

**NAME:** MICHAL MOKRY MD PhD

**Email:** m.mokry@umcutrecht.nl  
**Position title:** Associate Professor



## EDUCATION

- 2007 MD degree:** Faculty of Medicine, UPJS, Kosice, Slovakia  
Graduation with Dean's prize
- 2011 PhD degree:** Genome biology, Hubrecht Institute  
University Utrecht, Utrecht, The Netherlands  
Supervisor: Prof. Edwin Cuppen  
Thesis: Applications of next-generation sequencing in (Epi)Genetics

## POSITIONS AND EMPLOYMENT

### 1. Employment

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|----------------|---|
| 2007 – 2011    | PhD student, Utrecht University, Hubrecht Institute           |
| 2011 – 2017    | Postdoc, WKZ, UMC Utrecht, Division of Pediatrics             |
| 2015 – present | Investigator, UMCU strategic program Child Health             |
| 2018 – 2020    | Associate professor, WKZ, UMC Utrecht, Division of Pediatrics |
| 2018 – present | Associate professor, UMC Utrecht, Cardiovascular Genetics     |

### 2. Supervision

#### PhD Students (Co-promotor)

- |             |   |
|-------------|---|
| 2019 -      | Michele Buono – Sex and epigenetics mediated differences in epithelial cell functions |
| 2019 -      | Maike de Vries - Organoid based model systems in VEOIBD                               |
| 2019 -      | Kai Cui - Omics techniques in atherosclerosis research                                |
| 2018 -      | Lotte Slenders - Omics techniques in platelets biology and atherosclerosis            |
| 2018 -      | Zahra Shojaei-Jeshvaghani - Organoid based model systems in VEOIBD                    |
| 2014 – 2019 | Claartje Meddens - Genetics and Epigenetics of complex diseases                       |
| 2013 – 2017 | Saskia Haitjema - Thesis: Sex matters to the arteries                                 |

Besides the PhD students, I directly supervise three technicians (two in EpiGenOmic Facility and one research technician) and two postdoctoral fellows. Altogether I have guided ~20 Master's and Bachelor students

### 3. Teaching

- |                |   |
|----------------|---|
| 2010           | Invited lecturer undergraduate course "Bioinformatics for Biologists" at the University Utrecht.                              |
| 2012           | Invited lecturer undergraduate course "I&I Master's course -Signaling & Techniques" at the University Medical Center Utrecht. |
| 2016 - present | Member of the organizing comity and lecturer for the BMW BIOINFORMATICS & GENOMICS course                                     |
| 2017           | Faculty member: ESPGHAN Master Class On Gastrointestinal Immunology   |

### 4. Honours and awards

- 2005 Slovak Gas Industry Foundation's scholarship
- 2006 personal Scholarship of Pavol Jozef Safarik University in Kosice for accomplishments in scientific field and good representation of university
- 2006 Leonardo Da Vinci scholarship
- 2006 "Slovak Student Personality of the Year 2005/2006 Award" in medical sciences and pharmacy with an audience with The President of the Slovak Republic
- 2006 Award and Audience with the Rector of Pavol Jozef Safarik University in Kosice for best students in academic year 2005/2006
- 2007 Award and Audience with the Dean of Pavol Jozef Safarik University in Kosice, Faculty of Medicine for best students in academic year 2006/2007
- 2007 personal Scholarship of Pavol Jozef Safarik University in Kosice for accomplishments in scientific field and good representation of university
- 2007 graduation with Dean's Prize
- 2015 MLDS career development grant
- 2017 The Kenneth Rainin Foundation - Innovator Award

## 5. Other relevant experience and professional memberships

I am active member/PI of RegMed XB Cardiovascular Moonshot, CVON-RECONNECT, Leducq PlaqOmics, HCT VEOIBD, and ERA-CVD druggable-MI-genes consortium.

