F. Giordano, S. Gerlo, I. Segura, S. Van Eygen, G. Molenberghs, S. Rocha, A. Houcine, R. Derua, T. Verfaillie, J. Vangindertael, H. De Keersmaecker, E. Waelkens, J. Tavernier,

- J. Hofkens, W. Annaert, P. CARMELIET, A. Samali, H. Mizuno & P. Agostinis. The ER Stress Sensor PERK Coordinates ER-Plasma Membrane Contact Site Formation through Interaction with Filamin-A and F-Actin Remodeling. **Mol Cell** 65(5): 885-99 e86 (2017) (IF = 14.2).
613. P. Sadiku, J.A. Willson, R.S. Dickinson, F. Murphy, A.J. Harris, A. Lewis, D. Sammut, A.S. Mirchandani, E. Ryan, E.R. Watts, A.A.R. Thompson, H.M. Marriott, D.H. Dockrell, C.T. Taylor, M. Schneider, P.H. Maxwell, E.R. Chilvers, M. Mazzone, V. Moral, C.W. Pugh, P.J. Ratcliffe, C.J. Schofield, B. Ghesquiere, P. CARMELIET, M.K.B. Whyte & S.R. Walmsley. Prolyl hydroxylase 2 inactivation enhances glycogen storage and promotes excessive neutrophilic responses. **J Clin Invest** 127(9): 3407-20 (2017) (IF = 13.2).
614. S. Monteagudo, F.M.F. Cornelis, C. Aznar-Lopez, P. Yibmantasiri, L.A. Guns, P. CARMELIET, F. Cailotto & R.J. Lories. DOT1L safeguards cartilage homeostasis and protects against osteoarthritis. **Nat Commun** 8: 15889 (2017) (IF = 12.3).
615. J.R. Hernandez-Fernaund, E. Ruengeler, A. Casazza, L.J. Neilson, E. Pulleine, A. Santi, S. Ismail, S. Lilla, S. Dhayade, I.R. MacPherson, I. McNeish, D. Ennis, H. Ali, F.G. Kugeratski, H. Al Khamici, M. van den Biggelaar, P.V. van den Berghe, C. Cloix, L. McDonald, D. Millan, A. Hoyle, A. Kuchnio, P. CARMELIET, S.M. Valenzuela, K. Blyth, H. Yin, M. Mazzone, J.C. Norman, and S. Zanivan. Secreted CLIC3 drives cancer progression through its glutathione-dependent oxidoreductase activity. **Nat Commun** 8: 14206 (2017) (IF = 12.3).
616. J. Schweisgut, C. Schutt, S. Wust, A. Wietelmann, B. Ghesquiere, P. CARMELIET, S. Drose, K.S. Korach, T. Braun & T. Boettger. Sex-specific, reciprocal regulation of ERalpha and miR-22 controls muscle lipid metabolism in male mice. **EMBO J** 36(9): 1199-214 (2017) (IF = 10.5).
617. H. Huang, S. Vandekeere, J. Kalucka, L. Bierhansl, A. Zecchin, U. Bruning, A. Visnagri, N. Yuldasheva, J. Goveia, B. Cruys, K. Brepoels, S. Wyns, S. Rayport, B. Ghesquiere, S. Vinckier, L. Schoonjans, R. Cubbon, M. Dewerchin, G. Eelen & P. CARMELIET. Role of glutamine and interlinked asparagine metabolism in vessel formation. **EMBO J** 36(16): 2334-52 (2017) (IF = 10.5) (featured cover article).
618. B.W. Wong, E. Marsch, L. Treps, M. Baes & P. CARMELIET. Endothelial cell metabolism in health and disease: impact of hypoxia. **EMBO J** 36:2187-2203 (2017) (Review) (IF = 10.5).
619. W. Sents, B. Meeusen, P. Kalev, E. Radaelli, X. Sagaert, E. Miermans, D. Haesen, C. Lambrecht, M. Dewerchin, P. CARMELIET, J. Westermarck, A. Sablina & V. Janssens. PP2A Inactivation Mediated by PPP2R4 Haploinsufficiency Promotes Cancer Development. **Cancer Res** 77(24): 6825-37 (2017) (IF = 9.1).
620. I. Ben-Batalla, R. Erdmann, H. Jorgensen, R. Mitchell, T. Ernst, G. von Amsberg, P. Schafhausen, J.L. Velthaus, S. Rankin, R.E. Clark, S. Koschmieder, A. Schultze, S. Mitra, P. Vandenberghe, T.H. Brummendorf, P. CARMELIET, A. Hochhaus, K. Pantel, C. Bokemeyer, G.V. Helgason, T.L. Holyoake & S. Loges. Axl Blockade by BGB324 Inhibits BCR-ABL Tyrosine Kinase Inhibitor-Sensitive and -Resistant Chronic Myeloid Leukemia. **Clin Cancer Res** 23(9): 2289-300 (2017) (IF = 10.1).
621. M. Knobloch, G.A. Pilz, B. Ghesquiere, W.J. Kovacs, T. Wegleiter, D.L. Moore, M. Hruzova, N. Zamboni, P. CARMELIET & S. Jessberger. A Fatty Acid Oxidation-Dependent Metabolic Shift Regulates Adult Neural Stem Cell Activity. **Cell Rep** 20(9): 2144-2155 (2017) (IF = 8).
622. K. Van der Borght, C.L. Scott, V. Nindl, A. Bouche, L. Martens, D. Sichien, J. Van Moorlegghem, M. Vanheerswynghels, S. De Prijck, Y. Saeys, B. Ludewig, T. Gillebert, M. Williams, P. CARMELIET & B.N. Lambrecht. Myocardial Infarction Primes Autoreactive T Cells through Activation of Dendritic Cells. **Cell Rep** 18(12): 3005-17 (2017) (IF = 8).
623. M.G. Mori da Cunha, S. Zia, D.V. Beckmann, M.S. Carlon, F.O. Arcolino, M. Albersen, N.L. Pippi, D.L. Graca, C. Gysemans, P. CARMELIET, E. Levchenko, J. Deprest & J. Toelen. Vascular Endothelial Growth Factor Up-regulation in Human Amniotic Fluid Stem Cell Enhances Nephroprotection After Ischemia-Reperfusion Injury in the Rat. **Crit Care Med** 45(1): e86-e96 (2017) (IF = 6.6).
624. S. Van Welden, M. De Vos, B. Wielockx, S.J. Tavernier, M. Dullaers, S. Neyt, B. Descamps, L. Devisscher, S. Devriese, L. Van den Bossche, T. Holvoet, A. Baeyens, C. Correale, S. D'Alessio, C. Vanhove, F. De Vos, B. Verhasselt, G. Breier, B.N. Lambrecht, S. Janssens, P. CARMELIET, S. Danese, D. Elewaut, D. Laukens & P. Hindryckx. Haematopoietic prolyl hydroxylase-1 deficiency promotes M2 macrophage polarization and is both necessary and sufficient to protect against experimental colitis. **J Pathol** 241(4): 547-58 (2017) (IF = 6.2).

