

Publications nCounter Core Facility

Since 2012, 31 original articles were published of which 22 were from groups of the Heidelberg campus (**). 4 more publications are currently under review or in revision:

1. ****Hammer C**, Cichon S, Mühleisen TW, Haenisch B, Degenhardt F, Breuer R, Witt S, Strohmaier J, Oruc L, Rivas F, Babadjanova G, Grigoriu-Serbanescu M, Hauser J, Röth R, **Rappold G**, Rietschel M, Nöthen MN, **Niesler B** (2012). Replication of functional serotonin receptor type 3A and B variants in bipolar affective disorder: a European multicenter study, **Transl Psychiatry** 2: e103; doi:10.1038/tp.2012.30
2. Trilling M, Bellora N, Rutkowski AJ, de Graaf M, Dickinson P, Robertson K, Prazeres da Costa O, Ghazal P, Friedel CC, Albà MM, **Dölken L** (2013). Deciphering the modulation of gene expression by type I and II interferons combining 4sU-tagging, translational arrest and in silico promoter analysis. **Nucleic Acids Res.** 2013 Sep;41(17):8107-25. doi: 10.1093/nar/gkt589. Epub 2013 Jul 5.
3. **Stoilova B**, **Kowenz-Leutz E**, Scheller M, **Leutz A** (2013). Lymphoid to myeloid cell trans-differentiation is determined by C/EBP β structure and post-translational modifications. **PLoS One.** 2013 Jun 5;8(6):e65169. doi: 10.1371/journal.pone.0065169. Print 2013. PMID: 23755188
4. ****Genome-wide identification and functional analyses of microRNA signatures associated with cancer pain.** **Bali KK**, Selvaraj D, Satagopam VP, Lu J, Schneider R, **Kuner R.** **EMBO Mol Med.** 2013 Nov;5(11):1740-58. doi: 10.1002/emmm.201302797. Epub 2013 Oct 18. PMID: 24039159
5. ****Körber C**, Dondzillo A, Eisenhardt G, Herrmannsdörfer F, Wafzig O, **Kuner T** (2014). Gene expression profile during functional maturation of a central mammalian synapse. **Eur J Neurosci.** 2014 Sep;40(6):2867-77. doi: 10.1111/ejn.12661. Epub 2014 Jul 3. PMID: 24995587
6. ****Walstab J**, **Wohlfarth C**, Hovius R, **Schmitteckert S**, **Röth R**, Lasitschka F, Wink M, Bönisch H, **Niesler B**. Natural compounds boldine and menthol are antagonists of human 5-HT₃ receptors: implications for treating gastrointestinal disorders. **Neurogastroenterology and Motility.** 2014 Jun;26(6):810-820. doi: 10.1111/nmo.12334. Epub 2014 Apr 8.
7. ****Schlupf J**, **Steinbeißer H** (2014) IGF antagonizes the Wnt/ β -Catenin pathway and promotes differentiation of extra-embryonic endoderm. **Differentiation.** 2014 Jun;87(5):209-19. doi: 10.1016/j.diff.2014.07.003. Epub 2014 Oct 5
8. **Rosenbaum C**, Schick MA, Wollborn J, Heider A, Scholz CJ, Cecil A, **Niesler B**, Hirrlinger J, Walles H, **Metzger M.** (2016) Activation of enteric glia during acute systemic inflammation in vitro and in vivo. **PLoS One.** 2016 Mar 10;11(3):e0151335. doi: 10.1371/journal.pone.0151335. eCollection 2016.
9. ****Linge A**, Löck S, Gudziol V, Nowak A, Lohaus F, von Neubeck C, Jütz M, **Abdollahi A**, Debus J, Tinhofer I, Budach V, Sak A, Stuschke M, Balermipas P, Rödel C, Avlar M, Grosu AL, Bayer C, Belka C, Pigorsch S, Combs SE, Welz S, Zips D, Buchholz F, Aust DE, Baretton GB, Thames HD, Dubrovskaja A, Alsner J, Overgaard J, Baumann M, Krause M; DTK-ROG. Low Cancer Stem Cell Marker Expression and Low Hypoxia Identify Good Prognosis Subgroups in HPV(-) HNSCC after Postoperative Radiochemotherapy: A Multicenter Study of the DTK-ROG. **Clin Cancer Res.** 2016 Jun 1;22(11):2639-49. doi: 10.1158/1078-0432.CCR-15-1990. Epub 2016 Jan 11.
10. ****Pruunsild P**, **Bengtson CP**, **Bading H** (2017). Networks of Cultured iPSC-Derived Neurons Reveal the Human Synaptic Activity-Regulated Adaptive Gene Program. *Jan 3;18(1):122-135.* doi: 10.1016/j.celrep.2016.12.018. **Cell Rep.**