- 2005 - 2007 - Vice-chairman of the Academic Senate of Faculty of Medicine, PJ Safarik University,
- 2004 - 2007 - Elected member of the Academic senate of, PJ Safarik University

## 6. Reviewer for international journals

Nucleic Acids Research, PLOS ONE, PLOS Genetics, Bioinformatics, BMC Bioinformatics, Epigenomics, Scientific Reports, Inflammatory Bowel Diseases, Journal of Human Genetics, PLOS Neglected Tropical Diseases, PLOS Computational Biology, Human Molecular Genetics  
**Grant review:** Trond Mohn Foundation, Israeli Ministry of Science, Czech Health Research Council

## FUNDING

<b>Grants PI</b>	<b>Amount</b>	<b>Year of award</b>	<b>Status</b>
MLDS Career Development Grant (MLDS)	250 k€	2015	ongoing
WKZ Research Funds	150 k€	2013	completed
<b>Grants Co-PI</b>	<b>Amount</b>	<b>Year of award</b>	<b>Status</b>
PlaqOmics/Leducq Young talent program	25 k\$	ongoing	2019
Kenneth Rainin Foundation Innovator Award (Kenneth Rainin Foundation)	200 k\$	2017	ongoing
WKZ Research Funds	150 k€	2016	ongoing
CCFA-BM (Broad Medical Foundation)	83 k\$	2015	completed
Dutch Kidney Foundation Call Innovation Grant (DKF)	100 k€	2015	completed
RECONNECT/CVON (WP leader)	237 k€	2015	ongoing
Reumafonds	160 k€	2014	completed
RAC Genetic UMCU	16 k€	2013	completed

## CONTRIBUTIONS TO SCIENCE

### Targeted resequencing methodologies

Before we introduced our multiplexed targeted re-sequencing technique, the genomic capture had to be performed separately for each sample. We have designed a protocol where molecularly barcoded samples are pooled before genomic capture – an approach, which dramatically reduced the costs and simplified the procedure. The methodology became widely used to detect genetic variants; it was successfully used to find a genetic cause of numerous human diseases and is still widely used in diagnostics practice.

**Mokry M**, Feitsma H, Nijman I.J, de Bruijn E, van der Zaag PJ, Guryev V, Cuppen, E. (2010) Accurate SNP and mutation detection by targeted custom microarray-based genomic enrichment of short-fragment sequencing libraries. *Nucleic Acids Res.* 36(10), e116

\*Nijman IJ, \***Mokry M**, \*van Boxtel R, Toonen P, de Bruijn E, Cuppen E (2010) Mutation discovery by targeted genomic enrichment of multiplexed barcoded samples. *Nature Methods.* 7(11),913-915.

\*Harakalova M, \***Mokry M**, Hrdlickova B, Renkens I, Duran K, van Roekel H, Lansu N, van Roosmalen M, Bruijn E, Nijman IJ, Kloosterman WP, Cuppen E (2011), Multiplexed array-based and in-solution genomic enrichment for flexible and cost-effective targeted next-generation sequencing. *Nature Protocols.* 6, p1870 - p1886

### Transcriptional regulation

Using emerging technologies (ChIP-seq, RNA-seq), we have elucidated several fundamental principles in transcriptional regulation and elucidated the role of transcriptional regulators in intestinal stem cell homeostasis. Namely, we have identified that pre-existing chromatin activity is a leading factor in selectivity of transcriptional programs. Next, we utilized the localization of RNA polymerase II to identify active regulatory units and its dynamics in identification of differentially regulated genes. Finally, we have elucidated role of ASCL2 in the control of stemness in intestinal epithelium.

Schuijers J, Junker JP, **Mokry M**, Hatzis P, Koo BK, Sasselli V, van der Flier LG, Cuppen E, van Oudenaarden A, Clevers H. (2015) Ascl2 Acts as an R-spondin/Wnt-Responsive Switch to Control Stemness in Intestinal Crypts. *Cell Stem Cell* Feb 5;16(2):158-70

\*Eijkelenboom A, \***Mokry M**, Smits LM, Nieuwenhuis EE, Burgering BMT. (2013) FOXO3 selectively amplifies enhancer activity to establish target gene regulation, *Cell Reports*, <http://dx.doi.org/10.1016/j.celrep.2013.11.031>

Schuijers J, **Mokry M**, Hatzis P, Cuppen E, Clevers H (2013) Wnt-induced transcriptional activation is exclusively mediated by TCF/LEF. *EMBO Journal*, Sep;20(9):1219-29