625. T. Walchli, A. Ulmann-Schuler, C. Hintermuller, E. Meyer, M. Stamparoni, P. CARMELIET, M.Y. Emmert, O. Bozinov, L. Regli, M.E. Schwab, J. Vogel & S.P. Hoerstrup. Nogo-A regulates vascular network architecture in the postnatal brain. **J Cereb Blood Flow Metab** 37(2): 614-31 (2017) (IF = 6).
626. L. Bierhansl, L.C. Conradi, L. Treps, M. Dewerchin & P. CARMELIET. Central Role of Metabolism in Endothelial Cell Function and Vascular Disease. **Physiology** 32(2): 126-40 (2017) (Review) (IF = 5.9).
627. A. Zecchin, J. Kalucka, C. Dubois & P. CARMELIET How Endothelial Cells Adapt Their Metabolism to Form Vessels in Tumors. **Front Immunol** 8: 1750 (2017) (Review) (IF = 5.5).
628. T. P. Bachor, J. Karbanová, E. Büttner, V. Bermúdez, M.M. Ramella, P. CARMELIET, D. Corbeil & A. M. Suburo. Early ciliary and prominin-1 dysfunctions precede neurogenesis impairment in a mouse model of type 2 diabetes. **Neurobiol Dis** 108: 13-28 (2017) (IF = 5.2).
629. A.R. Cantelmo, A. Pircher, J. Kalucka & P. CARMELIET. Vessel pruning or healing: endothelial metabolism as a novel target? **Expert Opin Ther Targets** 21(3): 239-47 (2017) (Review) (IF = 4.5).
630. L.C. Conradi, A. Brajic, A.R. Cantelmo, A. Bouche, J. Kalucka, A. Pircher, U. Bruning, L.A. Teuwen, S. Vinckier, B. Ghesquiere, M. Dewerchin & P. CARMELIET. Tumor vessel disintegration by maximum tolerable PFKFB3 blockade. **Angiogenesis** 20(4): 599-613 (2017) (IF = 4.3).
631. S.J. Tavernier, N. Vanlangenakker, J. Veters, P. CARMELIET, S. Janssens & B.N. Lambrecht. Opposing regulation and roles for PHD3 in lung dendritic cells and alveolar macrophages. **J Leukocyte Biol** 102(4): 1115-26 (2017) (IF = 4.2).
632. Y. Feng, P. Cui, X. Lu, B. Hsueh, F. Moller Billig, L. Zarnescu Yanez, R. Tomer, D. Boerboom, P. CARMELIET, K. Deisseroth & A.J. Hsueh. CLARITY reveals dynamics of ovarian follicular architecture and vasculature in three-dimensions. **Sci Rep** 7: 44810 (2017) (IF = 4.1).
633. R. Missiaen, F. Morales-Rodriguez, G. Eelen & P. CARMELIET. Targeting endothelial metabolism for anti-angiogenesis therapy: A pharmacological perspective. **Vascul Pharmacol** 90: 8-18 (2017) (Review) (IF = 3.6).
634. N. Draoui, P. de Zeeuw & P. CARMELIET. Angiogenesis revisited from a metabolic perspective: role and therapeutic implications of endothelial cell metabolism. **Open Biol** 7(12) pii: 170219 (2017) (Review) (IF = 3.2).
635. L.A. Teuwen, N. Draoui, C. Dubois & P. CARMELIET. Endothelial cell metabolism: an update anno 2017. **Cur Opin Hematol** 24(3): 240-7 (2017) (Review) (IF = 2.8).
636. J. Kalucka, L. Bierhansl, B. Wielockx, P. CARMELIET & G. Eelen. Interaction of endothelial cells with macrophages-linking molecular and metabolic signaling. **Pflugers Archiv** 469(3-4): 473-83 (2017) (Review) (IF = 2.7).
637. D. Ciarlillo, C. Celeste, P. CARMELIET, D. Boerboom & C. Theoret. A hypoxia response element in the Vegfa promoter is required for basal Vegfa expression in skin and for optimal granulation tissue formation during wound healing in mice. **Plos One** 12(7): e0180586 (2017) (IF = 2.7).
638. V.R. Kay, C. Tayade, P. CARMELIET & B.A. Croy. Influences of Placental Growth Factor on Mouse Retinal Vascular Development. **Dev Dynam** 246(9): 700-12 (2017) (IF = 2.5).
639. A.A. Thompson, R.S. Dickinson, F. Murphy, J.P. Thomson, H.M. Marriott, A. Tavares, J. Willson, L. Williams, A. Lewis, A. Mirchandani, P. Dos Santos Coelho, C. Doherty, E. Ryan, E. Watts, N.M. Morton, S. Forbes, R.H. Stimson, A.G. Hameed, N. Arnold, J.A. Preston, A. Lawrie, V. Finisguerra, M. Mazzone, P. Sadiku, J. Goveia, F. Taverna, P. CARMELIET, S.J. Foster, E.R. Chilvers, A.S. Cowburn, D.H. Dockrell, R.S. Johnson, R.R. Meehan, M.K. Whyte & S.R. Walmsley. Hypoxia determines survival outcomes of bacterial infection through HIF-1alpha dependent re-programming of leukocyte metabolism. **Sci Immunol** 2(8) pii: eaal2861 (2017) (IF = n/a).

## 2018

640. G. Eelen, C. Dubois, A.R. Cantelmo, J. Goveia, U. Bruning, M. DeRan, G. Jarugumilli, J. van Rijssel, G. Saladino, F. Comitani, A. Zecchin, S. Rocha, R. Chen, H. Huang, S. Vandekerke, J. Kalucka, C. Lange, F. Morales-Rodriguez, B. Cruys, L. Treps, L. Ramer, S. Vinckier, K. Brepoels, S. Wyns, J. Souffreau, L. Schoonjans, W.H. Lamers, Y. Wu, J. Haustraete, J. Hofkens, S. Liekens, R. Cubbon, B. Ghesquiere, M. Dewerchin, F.L. Gervasio, X. Li, J.D. van Buul, X. Wu & P. CARMELIET. Role of