11. ****Martínez C**, Rodiño-Janeiro BK, Lobo B, **Stanifer ML**, Klaus B, Granzow M, González-Castro AM, Salvo-Romero E, Alonso-Cotoner C, Pigrau M, Frias C, **Roeth R**, **Rappold G**, Huber W, Gonzalez- Silos R, Lorenzo J, de Torres I, Azpiroz F, **Boulant S**, Vicario M*, **Niesler B*** & Santos J*(2017) miR-16 and miR-125b are involved in barrier function dysregulation through the modulation of claudin-2 and cingulin expression in the jejunum in irritable bowel syndrome with diarrhoea, **Gut**, 2017 Jan 12. pii: gutjnl-2016-311477. doi: 10.1136/gutjnl-2016-311477. [Epub ahead of print],*joined senior authorship
12. ****Hoffmann S***, **Schmitteckert S***, Glaser A¹, Preiss H, Sumer S, Rolletschek A, Granzow M, Eckstein V, **Niesler B** and **Rappold GA** (2017). Comparative expression analysis of Shox2-deficient embryonic stem cell-derived sinoatrial node-like cells, *Stem Cell Res.* 2017 May;21:51-57. doi: 10.1016/j.scr.2017.03.018. Epub 2017 Mar 29.
13. **Worst TS**, Daskalova K, Steidler A, Berner-Leischner K, **Röth R**, **Niesler B**, Weis CA, Kriegmair MC, **Erben P**, Pfalzgraf D (2017). Novel insights into a reputedly irreversible process: combined mRNA and miRNA profiling of tissue from vesicourethral anastomotic stenosis after radical prostatectomy. **World J Urol.** 2017 Jun 20. doi: 10.1007/s00345-017-2060-2. [Epub ahead of print]
14. ****Schmitteckert S**, Griesbeck A, Sumer S, Jauch A, Rolletschek A, **Niesler B**, Rappold GA, Hoffmann S (2017) Murine transgenic embryonic stem cell lines for the investigation of sinoatrial node-related molecular pathways. *Stem Cell Res.* 2017 Dec, 25: 278-282 .
15. Worst TS, Daskalova K, Steidler A, Berner-Leischner K, **Niesler B**, **Röth R**, **Erben P**, Pfalzgraf D. Impact of altered Wnt stimulation on bladder wall fibroblasts – implications for urinary tract wound healing and regeneration (2017). **Urologia Internationalis**, *Urol Int.* 2017;99(4):476-483. doi: 10.1159/000481440. Epub 2017 Oct 31.
16. ****Wohlfarth C[#]**, **Schmitteckert S[#]**, Härtle JD, Houghton LA, Dweep H, Fortea M, Assadi G, Braun A, Mederer T, Pöhner S, Becker PB, Fischer C, Granzow M, Mönnikes H, Mayer EA, Sayuk G, Boeckstaens G, Wouters MM, Simrén M, Lindberg G, Ohlsson B, Schmidt PT, Dlugosz A, Agreus L, Andreasson A, D’Amato M, Burwinkel B, Lorenzo J, Röth R, Lasitschka F, Vicario M, Metzger M, Santos J, **Rappold G**, ***Martínez C**, ***Niesler B** (2017) miRNA-16 and miR-103 impact 5-HT₄ receptor signalling and correlate with symptom profile in irritable bowel syndrome , **SciRep**, 2017 Oct 31;7(1):14680. doi: 10.1038/s41598-017-13982-0., [#]joined first authorship, *joined senior authorship
17. ****Braun A***, **Martínez-Martínez C***, **Schmitteckert S.**, **Röth R.**, Lasitschka F*, **Niesler B***. (2017). Investigation of site-specific gene expression in the human intestine by a combined approach using laser-capture microdissection and nCounter analysis, *equal contribution, **Neurogastroenterology and Motility**, 2017 Nov 28. doi: 10.1111/nmo.13261. [Epub ahead of print]
18. Steven S, Dib M, Hausding M, Kashani F, Oelze M, Kröllner-Schön S, Hanf A, Daub S, Roohani S, Gramlich Y, Lutgens E, Schulz E, Becker C, Lackner KJ, Kleinert H, Knosalla C, **Niesler B**, Wild PS, Münzel T, **Daiber A.** (2018) CD40L controls obesity-associated vascular inflammation, oxidative stress, and endothelial dysfunction in high fat diet-treated and db/db mice. **Cardiovasc Res.** 2018 Feb 1;114(2):312-323. doi: 10.1093/cvr/cvx197.
19. ****Liang J**, Jahraus B, Balta E, Ziegler JD, Hübner K, Blank N, **Niesler B**, Wabnitz GH, and **Samstag Y.** Sulforaphane Inhibits Inflammatory Responses of Primary Human T-cells by increasing ROS and depleting Glutathione, **Frontiers in Immunology**, 2018 Nov 14;9:2584. doi: 10.3389/fimmu.2018.02584. eCollection 2018.in press
20. ****Berkel S**, Eltokhi A, Frohlich H, Porrás-Gonzalez D, Rafiullah R, Sprengel R, **Rappold GA.** 2018. Sex Hormones Regulate SHANK Expression. **Front Mol Neurosci** 11:337.