Eijkelenboom A, **Mokry M**, de Wit E, Smits LM, Polderman PE, van Triest MH, van Boxtel R, Schulze A, de Laat W, Cuppen E, Burgering BMT: Genome wide analysis of FOXO3 transcription regulation through RNA pol II profiling *Molecular Systems Biology* 2013, 9:638,

\***Mokry M**, \*Hatzis P, \*Schuijers J, Lansu N, Ruzius FP, Clevers H and Cuppen E (2011) Integrated genome-wide analysis of transcription factor occupancy, RNA polymerase II binding and steady state RNA levels identifies differentially regulated functional gene classes. *Nucleic Acids Research* 2011, doi: 10.1093/nar/gkr720.

### Complex genomics

The contribution of genetic factors to the pathogenesis of inflammatory bowel disease (IBD) and other complex diseases is established by twin, targeted-sequencing, and genome-wide association studies. These studies identified many risk loci, and research is underway to identify causal variants. These studies have focused mainly on protein-coding genes. We show that the other functional elements in the human genome, such as regulatory regions are likely involved. Next, we have used this information to identify novel candidate genes using circular chromosome conformation capture-sequencing (4C-seq).

**Mokry M**, Middendorp S, Wiegerinck CL, Witte M, Teunissen H, Meddens CA, Cuppen E, Clevers H and Nieuwenhuis EES (2014) Many Inflammatory Bowel Disease Risk Loci Include Regions that Regulate Gene Expression in Immune Cells and the Intestinal Epithelium. *Gastroenterology* Apr;146(4):1040-7

Meddens CA, Harakalova M, van den Dungen NA, Foroughi Asl H, Hijma HJ, Cuppen EP, Björkegren JL, Asselbergs FW, Nieuwenhuis EES, **Mokry M**. (2016) Systematic analysis of chromatin interactions at disease associated loci links novel candidate genes to inflammatory bowel disease. *Genome Biology* 2016 Nov 30;17(1):247.

Brandt MM, Meddens CA, Louzao-Martinez L, van den Dungen NAM, Lansu NR, Nieuwenhuis EES, Duncker DJ, Verhaar MC, Joles JA, \***Mokry M**, \*Cheng C. (2017) Chromatin Conformation Links Distal Target Genes to CKD Loci. *J Am Soc Nephrol.* 29(2):462-476.

Haitjema S, Meddens CA, van der Laan SW, Kofink D, Harakalova M, Tragante V, Foroughi Asl H, van Setten J, Brandt MM, Bis JC, O'Donnell C, Cheng C, Hofer IE, Waltenberger J, Biessen E, Jukema JW, Doevendans PA, Nieuwenhuis EE, Erdmann J, Björkegren JL, Pasterkamp G, \*Asselbergs FW, \*den Ruijter HM, \***Mokry M**. (2017) Additional Candidate Genes for Human Atherosclerotic Disease Identified Through Annotation Based on Chromatin Organization. *Circ Cardiovasc Genet.* Apr;10(2).

## PUBLICATIONS

### Best Publication

**Mokry M**, Middendorp S, Wiegerinck CL, Witte M, Teunissen H, Meddens CA, Cuppen E, Clevers H, Nieuwenhuis EES. Many inflammatory bowel disease risk loci include regions that regulate gene expression in immune cells and the intestinal epithelium. *Gastroenterology* 2014;146:1040-1047.

GWAS identified many risk loci, and research is underway to identify causal variants and underlying genes. **In this landmark publication, we show that besides protein coding genes, the other functional elements in the human genome, such as regulatory regions, are likely involved.** Based on this principle, we have later employed circular chromosome conformation capture-sequencing (4C-seq) to identify novel candidate genes in IBD, CAD/Stroke and Chronic Kidney Disease.