- glutamine synthetase in angiogenesis beyond glutamine synthesis. **Nature** 561(7721): 63 (2018) (IF = 43). [Pubmed Link](#)
641. X. Li & P. CARMELIET, Targeting angiogenic metabolism in disease. **Science** 359(6382): 1335-6 (2018) (IF = 41) [Pubmed Link](#)
642. D. Lambrechts, E. Wauters, B. Boeckx, S. Aibar, D. Nittner, O. Burton, A. Bassez, H. Decaluwe, A. Pircher, K. Van den Eynde, B. Weynand, E. Verbeken, P. De Leyn, A. Liston, J. Vansteenkiste, P. CARMELIET, S. Aerts & B.Thienpont. Phenotype molding of stromal cells in the lung tumor microenvironment. **Nat Med** 24(8): 1277-89 (2018) (IF = 30.6). [Pubmed Link](#)
643. G. Eelen, P. de Zeeuw, L. Treps, U. Harjes, B.W. Wong & P. CARMELIET. Endothelial Cell Metabolism. **Physiol Rev** 98(1): 3-58 (2018) (IF = 24.2). [Pubmed Link](#)
644. S. Vandekerke, C. Dubois, J. Kalucka, M. R. Sullivan, M. Garcia-Caballero, J. Goveia, R. Chen, F. F. Diehl, L. Bar-Lev, J. Souffreau, A. Pircher, S. Kumar, S. Vinckier, Y. Hirabayashi, S. Furuya, L. Schoonjans, G. Eelen, B. Ghesquiere, E. Keshet, X. Li, M. G. Vander Heiden, M. Dewerchin & P. CARMELIET. Serine Synthesis via PHGDH Is Essential for Heme Production in Endothelial Cells. **Cell Metab** 28: 573-587 e513 (2018). (IF = 22.4). [Pubmed Link](#)
645. J. Kalucka, L. Bierhansl, N.V. Concinha, R. Missiaen, I. Elia, U. Bruning, S. Scheinok, L. Treps, A.R. Cantelmo, C. Dubois, P. de Zeeuw, J. Goveia, A. Zecchin, F. Taverna, F. Morales-Rodriguez, A. Brajic, L.C. Conradi, S. Schoors, U. Harjes, K. Vriens, G.A. Pilz, R. Chen, R. Cubbon, B. Thienpont, B. Cruys, B.W. Wong, B. Ghesquiere, M. Dewerchin, K. De Bock, X. Sagaert, S. Jessberger, E.A.V. Jones, B. Gallez, D. Lambrechts, M. Mazzone, G. Eelen, X. Li, S.M. Fendt & P. CARMELIET. Quiescent Endothelial Cells Upregulate Fatty Acid beta-Oxidation for Vasculoprotection via Redox Homeostasis. **Cell Metab** 28:881-94 e813 (2018) (IF = 22.4). [Pubmed Link](#)
646. U. Bruning, F. Morales-Rodriguez, J. Kalucka, J. Goveia, F. Taverna, K.C.S. Queiroz, C. Dubois, A.R. Cantelmo, R. Chen, S. Lorocho, E. Timmerman, V. Caixeta, K. Bloch, L.C. Conradi, L. Treps, A. Staes, K. Gevaert, A. Tee, M. Dewerchin, C.F. Semenkovich, F. Impens, B. Schilling, E. Verdin, J.V. Swinnen, J.L. Meier, R.A. Kulkarni, A. Sickmann, B. Ghesquiere, L. Schoonjans, X. Li, M. Mazzone & P. CARMELIET. Impairment of Angiogenesis by Fatty Acid Synthase Inhibition Involves mTOR Malonylation. **Cell Metab** 28:866-80 e815 (2018) (IF = 22.4). [Pubmed Link](#)
647. M.M. Mihaylova, C.W. Cheng, A.Q. Cao, S. Tripathi, M.D. Mana, K.E. Bauer-Rowe, M. Abu-Remaileh, L. Clavain, A. Erdemir, C.A. Lewis, E. Freinkman, A.S. Dickey, A.R. La Spada, Y. Huang, G.W. Bell, V. Deshpande, P. CARMELIET, P. Katajisto, D.M. Sabatini & O.H. Yilmaz. Fasting Activates Fatty Acid Oxidation to Enhance Intestinal Stem Cell Function during Homeostasis and Aging. **Cell Stem Cell** 22(5): 769-78 e4 (2018) (IF = 21.4). [Pubmed Link](#)
648. T.J. Rabelink & P. CARMELIET. Renal metabolism in 2017: Glycolytic adaptation and progression of kidney disease. **Nat Rev Nephrol** 14(2): 75-6 (2018) (IF = 19.6). [Pubmed Link](#)
649. K. Rohlenova, K. Veys, I. Miranda-Santos, K. De Bock & P. CARMELIET. Endothelial Cell Metabolism in Health and Disease. **Trends Cell Biol** 28(3): 224-36 (2018) (IF = 16.5). [Pubmed Link](#)
650. P. CARMELIET, X. Li, L. Treps, L.C. Conradi & S. Loges. RAISEing VEGF-D's importance as predictive biomarker for ramucirumab in metastatic colorectal cancer patients. **Ann Oncol** 29(3): 527-9 (2018) (IF = 14.1). [Pubmed Link](#)
651. J.G. Parchem, K. Kanasaki, M. Kanasaki, H. Sugimoto, L. Xie, Y. Hamano, S.B. Lee, V.H. Gattone, S. Parry, J.F. Strauss, V.D. Garovic, T.F. McElrath, K.H. Lu, B.M. Sibai, V.S. LeBleu, P. CARMELIET, & R. Kalluri. Loss of placental growth factor ameliorates maternal hypertension and preeclampsia in mice. **J Clin Invest** 128:5008-17 (2018) (IF = 12.2). [Pubmed Link](#)
652. J.A. Maybin, A.A. Murray, P.T.K. Saunders, N. Hirani, P. CARMELIET & H.O.D. Critchley. Hypoxia and hypoxia inducible factor-1alpha are required for normal endometrial repair during menstruation. **Nat Commun** 9(1): 295 (2018) (IF = 11.8). [Pubmed Link](#)
653. S. Stegen, I. Stockmans, K. Moermans, B. Thienpont, P.H. Maxwell, P. CARMELIET & G. Carmeliet, Osteocytic oxygen sensing controls bone mass through epigenetic regulation of sclerostin. **Nat Commun** 9(1): 2557 (2018) (IF = 11.8). [Pubmed Link](#)
654. B.W. Wong, A. Zecchin, M. García-Caballero & P. CARMELIET. Emerging Concepts in Organ-Specific Lymphatic Vessels and Metabolic Regulation of Lymphatic Development. **Dev Cell** 45(3):289-301 (2018) (IF = 9.1). [Pubmed Link](#)

655. R. Bauer, F. Udonta, M. Wroblewski, I. Ben-Batalla, I.M. Santos, F. Taverna, M. Kuhlencord, V. Gensch, S. Pasler, S. Vinckier, J.M. Brandner, K. Pantel, C. Bokemeyer, T. Vogl, J. Roth, P. CARMELIET & S. Loges. Blockade of myeloid-derived suppressor cell expansion with all-trans retinoic acid increases the efficacy of antiangiogenic therapy. **Cancer Res** 78:3220-32 (2018) (IF = 8.3).
656. L.J.B. Briant, M.S. Dodd, M.V. Chibalina, N.J.G. Rorsman, P.R.V. Johnson, P. CARMELIET, P. Rorsman & J.G. Knudsen. CPT1a-Dependent Long-Chain Fatty Acid Oxidation Contributes to Maintaining Glucagon Secretion from Pancreatic Islets. **Cell Rep** 23(11): 3300-11 (2018) (IF = 7.8).
657. M.A. Goyette, S. Duhamel, L. Aubert, A. Pelletier, P. Savage, M.P. Thibault, R.M. Johnson, P. CARMELIET, M. Basik, L. Gaboury, W.J. Muller, M. Park, P.P. Roux, J.P. Gratton & J.F. Cote. The Receptor Tyrosine Kinase AXL Is Required at Multiple Steps of the Metastatic Cascade during HER2-Positive Breast Cancer Progression. **Cell Rep** 23(5): 1476-90 (2018) (IF = 7.8).
658. B. Lavina, M. Castro, C. Niaudet, B. Cruys, A. Alvarez-Aznar, P. CARMELIET, K. Bentley, C. Brakebusch, C. Betsholtz & K. Gaengel. Defective endothelial cell migration in the absence of Cdc42 leads to capillary-venous malformations. **Development** 145(13) (2018) (IF = 5.7).
659. P. Nowak-Sliwinska, K. Alitalo, E. Allen, A. Anisimov, A. C. Aplin, R. Auerbach, H. G. Augustin, D. O. Bates, J. R. van Beijnum, R. H. F. Bender, G. Bergers, A. Bikfalvi, J. Bischoff, B. C. Bock, P. C. Brooks, F. Bussolino, B. Cakir, P. CARMELIET, D. Castranova, A. M. Cimpanu, O. Cleaver, G. Coukos, G. E. Davis, M. De Palma, A. Dimberg, R. P. M. Dings, V. Djonov, A. C. Dudley, N. P. Dufton, S. M. Fendt, N. Ferrara, M. Fruttiger, D. Fukumura, B. Ghesquiere, Y. Gong, R. J. Griffin, A. L. Harris, C. C. W. Hughes, N. W. Hultgren, M. L. Iruela-Arispe, M. Irving, R. K. Jain, R. Kalluri, J. Kalucka, R. S. Kerbel, J. Kitajewski, I. Klaassen, H. K. Kleinmann, P. Koolwijk, E. Kuczynski, B. R. Kwak, K. Marien, J. M. Melero-Martin, L. L. Munn, R. F. Nicosia, A. Noel, J. Nurro, A. K. Olsson, T. V. Petrova, K. Pietras, R. Pili, J. W. Pollard, M. J. Post, P. H. A. Quax, G. A. Rabinovich, M. Raica, A. M. Randi, D. Ribatti, C. Ruegg, R. O. Schlingemann, S. Schulte-Merker, L. E. H. Smith, J. W. Song, S. A. Stacker, J. Stalin, A. N. Stratman, M. Van de Velde, V. W. M. van Hinsbergh, P. B. Vermeulen, J. Waltenberger, B. M. Weinstein, H. Xin, B. Yetkin-Arik, S. Yla-Herttuala, M. C. Yoder & A. W. Griffioen. Consensus guidelines for the use and interpretation of angiogenesis assays. **Angiogenesis** 21: 425-532 (2018) (IF = 5.7).
660. K. L. Mills, A. M. Gomes, C. R. Standlee, M. D. Rojo, P. CARMELIET, Z. Lin & H. L. Machado. Gas6 is dispensable for pubertal mammary gland development. **PLoS One** 13: e0208550 (2018) (IF=2.7).
661. A. Zecchin, B.W. Wong, B. Tembuysen, J. Souffreau, A. Van Nuffelen, S. Wyns, S. Vinckier, P. CARMELIET & M. Dewerchin. Live imaging reveals a conserved role of fatty acid beta-oxidation in early lymphatic development in zebrafish. **Biochem Biophys Res Commun** 503(1): 26-31 (2018) (IF = 2.7).
662. V.R. Kay, M.T. Ratsep, L.S. Cahill, A.F. Hickman, B. Zavan, M.E. Newport, J. Ellegood, C.L. Laliberte, J.N. Reynolds, P. CARMELIET, C. Tayade, J.G. Sled & B.A. Croy. Effects of placental growth factor deficiency on behavior, neuroanatomy and cerebrovasculature of mice. **Physiol Genomics** 50:862-75 (2018) (IF = 2.5)