21. **Schmitteckert S, Mederer T, Roeth R, Guenther P, Holland-Cunz S, Metzger M, Samstag Y, Schröder-Braunstein J, Wabnitz G, Kurzhals S, Scheuerer J, Beretta CA, Lasitschka F, **Rappold GA**, Romero P, **Niesler B** (2019). Postnatal human enteric neurospheres show a remarkable molecular complexity, **Neurogastroenterology and Motility**, 2019 Oct;31(10):e13674. doi: 10.1111/nmo.13674. Epub 2019 Jul 18.
22. **Orlik C, Deibel D, Küblbeck J, Balta E, Ganskih S, Habicht J, **Niesler B**, Schröder-Braunstein J, Schäkel K, Wabnitz G and **Samstag Y** (2019). Keratinocytes costimulate naive human T cells via CD2:a potential target to prevent the development of proinflammatory Th1 cells in the skin, **Cellular and Molecular Immunology** 2020 Apr;17(4):380-394. doi: 10.1038/s41423-019-0261-x. Epub 2019 Jul 19. PMID: 31324882.
23. **Sonner JK, Keil M, Falk-Paulsen M, Mishra N, Rehman A, Kramer M, Deumelandt K, Wolf L, von Landenberg A, Wolff H, Bharti R, Oezen I, Lanz TV, Wanke F, Tang Y, Brandao I, Mohapatra SR, Opitz CA, **Röth R**, **Niesler B**, Okun JG, Reinhardt C, Kurschus FC, Wick W, Bode H, Rosenstiel P, **Platten M**. Dietary tryptophan links encephalogenicity of autoreactive T cells with gut 1 microbial ecology, **Nature Communications**, 2019 Oct 25;10(1):4877. doi: 10.1038/s41467-019-12776-4.
24. **Thoeni C, Waldherr R, Scheuerer J, Schmitteckert S, **Roeth R**, **Niesler B**, Cutz E, Flechtenmacher C, Goepfert B, Schirmacher P, Lasitschka F. Expression Analysis of ATP-Binding Cassette Transporters ABCB11 and ABCB4 in Primary Sclerosing Cholangitis and Variety of Pediatric and Adult Cholestatic and Noncholestatic Liver Diseases. **Canadian Journal of Gastroenterology and Hepatology**, 2019 Dec 10;2019:1085717. doi: 10.1155/2019/1085717. eCollection 2019.
25. **Liang J, Ziegler JD, Jahraus B, Orlik C, Blatnik R, Blank N, **Niesler B**, Wabnitz G, Ruppert T, Hübner K, Balta E, **Samstag Y**. Piperlongumine Acts as an Immunosuppressant by Exerting Prooxidative Effects in Human T Cells Resulting in Diminished TH17 but Enhanced Treg Differentiation. **Front Immunol**. 2020 Jun 12;11:1172. doi: 10.3389/fimmu.2020.01172. eCollection 2020. PMID: 32595640.
26. **Martinez C*, Lasitschka F*, Thöni C, Wohlfarth C, Granzow M, **Röth R**, **Rappold GA**, Dizdar V, Hausken T, Langeland N, Hanevik K, **Niesler B**. Comparative expression profiling in the intestine of patients with Giardia-induced post-infectious functional gastrointestinal disorders, *equal contribution, **Neurogastroenterology and Motility**, 2020; 00:e13868. <https://doi.org/10.1111/nmo>. *equal contribution
27. **_Aslan K, Turco V, Blobner J, Sonner JK, Liuzzi AR, Núñez NG, De Feo D, Kickingereeder P, Fischer M, Green E, Sadik A, Friedrich M, Sanghvi K, Kilian M, Cichon F, Wolf L, Jähne K, von Landenberg A, Bunse L, Sahm F, Schrimpf D, Meyer J, Alexander A, Brugnara G, **Röth R**, Pfeleiderer K, **Niesler B**, von Deimling A, Opitz C, Breckwoldt MO, Heiland S, Bendszus M, Wick W, Becher B, **Platten M**. Heterogeneity of response to immune checkpoint blockade in hypermutated experimental gliomas. **Nature Communications** 2020 Feb 18;11(1):931. doi: 10.1038/s41467.
28. Cossais F, Schaeffer E, Heinzl S, Zimmermann J, **Niesler B**, **Röth R**, **Rappold G**, Scharf A, Zorenkov D, Lange C, Barrensche M, Margraf NG, Ellrichmann M, Berg D, Böttner M, Wedel T.J (2021). Expression Profiling of Rectal Biopsies Suggests Altered Enteric Neuropathological Traits in Parkinson's Disease Patients, **Parkinsons Dis**. 2021;11(1):171-176. doi: 10.3233/JPD-202258.PMID: 33337386.
29. **Hoffmann S, Schmitteckert S, Raedecke K, Rheinert D, Diebold S, **Roeth R**, Weiss B, Granzow M, **Niesler B**, Griesbeck A, Eckstein V, Zimmermann WH, Just S, **Rappold GA** (2021). **Biochim Biophys Acta Gene Regul Mech**. 2021 Mar 8:194702. doi: 10.1016/j.bbagr.2021.194702. Online ahead of print.