### Full publication list

Total number: 78

First author (including shared first): 16

Second author: 8

Second last author: 11

Last author (including shared last): 4

h-index = 28

1. Hartman RJG, Korporaal SJA, **Mokry M**, de Jager SCA, Meeuwse JAL, van der Laan SW, Lansu NR, Zoet GA, Pasterkamp G, Urbanus RT, Hofer IE, Franx A, Velthuis BK, van Rijn BB, den Ruijter HM: *Atherosclerosis*, 2019, 291:114-121
2. Brandt MM, van Dijk CGM, Maringanti R, Chrifi I, Kramann R, Verhaar MC, Duncker DJ, **Mokry M**, Cheng C: Transcriptome analysis reveals microvascular endothelial cell-dependent pericyte differentiation. *Scientific Reports* 2019, 30;9(1):15586
3. Prestel M, Prell-Schicker C, Webb T, Malik R, Lindner B, Ziesch N, Rex-Haffner M, Röh S, Viturawong T, Lehm M, **Mokry M**, den Ruijter H, Haitjema S, Asare Y, Söllner F, Najafabadi MG, Aherrahrou R, Civelek M, Samani NJ, Mann M, Haffner C, Dichgans M: The Atherosclerosis Risk Variant rs2107595 Mediates Allele-Specific Transcriptional Regulation of HDAC9 via E2F3 and Rb1. *Stroke*. 2019 Oct;50(10):2651-2660
4. Brandt MM, Nguyen ITN, Krebber MM, van de Wouw J, **Mokry M**, Cramer MJ, Duncker DJ, Verhaar MC, Joles JA, Cheng C: Limited synergy of obesity and hypertension, prevalent risk factors in onset and progression of heart failure with preserved ejection fraction. *J Cell Mol Med*. 2019 Oct;23(10):6666-6678
5. Pei J, Juni R, Harakalova M, Duncker DJ, Asselbergs FW, Koolwijk P, Hinsbergh VV, Verhaar MC, **Mokry M**, Cheng C. Indoxyl Sulfate Stimulates Angiogenesis by Regulating Reactive Oxygen Species Production via CYP1B1. *Toxins (Basel)*. 2019 Aug 2;11(8)
6. Hemerich D, Pei J, Harakalova M, van Setten J, Boymans S, Boukens BJ, Efimovm IR, Michels M, van der Velden J, Vink A, Cheng C, van der Harst P, Moore JH, **Mokry M**, Tragante V, Asselbergs FW. Integrative Functional Annotation of 52 Genetic Loci Influencing Myocardial Mass Identifies Candidate Regulatory Variants and Target Genes. *Circ Genom Precis Med*. 2019 Feb;12(2):e002328
7. Meddens CA, Van Der List ACJ, Nieuwenhuis EES, **Mokry M**. Non-coding DNA in IBD: From sequence variation in DNA regulatory elements to novel therapeutic potential. *Gut* 2019.
8. Oosterhoff LA, Kruitwagen HS, van Wolferen ME, van Balkom BWM, **Mokry M**, Lansu N, van den Dungen NAM, Penning LC, Spanjersberg TCF, de Graaf JW, Veenendaal T, Zomerdijk F, Fledderus JO, Spee B, van Steenbeek FG. Characterization of Endothelial and Smooth Muscle Cells From Different Canine Vessels. *Front Physiol* 2019;10:101.
9. Plantinga M, de Haar CG, Dunnebach E, van den Beemt D, Bloemenkamp KWM, **Mokry M**, Boelens JJ, Nierkens S. Cord-Blood-Stem-Cell-Derived Conventional Dendritic Cells Specifically Originate from CD115-Expressing Precursors. *Cancers (Basel)* 2019;11.
10. Van Der Kroef M, Castellucci M, **Mokry M**, Cossu M, Garonzi M, Bossini-Castillo LM, Chouri E, Wichers CGK, Beretta L, Trombetta E, Silva-Cardoso S, Vazirpanah N, Carvalheiro T, Angiolilli C, Bekker CPJ, Affandi AJ, Reedquist KA, Bonte-Mineur F, Zirkzee EJM, Bazzoni F, Radstake TRDJ, Rossato M. Histone modifications underlie monocyte dysregulation in patients with systemic sclerosis, underlining the treatment potential of epigenetic targeting. *Annals of the Rheumatic Diseases* 2019.
11. Schreurs RRCE, Baumdick ME, Sagebiel AF, Kaufmann M, **Mokry M**, Klarenbeek PL, Schaltenberg N, Steinert FL, van Rijn JM, Drewniak A, The SMML, Bakx R, Derikx JPM, de Vries N, Corpeleijn WE, Pals ST, Gagliani N, Friese MA, Middendorp S, Nieuwenhuis EES, Reinshagen K, Geijtenbeek