## 2019

663. X. Li, X. Sun & P. CARMELIET. Hallmarks of Endothelial Cell Metabolism in Health and Disease. **Cell Metab** 30: 414-433 (2019) (Review) (IF=21.5). [Pubmed Link](#)
664. X. Li, A. Kumar & P. CARMELIET. Metabolic Pathways Fueling the Endothelial Cell Drive. **Annu Rev Physiol** 81: 483-503 (2019) (IF=19.5) [Pubmed Link](#)
665. M. García-Caballero, A. Zecchin, J. Souffreau, A.-C. Khanh Truong, L.-A. Teuwen, W. Vermaelen, R. Martín-Pérez, P. de Zeeuw, A. Bouché, S. Vinckier, I. Cornelissen, G. Eelen, B. Ghesquiere, M. Mazzone, M. Dewerchin & P. CARMELIET. Role and therapeutic potential of dietary ketone bodies for lymph vessel growth. **Nat Metab** 1, 666-75 (2019) (IF=N/A).
666. K.D. Falkenberg, K. Rohlenova, Y. Luo & P. CARMELIET. The metabolic engine of endothelial cells. **Nat Metab** 1,937-46 (2019) (IF=N/A).
667. B. M. van den Berg, G. Wang, M. G. S. Boels, M. C. Avramut, E. Jansen, W. Sol, F. Lebrin, A. Jan van Zonneveld, E. J. P. de Koning, H. Vink, H. J. Grone, P. CARMELIET, J. van der Vlag & T. J.

- Rabelink. Glomerular Function and Structural Integrity Depend on Hyaluronan Synthesis by Glomerular Endothelium. **J Am Soc Nephrol** 31:118-138 (2019) (IF=9.2) [Pubmed Link](#)
668. S. Stegen, K. Laperre, G. Eelen, G. Rinaldi, P. Fraisl, S. Torrekens, R. Van Looveren, S. Loopmans, G. Bultynck, S. Vinckier, F. Meersman, P. H. Maxwell, J. Rai, M. Weis, D. R. Eyre, B. Ghesquiere, S. M. Fendt, P. CARMELIET & G. Carmeliet. HIF-1alpha metabolically controls collagen synthesis and modification in chondrocytes. **Nature** 565:511-15 (2019) (IF = 42.7). [Pubmed Link](#)
669. D. A. Mogilenko, J. T. Haas, L. L'Homme, S. Fleury, S. Quemener, M. Levavasseur, C. Becquart, J. Wartelle, A. Bogomolova, L. Pineau, O. Molendi-Coste, S. Lancel, H. Dehondt, C. Gheeraert, A. Melchior, C. Dewas, A. Nikitin, S. Pic, N. Rabhi, J. S. Annicotte, S. Oyadomari, T. Velasco-Hernandez, J. Cammenga, M. Foretz, B. Viollet, M. Vukovic, A. Villacreces, K. Kranc, P. CARMELIET, G. Marot, A. Boulter, S. Tavernier, L. Berod, M. P. Longhi, C. Paget, S. Janssens, D. Staumont-Salle, E. Aksoy, B. Staels & D. Dombrowicz. Metabolic and Innate Immune Cues Merge into a Specific Inflammatory Response via the UPR. **Cell** 177: 1201-1216 e1219 (2019) (IF=38.6). [Pubmed Link](#)
670. L. M. Charbonnier, Y. Cui, E. Stephen-Victor, H. Harb, D. Lopez, J. J. Bleesing, M. I. Garcia-Lloret, K. Chen, A. Ozen, P. CARMELIET, M. O. Li, M. Pellegrini & T. A. Chatila. Functional reprogramming of regulatory T cells in the absence of Foxp3. **Nat Immunol**: DOI 10.1038/s41590-019-0442-x (2019) (IF=20.4)
671. I. H. Jain, L. Zazzeron, O. Goldberger, E. Marutani, G. R. Wojtkiewicz, T. Ast, H. Wang, G. Schleifer, A. Stepanova, K. Brepoels, L. Schoonjans, P. CARMELIET, A. Galkin, F. Ichinose, W. M. Zapol & V. K. Mootha. Leigh Syndrome Mouse Model Can Be Rescued by Interventions that Normalize Brain Hyperoxia, but Not HIF Activation. **Cell Metab**: DOI 10.1016/j.cmet.2019.07.006 (2019) (IF=21.5). [Pubmed Link](#)
672. A. J. Harris, A. S. Mirchandani, R. W. Lynch, F. Murphy, L. Delaney, D. Small, P. Coelho, E. R. Watts, P. Sadiku, D. Griffith, R. S. Dickinson, E. Clark, J. A. Willson, T. Morrison, M. Mazzone, P. CARMELIET, B. Ghesquiere, C. O'Kane, D. McAuley, S. J. Jenkins, M. K. B. Whyte & S. R. Walmsley. IL4Ralpha Signaling Abrogates Hypoxic Neutrophil Survival and Limits Acute Lung Injury Responses In Vivo. **Am J Respir Crit Care Med** 200(2), 235-246 (2019) (IF=17.4). [Pubmed Link](#)
673. T. Vandoorne, K. Veys, W. Guo, A. Sicart, K. Vints, A. Swijsen, M. Moisse, G. Eelen, N. Gounko, L. Fumagalli, R. Fazal, C. Germeys, A. Quaegebeur, S.-M. Fendt, P. CARMELIET, C. Verfaillie, P. Van Damme, B. Ghesquiere, K. De Bock & L. Van Den Bosch. Differentiation but not ALS mutations in FUS rewires motor neuron metabolism. **Nat Commun** doi 10.1038/s41467-019-12099-4 (2019) (IF=12.1)
674. D. Singer, K. Thamm, H. Zhuang, J. Karbanova, Y. Gao, J. V. Walker, H. Jin, X. Wu, C. R. Coveney, P. Marangoni, D. Lu, P. R. C. Grayson, T. Gulsen, K. J. Liu, S. Ardu, A. K. Wann, S. Luo, A. C. Zambon, A. M. Jetten, C. Tredwin, O. D. Klein, M. Attanasio, P. CARMELIET, W. B. Huttner, D. Corbeil & B. Hu. Prominin-1 controls stem cell activation by orchestrating ciliary dynamics. **EMBO J**:38: (2019) (IF=9.8). [Pubmed Link](#)
675. S. Khan, F. Taverna, K. Rohlenova, L. Treps, V. Geldhof, L. de Rooij, L. Sokol, A. Pircher, L. C. Conradi, J. Kalucka, L. Schoonjans, G. Eelen, M. Dewerchin, T. Karakach, X. Li, J. Gouveia & P. CARMELIET "EndoDB: a database of endothelial cell transcriptomics data." **Nucleic Acids Res** 47:D736-D744 (2019) (IF=11.5). [Pubmed Link](#)
676. A. M. Gomes, E. C. Carron, K. L. Mills, A. M. Dow, Z. Gray, C. R. Fecca, M. A. Lakey, P. Carmeliet, F. Kittrell, D. Medina & H. L. Machado. Stromal Gas6 promotes the progression of premalignant mammary cells. **Oncogene**: 38:2437-50 (2019) (IF=7.9).
677. G. L. Tiemeier, G. Wang, S. J. Dumas, W. Sol, M. C. Avramut, T. Karakach, V. V. Orlova, C. W. van den Berg, C. L. Mummery, P. CARMELIET, B. M. van den Berg & T. J. Rabelink. Closing the Mitochondrial Permeability Transition Pore in hiPSC-Derived Endothelial Cells Induces Glycocalyx Formation and Functional Maturation. **Stem Cell Rep**.13: 803-816 (2019) (IF=6).
678. M. Declercq, L. Treps, P. CARMELIET & P. Witters. The role of endothelial cells in cystic fibrosis. **J Cyst Fibros**: DOI 10.1016/j.jcf.2019.07.005 (2019) (IF=4.7).
679. V. R. Kay, L. S. Cahill, A. Hanif, J. G. Sled, P. CARMELIET, C. Tayade & B. A. Croy. Adult Pgf(-/-) mice behaviour and neuroanatomy are altered by neonatal treatment with recombinant placental growth factor. **Sci Rep** 9: 9285 (2019) (IF=3.9).