30. Gries M, Christmann A, Schulte S, Weyland M, Rommel S, Martin M, Baller M, **Röth R**, Schmitteckert S, Unger M, Grundmann D, Liu Y, Sommer F, Mühlhaus T, Schroda M, Timmermans JP, Pintelon I, Lashuel H, **Rappold GA**, Britschgi M, Laschke M, **Niesler B**, Schäfer KH (2021). Functional and molecular early enteric biomarkers for Parkinson's disease in mice and men, **Molecular Neurodegeneration**, in press.
31. Konturek TJ, Martinez C, **Niesler B**, van der Voort I, Mönnikes H, Stengel A, Goebel-Stengel (2021). The Role of Brain-derived Neurotrophic Factor in Irritable Bowel Syndrome, **Frontiers in Psychiatry, section Psychosomatic Medicine**, 2021 Jan 14;11:531385. doi: 10.3389/fpsyt.2020.531385. eCollection 2020.
32. ** Mohr S, Fritz N, Hammer C, Martinez C, Berens S, Schmitteckert S, Wahl V, Schmidt M, Houghton LA, Goebel-Stengel M, Kabisch M, Knab D, Milovač I, D'Amato M, Zheng T, **Röth R**, Mönnikes H, Engel F, Gauss A, Tesarz J, Raithel M, Andresen V, Frieling T, Keller J, Pehl C, Thöringer-Stein C, Clarke G, Kennedy PJ, Cryan JF, Dinan TG, Quigley EM, Spiller R, Beltrán C, Madrid AM, Torres V, Herzog W, Mayer EA, Sayuk G, Gazouli M, Karamanolis G, Kapur-Pojškič L, Bustamante M, Rabionet R, Estivill X, Franke A, Lieb W, Boeckstaens G, Wouters MM, Simrén M, **Rappold GA**, Vicario M, Santos J, Schäfer R, Lorenzo-Bermejo J, **Niesler B**. The alternative serotonin transporter promoter P2 impacts gene function in females with irritable bowel syndrome, **Journal of Cellular and Molecular Medicine**, in revision.
33. ** **Kulkarni A**, Ferreira T, Bretscher C, Grewenig A, El-Andaloussi N, Bonifati S, Marttila T, Palissot V, Hossain J, Azuaje F, Miletic H, Ehrlich M, Golebiewska A, Niclou S, **Roeth R**, **Niesler B**, Weiss A, Brino L and **Marchini A**. Oncolytic H-1 parvovirus hijacks laminins for cell surface binding and clathrin-mediated endocytosis for cell entry. **Nature Microbiology**, in revision.
34. ** **Gras J**, Lasitschka F, Heninger AK, Heidtmann A, Wentrup S, **Niesler B**, Dinkelacker M, Brors B, Giese T, AlSaeedi M, Schneider M, Halama N, Schaible A, Eehalt R, Meuer S, **Schröder-Braunstein J**: mTOR regulates the initiation of the human intestinal inflammatory response, in revision.
35. Neuenfeldt F, Schumacher C, Habicht J, Schröder-Braunstein J, Gauss A, **Niesler B**, Gaida M6, Giese T, Meuer S, Samstag Y, Wabnitz G. CCR5-expressing PMN are increased in chronic inflammation and show enhanced NETosis induced through TNFR2/PI3Kinase signaling, submitted.

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