- TBH, van Goudoever JB, Bunders MJ. Human Fetal TNF- $\alpha$ -Cytokine-Producing CD4 + Effector Memory T Cells Promote Intestinal Development and Mediate Inflammation Early in Life. *Immunity* 2019;50:462-476.e8.
12. Peeters JGC, Picavet LW, Coenen SGJM, Mauthe M, Vervoort SJ, Mocholi E, de Heus C, Klumperman J, Vastert SJ, Reggiori F, Coffe P, **Mokry M**, van Loosdregt J. Transcriptional and epigenetic profiling of nutrient-deprived cells to identify novel regulators of autophagy. *Autophagy* 2019;15:98-112.
  13. Vervoort SJ, de Jong OG, Guy Roukens M, Frederiks CL, Vermeulen JF, Lourenço AR, Bella L, Vidakovic AT, Sandoval JL, Moelans C, van Amersfoort M, Dallman MJ, Bruna A, Caldas C, Nieuwenhuis E, van der Wall E, Derksen P, van Diest P, Verhaar MC, Lam EWF, **Mokry M**, Coffe P. Global transcriptional analysis identifies a novel role for SOX4 in tumor-induced angiogenesis. *eLife* 2018;7.
  14. van der Laan SW, Siemelink MA, Haitjema S, Foroughi Asl H, Perisic L, **Mokry M**, van Setten J, Malik R, Dichgans M, Worrall BB, of the International Stroke Genetics Consortium METASTROKE, Samani NJ, Schunkert H, Erdmann J, Hedin U, Paulsson-Berne G, Björkegren JLM, de Borst GJ, Asselbergs FW, den Ruijter FW, de Bakker PIW, Pasterkamp G. Genetic Susceptibility Loci for Cardiovascular Disease and Their Impact on Atherosclerotic Plaques. *Circulation. Genomic and precision medicine* 2018;11:e002115-e002115.
  15. van den Akker F, Vrijzen KR, Deddens JC, Buikema JW, **Mokry M**, van Laake LW, Doevendans PA, Sluijter JPG. Suppression of T cells by mesenchymal and cardiac progenitor cells is partly mediated via extracellular vesicles. *Heliyon* 2018;4.
  16. ter Haar NM, Tak T, **Mokry M**, Scholman RC, Meerding JM, de Jager W, Verwoerd A, Foell D, Vogl T, Roth J, Liefeld PHC, van Loosdregt J, Koenderman L, Vastert SJ, de Roock S. Reversal of Sepsis-Like Features of Neutrophils by Interleukin-1 Blockade in Patients With Systemic-Onset Juvenile Idiopathic Arthritis. *Arthritis and Rheumatology* 2018;70:943-956.
  17. Siemelink MA, van der Laan SW, Haitjema S, van Koeveerden ID, Schaap J, Wesseling M, de Jager SCA, **Mokry M**, van Iterson M, Dekkers KF, Luijk R, Foroughi Asl H, Michoel T, Björkegren JLM, Aavik E, Ylä-Herttuala S, de Borst GJ, Asselbergs FW, El Azzouzi H, den Ruijter HM, Heijmans BT, Pasterkamp G. Smoking is Associated to DNA Methylation in Atherosclerotic Carotid Lesions. *Circulation. Genomic and precision medicine* 2018;11:e002030-e002030.
  18. Petrelli A, Mijnheer G, Hoytema Van Konijnenburg DP, Van Der Wal MM, Giovannone B, Mocholi E, Vazirpanah N, Broen JC, Hijnen D, Oldenburg B, Coffe P, Vastert SJ, Prakken BJ, Spierings E, Pandit A, **Mokry M**, Van Wijk F. PD-1+CD8+ T cells are clonally expanding effectors in human chronic inflammation. *Journal of Clinical Investigation* 2018;128:4669-4681.
  19. Paauw ND, Lely AT, Joles JA, Franx A, Nikkels PG, **Mokry M**, van Rijn BB. H3K27 acetylation and gene expression analysis reveals differences in placental chromatin activity in fetal growth restriction. *Clinical Epigenetics* 2018;10.
  20. Laarman MD, Vermunt MW, Kleinloog R, De Boer-Bergsma JJ, Bank NB, Rinkel GJE, Creyghton MP, **Mokry M**, Bakkens J, Ruigrok YM. Intracranial aneurysm-associated single-nucleotide polymorphisms alter regulatory DNA in the human circle of willis. *Stroke* 2018;49:447-453.
  21. Ferraz MAMM, Rho HS, Hemerich D, Henning HHW, van Tol HTA, Hölker M, Besenfelder U, **Mokry M**, Vos PLAM, Stout TAE, Le Gac S, Gadella BM. An oviduct-on-a-chip provides an enhanced in vitro environment for zygote genome reprogramming. *Nature Communications* 2018;9.
  22. Ein-Dor T, Verbeke WJMI, **Mokry M**, Vrtička P. Epigenetic modification of the oxytocin and glucocorticoid receptor genes is linked to attachment avoidance in young adults. *Attachment and Human Development* 2018;20:439-454.
  23. Brandt MM, Meddens CA, Louzao-Martinez L, Van Den Dungen NAM, Lansu NR, Nieuwenhuis EES, Duncker DJ, Verhaar MC, Joles JA, **\*Mokry M**, **\*Cheng C**. Chromatin Conformation Links Distal Target Genes to CKD Loci. *Journal of the American Society of Nephrology* 2018;29:462-476.
  24. Bartels M, Govers A, Polak R, Vervoort S, Van Boxtel R, Pals C, Bierings M, Van Solinge W, Egberts T, Nieuwenhuis E, **Mokry M**, Coffe P. Megakaryocyte lineage development is controlled by modulation of protein acetylation. *PLoS ONE* 2018;13.
  25. Teitsma XM, Jacobs JWJ, **Mokry M**, Borm MEA, Pethö-Schramm A, van Laar JM, Bijlsma JWJ, Lafeber FPJ. Identification of differential co-expressed gene networks in early rheumatoid arthritis achieving sustained drug-free remission after treatment with a tocilizumab-based or methotrexate-based strategy. *Arthritis Research and Therapy* 2017;19.
  26. Minutti CM, Drube S, Blair N, Schwartz C, McCrae JC, McKenzie AN, Kamradt T, **Mokry M**, Coffe P, Sibilia M, Sijts AJ, Fallon PG, Maizels RM, Zaiss DM. Epidermal Growth Factor Receptor Expression Licenses Type-2 Helper T Cells to Function in a T Cell Receptor-Independent Fashion. *Immunity* 2017;47:710-722.e6.