680. J. Gomez-Escudero, C. Clemente, D. Garcia-Weber, R. Acin-Perez, J. Millan, J. A. Enriquez, K. Bentley, P. CARMELIET & A. G. Arroyo. PKM2 regulates endothelial cell junction dynamics and angiogenesis via ATP production. **Sci Rep** 9: 15022 (2019) (IF=3.9).
681. A. S. Vanherwegen, G. Eelen, G. B. Ferreira, B. Ghesquiere, D. P. Cook, T. Nikolic, B. Roep, P. CARMELIET, S. Telang, C. Mathieu & C. Gysemans. Vitamin D controls the capacity of human dendritic cells to induce functional regulatory T cells by regulation of glucose metabolism. **J Steroid Biochem Mol Biol**:134-45 (2019) (IF=3.8)
682. L. Teuwen, V. Geldhof & P. CARMELIET. How glucose, glutamine and fatty acid metabolism shape blood and lymph vessel development. **Dev Biol** 447:90-102 (2019) (Review) (IF = 2.8).
683. C. Dubois, G. Eelen & P. CARMELIET. [New non-metabolic role for glutamine synthetase in angiogenesis]. **Med Sci (Paris)** 35: 407-409 (2019) (IF=0.6)
684. J. Kalucka, B. Ghesquiere, S. M. Fendt & P. CARMELIET. Analysis of Endothelial Fatty Acid Metabolism Using Tracer Metabolomics. **Methods Mol Biol** 1978: 259-268 (2019).(IF=N/A)
685. I. Geric, S. Schoors, C. Claes, P. Gressens, C. Verderio, C.M. Verfaillie, P.P. Van Veldhoven, P. CARMELIET & M. Baes. Metabolic Reprogramming during Microglia Activation. **Immunometabolism** 1e190002 (2019) (IF=N/A)

## 2020

686. L. A. Teuwen, V. Geldhof, A. Pasut & P. CARMELIET. COVID-19: the vasculature unleashed. **Nat Rev Immunol**: doi:10.1038/s41577-020-0343-0 (2020) (IF=40.3) [PubMed Link](#)
687. J. Kalucka\*, L.P.M.H de Rooij\*, J. Goveia\*!, K. Rohlenova, S. Dumas, E. Meta, N.V. Conchinha, L.-A. Teuwen, K. Veys, M. Garcia-Caballero, S. Khan, V. Geldhof, L. Sokol, R. Chen, L. Treps, M. Borri, P. de Zeeuw, C. Dubois, T.K. Karakach, K. Falkenberg, M. Parys, X. Yin, S. Vinckier, Y. Du, R.A. Fenton, L. Schoonjans, M. Dewerchin, G. Eelen, B. Thienpont, L. Lin, L. Bolund, X. Li, Y. Luo & P. CARMELIET. A single cell transcriptome atlas of murine endothelial cells. **Cell** 180(4), 764-779 e720 (2020) (IF=38.6) [PubMed Link](#)
688. J. Goveia\*, K. Rohlenova\*, F. Taverna\*, L. Treps\*, L.-C. Conradi, A. Pircher, V. Geldhof, L. de Rooij, J. Kalucka, L. Sokol, M. Garcia-Caballero, J. Qian, L.-A. Teuwen, S. Khan, B. Boeckx, E. Wauters, H. Decaluwé, P. De Leyn, J. Vansteenkiste, B. Weynand, X. Sagaert, E. Verbeken, A. Wolthuis, B. Topal, W. Everaerts, H. Bohnenberger, A. Emmert, D. Panovska, F. De Smet, F. J.T. Staal, R. J. McLaughlin, F. Impens, V. Lagani, S. Vinckier, M. Mazzone, L. Schoonjans, M. Dewerchin, G. Eelen, T. Karakach, H. Yang, J. Wang, L. Bolund, L. Lin, B. Thienpont, X. Li, D. Lambrechts, Y. Luo & P. CARMELIET. An integrated gene expression landscape profiling approach to identify lung tumor endothelial cell heterogeneity and angiogenic candidates. **Cancer Cell** 37: 21-36 e13 (2020) (IF=26.6) [PubMed Link](#)
689. K. Rohlenova, J. Goveia, M. Garcia-Caballero, A. Subramanian, J. Kalucka, L. Treps, K. D. Falkenberg, L. de Rooij, Y. Zheng, L. Lin, L. Sokol, L. A. Teuwen, V. Geldhof, F. Taverna, A. Pircher, L. C. Conradi, S. Khan, S. Stegen, D. Panovska, F. De Smet, F. J. T. Staal, R. J. McLaughlin, S. Vinckier, T. Van Bergen, N. Ectors, P. De Haes, J. Wang, L. Bolund, L. Schoonjans, T. K. Karakach, H. Yang, G. Carmeliet, Y. Liu, B. Thienpont, M. Dewerchin, G. Eelen, X. Li, Y. Luo & P. CARMELIET. Single-Cell RNA Sequencing Maps Endothelial Metabolic Plasticity in Pathological Angiogenesis. **Cell Metab** 31: 862-877 e814 (2020) (IF=21.5) [PubMed Link](#)
690. G. Eelen, L. Treps, X. Li & P. CARMELIET. Basic and therapeutics aspects of angiogenesis updated. **Circ Res** 127:310–329 (invited review) (2020) (IF=14.4)
691. S.J. Dumas, M. Garcia-Caballero & P. CARMELIET. Metabolic signatures of distinct endothelial phenotypes. **Trends Endocrinol Metab** doi:10.1016/j.tem.2020.05.009 (in press 2020) (IF= 11.6)
692. F. Taverna\*, J. Goveia\*, S. Khan, T. K. Karakach, K. Rohlenova, L. Treps, A. Subramanian, L. Schoonjans, M. Dewerchin, G. Eelen & P. CARMELIET. BIOMEX: an interactive workflow for (single cell) omics data interpretation and visualization. **Nucleic Acids Res** doi:10.1093/nar/gkaa332 (2020) (IF = 11.5) [PubMed Link](#)
693. S. J. Dumas, E. Meta, M. Borri, J. Goveia, K. Rohlenova, N. V. Conchinha, K. Falkenberg, L. A. Teuwen, L. de Rooij, J. Kalucka, R. Chen, S. Khan, F. Taverna, W. Lu, M. Parys, C. De Legher, S. Vinckier, T. K. Karakach, L. Schoonjans, L. Lin, L. Bolund, M. Dewerchin, G. Eelen, T. J. Rabelink,



