

CURRICULUM VITAE

Alexander Koch



Personal information

name Alexander Koch
nationality Belgian
date of birth 22 July 1986
place of birth Gent, Belgium
address Correggiostraat 32
1000 Brussel, Belgium
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Skills & scientific interests

research Visualization, integration and analysis of (epi) genomic cancer data. Biomarker development. Strong writing and communication skills.
tech *daily use* R, Python, PHP, MySQL, javascript, html, css
familiar with bash & linux OS, d3.js, Adobe Creative Suite
learning about NLP, machine learning, networks & graphs
languages Dutch, English, French, German

Other interests

sports Multiple national rowing champion; former member of the junior and senior national rowing team. Running. Cycling.
photography walkingaround.be
web design alexanderkoch.be
theatre Played in three productions by the American Theatre Company (Brussels)

Education & experience

Dec 2015 – *now* Postdoctoral researcher at the department of Pathology, Maastricht University (Maastricht, the Netherlands)
Feb 2011 – *Oct 2015* PhD student at the lab of bioinformatics and computational genomics, Ghent University (Ghent, Belgium).
Visiting trainee at the Baylin lab, Johns Hopkins University School of Medicine (Baltimore, USA; Aug – Oct 2011 & June – Sep 2012).
Visiting trainee at the Fenyö lab, New York University (New York, USA; Oct – Dec 2014).
Jul 2009 – *Sep 2010* Member of the Belgian national rowing team. Raced at three world cup races and the European championships.
Sep 2004 – *Jun 2009* Bachelor and Master's degree in bioscience engineering, major in biotechnology, Ghent University (Ghent, Belgium).
International student, University of Natural Resources and Applied Life Sciences (Vienna, Austria; fall semester of 2008).
Sep 1998 – *Jun 2004* Royal Athenaeum Voskenslaan (Ghent, Belgium), studying science and mathematics. Finalist in the Flemish Mathematics Olympiad (2001).

Publications

ORCID:

<https://orcid.org/0000-0002-9804-7602>

Google scholar:

<https://scholar.google.be/citations?user=OfCcGvQAAAAJ>

Koch A, Jeschke J, Van Criekinge W, van Engeland M, De Meyer T. MEXPRESS update 2019. *Nucleic Acids Research* 2019

Joosten SC, Smits KM, Aarts MJ, Melotte V, **Koch A**, Tjan-Heijnen VC, van Engeland M. Epigenetics in renal cell cancer: mechanisms and clinical applications. *Nature Reviews Urology* 2018

Koch A*, Joosten SC*, Feng Z, de Ruijter TC, Draht MX, Melotte V, Smits KM, Veeck J, Herman JG, Van Neste L, Van Criekinge W, De Meyer T, van Engeland M. Analysis of DNA methylation in cancer: location revisited. *Nature Reviews Clinical Oncology* 2018

Draht MX, Goudkade D, **Koch A**, Grabsch HI, Weijenberg MP, van Engeland M, Melotte V, Smits KM. Prognostic DNA methylation markers for sporadic colorectal cancer: a systematic review. *Clinical Epigenetics* 2018, 10: 35

Jeschke J, Bizet M, Desmedt C, Calonne E, Dedeurwaerder S, Garaud S, **Koch A**, Larsimont D, Salgado R, Van den Eynden G, Gallo KW, Bontempi G, Defrance M, Sotiriou C, Fuks F. DNA methylation-based immune response signature improves patient diagnosis in multiple cancers. *Journal of Clinical Investigation* 2017, 127(8): 3090–3102

Seremet T*, **Koch A***, Jansen Y, Schreuer M, Wilgenhof S, Del Marmol V, Liénard D, Thielemans K, Schats K, Kockx M, Van Criekinge W, Coulie PG, De Meyer T, van Baren N, Neyns B. Molecular and epigenetic features of melanomas and tumor immune microenvironment linked to durable remission to ipilimumab-based immunotherapy in metastatic patients. *J Transl Med* 2016, 14(1): 232

Crappé J, Ndah E, **Koch A**, Steyaert S, Gawron D, De Keulenaer S, De Meester E, De Meyer T, Van Criekinge W, Van Damme P, Menschaert G. PROTEOFORMER: deep proteome coverage through ribosome profiling and MS integration. *Nucleic acids research* 2015, 43(5): e29

Koch A, De Meyer T, Jeschke J, Van Criekinge W. MEXPRESS: visualizing expression, DNA methylation and clinical TCGA data. *BMC Genomics* 2015, 16: 636

Koch A, Gawron D, Steyaert S, Ndah E, Crappé J, De Keulenaer S, De Meester E, Ma M, Shen B, Gevaert K, Van Criekinge W, Van Damme P, Menschaert G. A proteogenomics approach integrating proteomics and ribosome profiling increases the efficiency of protein identification and enables the discovery of alternative translation start sites. *Proteomics* 2014, 14(23–24): 2688–2698

Wrangle J*, Wang W*, **Koch A***, Easwaran H, Mohammad HP, Vendetti F, Vancrickinge W, Demeyer T, Du Z, Parsana P, Rodgers K, Yen RW, Zahnow CA, Taube JM, Brahmer JR, Tykodi SS, Easton K, Carvajal RD, Jones PA, Baylin SB. Alterations of

immune response of non-small lung cancer with azacytidine. *Oncotarget* 2013, 4(11): 2067–2079

Menschaert G, Van Criekinge W, Notelaers T, **Koch A**, Crappé J, Gevaert K, Van Damme P. Deep proteome coverage based on ribosome profiling aids mass spectrometry-based protein and peptide discovery and provides evidence of alternative translation products and near-cognate translation initiation events. *Molecular & cellular proteomics* 2013, 12(7): 1780–1790

Jeschke J, Van Neste L, Glöckner SC, Dhir M, Calmon MF, Deregowski V, Van Criekinge W, Vlassenbroeck I, **Koch A**, Chan TA, Cope L, Hooker CM, Schuebel KE, Gabrielson E, Winterpacht A, Baylin SB, Herman JG, Ahuja N. Biomarkers for detection and prognosis of breast cancer identified by a functional hypermethylation screen. *Epigenetics* 2012, 7(7): 701–709

* these authors contributed equally

Conferences

- 2018 1st Belgian Dataviz meetup, Brussels (Belgium) – talk: *How did I get here? My data viz journey*
AACR, Chicago (USA) – poster
IEEE VIS, Berlin (Germany) – poster
GROW Science Day, Maastricht (the Netherlands) – talk: *The human cancer DNA methylation marker atlas*
- 2017 ECEC, Heidelberg (Germany) – poster
- 2016 IEEE Vis, Baltimore (USA) – poster
byteMAL, Maastricht (the Netherlands) – poster
- 2015 BeNeMEET, Antwerp (Belgium) – talk: *Epigenetic profiling of melanoma*.
- 2013 ASMS, Minneapolis (USA) – poster
- 2013 euMEET, Brussels (Belgium) – talk: *CTLA-4 blockade and dendritic cell therapy in advanced melanoma: DNA methylation profiling*.

Reviewing

Peer-reviewed articles for the following journals:

- Plos ONE
- BMC Genomics
- Cancers