27. Haitjema S, Meddens CA, Van Der Laan SW, Kofink D, Harakalova M, Tragante V, Foroughi Asl H, Van Setten J, Brandt MM, Bis JC, O'Donnell C, Cheng C, Hoefler IE, Waltenberger J, Biessen E, Jukema JW, Doevendans PAFM, Nieuwenhuis EES, Erdmann J, Björkegren JLM, Pasterkamp G, \*Asselbergs FW, Den \*Ruijter HM, \*Mokry M. Additional Candidate Genes for Human Atherosclerotic Disease Identified Through Annotation Based on Chromatin Organization. *Circulation: Cardiovascular Genetics* 2017;10.
28. Van Den Broek T, Delemarre EM, Janssen WJM, Nievelstein RAJ, Broen JC, Tesselaar K, Borghans JAM, Nieuwenhuis EES, Prakken BJ, **Mokry M**, Jansen NJG, Van Wijk F. Neonatal thymectomy reveals differentiation and plasticity within human naive T cells. *Journal of Clinical Investigation* 2016;126:1126-1136.
29. Peeters JGC, Vervoort SJ, Mijnheer G, de Roock S, Vastert SJ, Nieuwenhuis EES, van Wijk F, Prakken BJ, **Mokry M**, van Loosdregt J. Autoimmune disease-associated gene expression is reduced by BET-inhibition. *Genomics Data* 2016;7:14-17.
30. **Mokry M**, Harakalova M, Asselbergs FW, De Bakker PIW, Nieuwenhuis EES. Extensive association of common disease variants with regulatory sequence. *PLoS ONE* 2016;11.
31. Meddens CA, Harakalova M, van den Dungen NAM, Foroughi Asl H, Hijma HJ, Cuppen EPJG, Björkegren JLM, Asselbergs FW, Nieuwenhuis EES, **Mokry M**. Systematic analysis of chromatin interactions at disease associated loci links novel candidate genes to inflammatory bowel disease. *Genome Biology* 2016;17.
32. Mauthe M, Langereis M, Jung J, Zhou X, Jones A, Omta W, Tooze SA, Stork B, Paludan SR, Ahola T, Egan D, Behrends C, **Mokry M**, de Haan C, van Kuppeveld F, Reggiori F. An siRNA screen for ATG protein depletion reveals the extent of the unconventional functions of the autophagy proteome in virus replication. *Journal of Cell Biology* 2016;214:619-635.
33. Kent LN, Rakijas JB, Pandit SK, Westendorp B, Chen HZ, Huntington JT, Tang X, Bae S, Srivastava A, Senapati S, Koivisto C, Martin CK, Cuitino MC, Perez M, Clouse JM, Chokshi V, Shinde N, Kladney R, Sun D, Perez-Castro A, Matondo RB, Nantasanti S, **Mokry M**, Huang K, Machiraju R, Fernandez S, Rosol TJ, Coppola V, Pohar KS, Pipas JM, Schmidt CR, De Bruin A, Leone G. E2f8 mediates tumor suppression in postnatal liver development. *Journal of Clinical Investigation* 2016;126:2955-2969.
34. Kaaij LJT, **Mokry M**, Zhou M, Musheev M, Geeven G, Melquiond ASJ, de Jesus Domingues AM, de Laat W, Niehrs C, Smith AD, Ketting RF. Enhancers reside in a unique epigenetic environment during early zebrafish development. *Genome Biology* 2016;17.