- X. Li, Y. Luo & P. CARMELIET. Single-Cell RNA Sequencing Reveals Renal Endothelium Heterogeneity and Metabolic Adaptation to Water Deprivation. **J Am Soc Nephrol** 31:118-138 (2020) (IF=9.2) [PubMed Link](#)
694. N. van Gastel, S. Stegen, G. Eelen, S. Schoors, A. Carlier, V. W. Daniëls, N. Baryawno, D. Przybyski, M. Depypere, P.-J. Stiers, D. Lambrechts, R. Van Looveren, S. Torrekens, A. Sharda, P. Agostinis, D. Lambrechts, F. Maes, J. V. Swinnen, L. Geris, H. Van Oosterwyck, B. Thienpont, P. CARMELIET, D. T. Scadden & G. Carmeliet. Lipid availability determines skeletal progenitor cell fate via SOX9. **Nature** doi.10.1038/s41586-020-2050-1(2020) (IF=42.7).
695. T. Schmidt, B. Kharabi Masouleh, S. Loges, S. Cauwenberghs, P. Fraisl, C. Maes, B. Jonckx, K. De Keersmaecker, M. Kleppe, M. Tjwa, T. Schenk, S. Vinckier, R. Fragoso, M. De Mol, K. Beel, S. Dias, C. Verfaillie, R. E. Clark, T. H. Brummendorf, P. Vandenberghe, S. Rafii, T. Holyoake, A. Hochhaus, J. Cools, M. Karin, G. Carmeliet, M. Dewerchin & P. CARMELIET. Loss or Inhibition of Stromal-Derived PIGF Prolongs Survival of Mice with Imatinib-Resistant Bcr-Abl1(+) Leukemia. **Cancer Cell** 37: 135-136 (2020) (Erratum for Cancer Cell 2011) (IF=26.6) [PubMed Link](#)
696. R. Kalluri, AJ Mead, MP di Magiano, M Filbin, P. CARMELIET & I. Amit. Single-Cell Analyses in the Multi-omics Era. **Cancer Cell** 38: 9-10 (2020) (IF=26.6)
697. J. Zhang, J. Muri, G. Fitzgerald, T. Gorski, R. Gianni-Barrera, E. Masschelein, G. D'Hulst, P. Gilardoni, G. Turiel, Z. Fan, T. Wang, M. Planque, P. CARMELIET, L. Pellerin, C. Wolfrum, S. M. Fendt, A. Banfi, C. Stockmann, I. Soro-Arnaiz, M. Kopf & K. De Bock. Endothelial Lactate Controls Muscle Regeneration from Ischemia by Inducing M2-like Macrophage Polarization. **Cell Metab** 31: 1136-1153 e1137 (2020) (IF=21.5)
698. J. Saravia, H. Zeng, Y. Dhungana, D. Bastardo Blanco, T. M. Nguyen, N. M. Chapman, Y. Wang, A. Kanneganti, S. Liu, J. L. Raynor, P. Vogel, G. Neale, P. CARMELIET & H. Chi. Homeostasis and transitional activation of regulatory T cells require c-Myc. **Sci Adv** 6: eaaw6443 (2020) (IF=13.1)
699. K. Veys, Z. Fan, M. Ghobrial, A. Bouche, M. Garcia-Caballero, K. Vriens, N. V. Conchinha, A. Seuwen, F. Schlegel, T. Gorski, M. Crabbe, P. Gilardoni, R. Ardicoglu, J. Schaffenrath, C. Casteels, G. De Smet, I. Smolders, K. Van Laere, E. D. Abel, S. M. Fendt, A. Schroeter, J. Kalucka, A. R. Cantelmo, T. Walchli, A. Keller, P. CARMELIET & K. De Bock. Role of the GLUT1 Glucose Transporter in Postnatal CNS Angiogenesis and Blood-Brain Barrier Integrity. **Circ Res** doi: 10.1161/CIRCRESAHA.119.316463 (2020) (IF=14.4)
700. G. D'Hulst, I. Soro-Arnaiz, E. Masschelein, K. Veys, G. Fitzgerald, B. Smeuninx, S. Kim, L. Deldicque, B. Blaauw, P. CARMELIET, L. Breen, P. Koivunen, S. M. Zhao & K. De Bock. PHD1 controls muscle mTORC1 in a hydroxylation-independent manner by stabilizing leucyl tRNA synthetase. **Nat Commun** 11: 174 (2020) (IF=12.1).
701. R. Boon, M. Kumar, T. Tricot, I. Elia, L. Ordovas, F. Jacobs, J. One, J. De Smedt, G. Eelen, M. Bird, P. Roelandt, G. Doglioni, K. Vriens, M. Rossi, M. A. Vazquez, T. Vanwelden, F. Chesnais, A. El Taghdouini, M. Najimi, E. Sokal, D. Cassiman, J. Snoeys, M. Monshouwer, W. S. Hu, C. Lange, P. CARMELIET, S. M. Fendt & C. M. Verfaillie. Amino acid levels determine metabolism and CYP450 function of hepatocytes and hepatoma cell lines. **Nat Commun** 11: 1393 (2020) (IF=12.1)
702. F. D'Anna, L. Van Dyck, J. Xiong, H. Zhao, R. V. Berrens, J. Qian, P. Bieniasz-Krzywiec, V. Chandra, L. Schoonjans, J. Matthews, J. De Smedt, L. Minnoye, R. Amorim, S. Khorasanizadeh, Q. Yu, L. Zhao, M. De Borre, S. N. Savvides, M. C. Simon, P. CARMELIET, W. Reik, F. Rastinejad, M. Mazzone, B. Thienpont & D. Lambrechts. DNA methylation repels binding of hypoxia-inducible transcription factors to maintain tumor immunotolerance. **Genome Biol** 21: 182 (2020) (IF=10.8)
703. S. Stegen, G. Rinaldi, S. Loopmans, I. Stockmans, K. Moermans, B. Thienpont, S. M. Fendt, P. CARMELIET & G. Carmeliet. Glutamine Metabolism Controls Chondrocyte Identity and Function. **Dev Cell**: DOI: 10.1016/j.devcel.2020.05.001 (2020) (IF=10.0)
704. M. M. Vaeyens, A. Jorge-Penas, J. Barrasa-Fano, C. Steuwe, T. Heck, P. CARMELIET, M. Roeffaers & H. Van Oosterwyck. Matrix deformations around angiogenic sprouts correlate to sprout dynamics and suggest pulling activity. **Angiogenesis**: DOI 10.1007/s10456-020-09708-y (2020) (IF=9.7).
705. L. Van Wyngene, T. Vanderhaeghen, S. Timmermans, J. Vandewalle, K. Van Looveren, J. Souffriau, C. Wallaeyns, M. Eggermont, S. Ernst, E. Van Hamme, A. Goncalves, G. Eelen, A. Remmerie, C. L. Scott, C. Rombouts, L. Vanhaecke, L. De Bus, J. Decruyenaere, P. CARMELIET & C. Libert. Hepatic PPARalpha function and lipid metabolic pathways are dysregulated in polymicrobial sepsis. **EMBO Mol Med**: e11319 (2020) (IF=8.8).



706. J. Dooley, V. Lagou, J. Goveia, A. Ulrich, K. Rohlenova, N. Heirman, T. Karakach, Y. Lampi, S. Khan, J. Wang, T. Dresselaers, U. Himmelreich, M. J. Gunter, I. Prokopenko, P. CARMELIET & A. Liston. Heterogeneous Effects of Calorie Content and Nutritional Components Underlie Dietary Influence on Pancreatic Cancer Susceptibility. **Cell Rep** 32: 107880 (2020) (IF=8.1)
707. G. Wang, S. Kostidis, G. L. Tiemeier, W. Sol, M. R. de Vries, M. Giera, P. CARMELIET, B. M. van den Berg & T. J. Rabelink. Shear Stress Regulation of Endothelial Glycocalyx Structure Is Determined by Glucobiosynthesis. **Arterioscler Thromb Vasc Biol**: 40: 350-364 (2020) (IF=6.6).
708. G. L. Tiemeier, R. de Koning, G. Wang, S. Kostidis, S. J. Dumas, M. Giera, C. W. van den Berg, J. C.J. Eikenboom, B. M. van den Berg, J.C.J. Eikenboom, B.M. van den Berg, P. CARMELIET & T. Rabelink. Lowering the increased intracellular pH of human-induced pluripotent stem cell-derived endothelial cells induces formation of mature Weibel-Palade bodies. **Stem Cell Transl Med** doi: 10.1002/sctm.19-0392 (2020) (IF=6.4)
709. J. Leslie, M. Garcia-Macia, S. Luli, J. Worrell, W. Reilly, H. Paish, A. Knox, B. Barksby, L. Gee, M. Zaki, A. Collins, R. Burgoyone, R. Cameron, C. Bragg, X. Xu, G. Chung, C. Brown, A. Blanchard, C. Nanthakumar, M. Karsdal, S. Robinson, D. Mannas, G. Sen, J. French, S. White, S. Murphy, M. Trost, J. Zakrzewski, U. Klein, R. Schwabe, I. Mederacke, C. Nixon, T. Bird, L.-A. Teuwen, L. Schoonjans, P. CARMELIET, J. Mann, A. Fisher, N. Sheerin, L. Borthwick, D. Mann & F. Oakley. c-Rel orchestrates energy-dependant epithelial and macrophage reprogramming in fibrosis. **Nat Metab** (Accepted Sep 2020) (IF=N/A)

### Articles in revision (selected list)

1. Dumas S., Meta E., Borri M., Luo Y., Prof. Li X., Rabelink T. & CARMELIET P. Phenotypic diversification and metabolic specialisation of endothelial cells control kidney function. **Nat Rev Nephrol** (IF=20.7)
2. P. de Zeeuw, L. Treps, M. Garcia Caballero, U. Harjes, J. Kalucka, C. De Legher, K. Brepoels, S. Vinckier, J. Souffreau, A. Bouché, F. Taverna, J. Dehairs, A. Talebi, B. Ghesquière, J. Swinnen, L. Schoonjans, G. Eelen, M. Dewerchin & P. Carmeliet. Unexpected role for endothelial PCK2 beyond gluconeogenesis. **Comm Biology** (May 2020) (IF=12.1)
2. T. Shu, L. M.H. de Rooij, L.-A. Teuwen, D. WU, X. Liang, Y. Qiu, M. Idorn, X. Pan, J. Xu, A. Subramanian, K. Rohlenova, Q. Wang, F. He, D. Olaghier, V. Geldhof, S. Vinckier, M. Huang, X. Yang, Q., Yang, Y. Qin, J. Zhang, Y. Bie, X. Zou, R. Li, J. Mu, Y. Wang, P. Van Mol, S. Pan, S. Yao, J. Zhang, B. Xie, X. Xu, J. Zhong, S. Liu, H. Jiang, J. Wang, H. Yang, E. Farahani, E., Wauters, L. Bolund, J. Wauters, W. Jacobs, B. Weynand, B. Thienpont, M. Dewerchin, L. Lin, G. Eelen, M. Lammens, L. Schoonjans, X. Li, S. Paludan, T. Yin, D.-Y. Zhang, Y. Shang, Y. Luo, P. CARMELIET. & X. Zhou. Role of HIF-1 $\alpha$  in COVID-19 lung disease unveiled from a single nucleus COVID-19 lung atlas. **Cell** (Jul 2020) (IF=38.6)
3. K.R. Kampen, F.J.G. Scherpen, H. Mahmud, T. Ackermann, A. ter Elst, A.B. Mulder, V. Guryev, G. Eelen, P. CARMELIET, H. Verhagen, K. De Keersmaecker, L. Smit, S.M. Kornblau & E.S.J.M. De Bont. VEGFC targeted therapy reduces the CD34+ AML expansion by enhanced differentiation and apoptosis; a role for simultaneous glycolysis inhibition. **Blood** (IF=17.5).
4. A. Zecchin, B.W. Wong, I. Cornelissen, S. Vinckier, X. Wang, A. Luttun, F. Kiefer, M. Dewerchin & P. CARMELIET. Unexpected enlargement of the jugular lymphatic sac upon CPT1a depletion in lymphatic endothelium. **FEBS Lett** (IF=3.0).

### Chapters in Books

1. C. Deneef, P. Maertens, W. Allaerts, A. Mignon, W. Robberecht, L. Swennen & P. CARMELIET. Methods to study cell-to-cell communication in peptide target cells of anterior pituitary. In: "Methods in Enzymology". Neuroendocrine Peptides Methodology (P.M Conn, Ed.). Academic Press, New York, 168, pp. 47-71, 1989.
2. P. CARMELIET & D. Collen. Role of the plasminogen/plasmin system in the vessel wall. In: "Atherosclerosis X" (F.P. Woodward, J. Davignon & A. Sniderman, eds). Elsevier Science B.V., pp. 45-49, 1995.