35. Ijssennagger N, Janssen AWF, Milona A, Ramos Pittol JM, Hollman DAA, **Mokry M**, Betzel B, Berends FJ, Janssen IM, Van Mil SWC, Kersten S. Gene expression profiling in human precision cut liver slices in response to the FXR agonist obeticholic acid. *Journal of Hepatology* 2016;64:1158-1166.
36. Fleskens V, **Mokry M**, Van Der Leun AM, Huppelschoten S, Pals CEGM, Peeters J, Coenen S, Cardoso BA, Barata JT, Van Loosdregt J, Coffey PJ. FOXP3 can modulate TAL1 transcriptional activity through interaction with LMO2. *Oncogene* 2016;35:4141-4148.
37. Blokzijl F, De Ligt J, Jager M, Sasselli V, Roerink S, Sasaki N, Huch M, Boymans S, Kuijk E, Prins P, Nijman IJ, Martincorena I, **Mokry M**, Wiegerinck CL, Middendorp S, Sato T, Schwank G, Nieuwenhuis EES, Verstegen MMA, Van Der Laan LJW, De Jonge J, Ijzermans JNM, Vries RG, Van De Wetering M, Stratton MR, Clevers H, Cuppen E, Van Boxtel R. Tissue-specific mutation accumulation in human adult stem cells during life. *Nature* 2016;538:260-264.
38. Van Keimpema M, Grüneberg LJ, **Mokry M**, Van Boxtel R, Van Zelm MC, Coffey P, Pals ST, Spaargaren M. The forkhead transcription factor FOXP1 represses human plasma cell differentiation. *Blood* 2015;126:2098-2109.
39. Schuijers J, Junker JP, **Mokry M**, Hatzis P, Koo BK, Sasselli V, Van Der Flier LG, Cuppen E, Van Oudenaarden A, Clevers H. Ascl2 acts as an R-spondin/wnt-responsive switch to control stemness in intestinal crypts. *Cell Stem Cell* 2015;16:158-170.
40. Peeters JGC, Vervoort SJ, Tan SC, Mijnheer G, de Roock S, Vastert SJ, Nieuwenhuis EES, van Wijk F, Prakken BJ, Creighton MP, Coffey PJ, **Mokry M**, Van Loosdregt J. Inhibition of Super-Enhancer Activity in Autoinflammatory Site-Derived T Cells Reduces Disease-Associated Gene Expression. *Cell Reports* 2015;12:1986-1996.
41. Lindemans CA, Calafiore M, Mertelsmann AM, O'Connor MH, Dudakov JA, Jenq RR, Velardi E, Young LF, Smith OM, Lawrence G, Ivanov JA, Fu YY, Takashima S, Hua G, Martin ML, O'Rourke KP, Lo YH, **Mokry M**, Romera-Hernandez M, Cupedo T, Dow LE, Nieuwenhuis EE, Shroyer NF, Liu C, Kolesnick R, Van Den Brink MRM, Hanash AM. Interleukin-22 promotes intestinal-stem-cell-mediated epithelial regeneration. *Nature* 2015;528:560-564.
42. Harakalova M, Kummeling G, Sammani A, Linschoten M, Baas AF, Van Der Smagt J, Doevendans PA, Van Tintelen JP, Dooijes D, **Mokry M**, Asselbergs FW. A systematic analysis of genetic dilated