3. P. CARMELIET & D. Collen. Evaluation of the role of the fibrinolytic system in transgenic animals. In: "Advances in Vascular Biology: Vascular control of hemostasis" (V.W.M. van Hinsbergh, Ed). Harwood Acad Publ Amsterdam, pp. 247-256, 1996.
4. P. CARMELIET & D. Collen. Insights into vascular biology via targeted gene inactivation and adenovirus-mediated gene transfer of the plasminogen system. In: "Coronary Restenosis: From Genetics to Therapeutics" (Giora Z. Feuerstein, Ed). M. Dekker Inc., New York, pp. 225-240, 1997.
5. P. CARMELIET & D. Collen. Targeted gene manipulation and transfer to study vascular biology. In: "Modern visualization of the endothelium". (J.Pollak, Ed). Harwood Acad. Publ. pp. 189-234, 1998.
6. P. CARMELIET & D. Collen. New developments in the molecular biology of the coagulation cascade. In: Handbook of Experimental Pharmacology: vol. 132 "Antithrombotics". (A.C.G. Uprichard, K.P. Gallagher, Eds). Springer-Verlag, Berlin, Germany, pp. 41-76, 1998.
7. P. CARMELIET & D. Collen. Genetic models of thrombosis and hemorrhage. In: "Thrombosis and hemorrhage" (J. Loscalzo & A.E. Schafer, Eds). Williams & Willkins, Baltimore; 2<sup>nd</sup> Edition, pp. 435-455, 1998.
8. P. CARMELIET. Genetic analysis of the coagulation and plasminogen systems: implications in blood vessel formation, hemostasis, thrombosis, stroke, restenosis, aneurysm formation and atherosclerosis. Proceedings of the International Symposium on recent progress of blood coagulation and fibrinolysis (Eds. Takada A, Collen D & Gaffney PJ). Hamamatsu, 21-22 March 1997. Elsevier Science, pp. 95-109.
9. P. CARMELIET & D. Collen. Biological effects of targeted gene inactivation and gene transfer of the coagulation and fibrinolytic system in mice . In: Textbook of Coronary thrombosis and thrombolysis. (R. C. Becker, Ed). Kluwer Acad. Publ. Norwell, MA, USA, pp. 79-99, 1997.
10. P. CARMELIET & D. Collen. Role of endothelial versus smooth muscle cells in blood vessel formation. In: "The biology of tumors"; vol.9 (E. Mihich & C. Croce, Eds). Plenum Publishing Co., New York, pp. 287-304, 1998.
11. P. CARMELIET & D. Collen. Role of the fibrinolytic and coagulation system in the formation and disorders of blood vessels. In: "Multiple Risk Factors in Cardiovascular Disease" (A.M. Gotto, C. Lenfant & P. Paoletti, Eds). Kluwer Academic Publishers and Fondazione Giovanni Lorenzini, Dordrecht, The Netherlands, 1998, pp. 35-44.
12. P. CARMELIET & D. Collen. Molecular analysis of vascular development and disorders. In: "Cardiovascular specific gene expression"; (P. Doevedans, R. Reneman and M. van Bilsen, Eds); Kluwer Academic Publishers, Dordrecht, The Netherlands, 1999, pp. 193-225.
13. P. CARMELIET & D. Collen. Role of vascular endothelial growth factor and vascular endothelial growth factor receptors in vascular development. In: "Vascular Growth Factors and Angiogenesis". L. Claesson-Wlesh (Ed), Springer-Verlag, Berlin, Germany, 1999, pp. 133-158.
14. P. CARMELIET & D. Collen. Life without proteinases: In vivo role of the fibrinolytic, hemostatic and matrix metalloproteinases as deduced from targeted manipulation of the mouse genome. In: Comprehensive Vascular Biology and Pathology: an encyclopedic reference. (A. Bikfalvi, Ed), Springer, Heidelberg, Germany, 2000.
15. P. CARMELIET, D. Collen & E.M. Conway. Molecular signals of vessel formation in health and disease. In: Theory and Practice of Vascular Medicine (E. Topol and P. Lanzer, Eds). Springer-Verlag, Berlin, Germany, 2002, pp. 273-287.
16. P. CARMELIET. Basic mechanisms of Angiogenesis. In: Development of the Cardiovascular System, vol.2: Blood Vessels (R. Tomanek, Ed), JAI Press Inc, Greenwich, Connecticut, USA.
17. E. Melis, P. CARMELIET, M. Dewerchin & M.F. Hoylaerts. The importance of enzyme cofactors: Tissue factor in blood coagulation and beyond. Recent Res. Devel. Biochem. 3: 609-638, 2002.
18. L. Moons, M. Autiero, S. Plaisance, E.M. Conway, P. CARMELIET & M. Dewerchin. Do we need other targets for treating angiogenic disorders: novel opportunities with Plgf. In 'Thrombosis. Fundamental and Clinical Aspects'. J. Arnout, G. de Gaetano, M. Hoylaerts, K. Peerlinck, C. Van Geet, and R. Verhaeghe, editors. Leuven: University Press. pp 225-240, 2003.

19. L. Moons, A. Luttun, E. Conway & P. CARMELIET. Mouse models to study pro- and anti-angiogenic potential: novel roles for PlGF and Flt1. In 'The Physiological Genomics of the Critically Ill Mouse'. C. Ince, editor. Amsterdam: Kluwer Academic Publishers, pp 329-347, 2003.
20. A. Luttun, M. Tjwa & P. CARMELIET. Formation of blood and lymphatic vessels: role of progenitors. Handbook of Stem Cells, Eds: Robert Lanza e.a. Elsevier Academic Press, 2004.
21. D. Manka, V. Compennolle & P. CARMELIET. Molecular basis of vasculogenesis, angiogenesis, and arteriogenesis. In: Atherothrombosis and Coronary artery disease. Eds: V. Fuster, E.J. Topol & E.G. Nabel. Lippincott Williams and Wilkins; 2nd edition, 2004, pp. 333-347.
22. L. Moons, P. CARMELIET & M. Dewerchin. Vascular and neuronal effects of VEGF in the nervous system: implications for neurological disorders. In: Cell Cycle in the Central Nervous system. Ed. D. Janigro, The Humana Press Inc, Totowa, NJ., 2006 (invited review).
23. EM Conway, S. Appelmans, N. Kindt & P. CARMELIET. Molecular Mechanisms of Angiogenesis. In Bronchial Vascular Remodeling in Asthma and COPD, edited by Claude Lenfant, Philadelphia, Marcel Dekker Inc. 2006.
24. D. Lambrechts & P. CARMELIET. VEGF, an angiogenic factor with neurotrophic activity, useful for treatment of ALS? Gene Therapy of the Central Nervous System : From Bench to Bedside, Elsevier, pages 239-252 (2006).
25. C. Fischer, M. Schneider & P. CARMELIET. Principles and therapeutic implications of angiogenesis, vasculogenesis and arteriogenesis. Handb Exp Pharmacol, 157-212 (2006).
26. C. Ruiz de Almodovar, A. Ny & P. CARMELIET. General concepts of angiogenesis and vasculogenesis. Retinal Vascular Disease, Edited by A.M. Jousseaume, T.W. Gardner, B. Kirchhof & S.J. Ryan. Springer Verlag. (2007).
27. T. Schmidt & P. CARMELIET. Role and therapeutic potential of angiogenic cytokines for leukemia. Invited book chapter in ASH Hematology Education book 2011 - Ham Wasserman Lecture book 2011 vol2011; no1, 1-8.
28. A. Luttun & P. CARMELIET. Development of the vasculature, angiogenesis and lymphangiogenesis. Invited book chapter in Edition Hemostasis & Thrombosis: Basic Principles and Clinical Practice, 6th edition, Wolters Kluwer / Lippincott Williams and Wilkins; 2012; 498-515.
29. P.C. Stapor, K. De Bock & P. CARMELIET. Essentials of Angiogenesis. In: Theory and Practice of Vascular Medicine II p1-34 (P. Lanzer, Eds). Springer-Verlag, Berlin, Germany (2014).
30. G. Eelen, J. Kalucka & P. CARMELIET. The ESC Textbook of Vascular Biology. Chapter 8: Arteriogenesis and angiogenesis. Edited by Rob Krams and Magnus Back - in press. Release scheduled in 2016.