- cardiomyopathy reveals numerous ubiquitously expressed and muscle-specific genes. *European Journal of Heart Failure* 2015;17:484-493.
43. De Bruin A, Cornelissen PWA, Kirchmaier BC, **Mokry M**, Ilich E, Nirmala E, Liang KH, Vegh AMD, Scholman KT, Groot Koerkamp MJ, Holstege FC, Cuppen E, Schulte-Merker S, Bakker WJ. Genome-wide analysis reveals NRP1 as a direct HIF1 $\alpha$ -E2F7 target in the regulation of motorneuron guidance in vivo. *Nucleic Acids Research* 2015;44:3549-3566.
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## Major publications that are submitted or in preparation

1. Depuydt MAC#, Prange KHM#, Slenders L#, Örd T, Elbersen D, Boltjes A, de Jager SAC, Asselbergs FW, de Borst GJ, Aavik E, Lönnberg T, Lutgens E, Bot I, Slütter B, Glass CH, Kaikkonen MU, van der Laan SW, Yla-Herttuala S, **Mokry M\***, Kuiper J\*, de Winther MPJ\*, Pasterkamp G\*: Microanatomy of the Human Atherosclerotic Plaque by Single Cell Transcriptomics
2. Harakalova M, Pei J, Maas R, Nagyova E, Gho JMIH, Mil A, van Es R, Sepehrkhoy S, Buijsrogge MP, de Jonge N, Nieuwenhuis EES, Doevendans PA, den Ruijter HM, Pasterkamp G, Huibers MM, Hajjar R, Mercola M, de Weger RA, Sluijter J, Cheng C, Vink A, **\*Mokry M**, \*Asselbergs FW: Integrated analysis of chromatin activity in end-stage cardiomyopathy
3. Pei M, Harakalova M, Treibel TA, Lumbers T, Boukens BJ, Efimov IR, van Dinter JT, El Azzouzi H, van den Dungen N, van Dijk CGM, Krebber MM, den Ruijter H, Pasterkamp G, Duncker DJ, Nieuwenhuis EES, Karargas G, de Weger G, Huibers MM, Vink A, Moore JH, Moon JC, Verhaar MC, **\*Mokry M**, \*Asselbergs FW, \*Cheng C: Histone acetylome signatures differ between healthy and remodeled human myocardium
4. Mijnheer G, **Mokry M**, Fleskens V, van der Wal M, Scholman R, Vervoort S, Roberts C, Petrelli A, Peeters JGC, Knijff M, de Roock S, Vastert S, Taams LS, van Loosdregt J, van Wijk F: Conserved human effector Regulatory T cell signature is reflected in super-enhancer landscape
5. Meddens CA, DeVries MH, ..., Clevers H, **\*Mokry M**, \*Nieuwenhuis EES: Stem cells are a main source of the intestinal epithelial inflammatory response

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