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Education and Related Research Experience

2000-2002 Bachelor of Sciences in Biomedical Sciences

Catholic University Leuven

2002-2004 Master of Sciences in Biomedical Sciences

Catholic University Leuven

Thesis: "Genetic characterisation of the *Procyon lotor* papillomavirus type

1"

Graduated Magna cum Laude

Dr. M. Van Ranst

2005 Visiting Scientist

Graham Brown Cancer centre

Louisville, KY

Drs. A.B. Jenson and S. Ghim

2005 Research Associate

Laboratory of Clinical and Epidemiological Virology

Catholic University Leuven

Dr. M. Van Ranst

2005-2007 Masters of Sciences in Biomedical Sciences

Albert Einstein College of Medicine

Dr. R.D. Burk

2007-2011 Ph.D. in Biomedical Sciences

Albert Einstein College of Medicine, Bronx

Thesis: "The evolution of papillomaviral carcinogenicity"

Dr. R.D. Burk

2011-2015 Postdoctoral Fellow

Lab of Viral Diseases, NIAID

Bethesda, MD

Dr. A.A. McBride

2016-present Research fellow

Lab of Viral Diseases, NIAID

Bethesda, MD

Dr. A.A. McBride

Fellowships and Honours

2014	ASM Conference on Viral Manipulation of Nuclear Processes Travel Award
2010	Albert Einstein College of Medicine Student Service Award
2009	International Papillomavirus Society Travel Award
2007	International Papillomavirus Society Travel Award
2006	International Papillomavirus Society Travel Award
2005-present	Fellow of the Belgian American Educational Foundation (BAEF)

Mentoring

Name of Student	Current position
David Melnick	Graduate student at University of Virginia
William Werbel	Graduate Student at University of Michigan
Narendranath Bhokisham	Graduate Student at University of Maryland
Ariana Harari, PhD	Scientific Associate at IMsci

Professional Service

2015	Organizer David J. Heslin memorial symposium, Albert Einstein College of
	Medicine
2011-present	Member of the International Committee for the Nomenclature of Viruses (ICTV)
	papillomavirus study group
2009-present	Peer reviewer for several journals including Plos Pathogens, Plos One, Virology,
	Journal of Virology, Journal of General Virology, Journal of Medical Virology and
	Infection, Genetics and Evolution.

Lectures

Invited lectures

2017	TT ' ' CA ' A ' TIGA
2016	University of Arizona, Arizona, USA
2015	Plenary talk, 30th International Papillomavirus conference, Lisbon, Portugal.
2015	University of Western Ontario, Ontario, Canada.
2014	Comparative Biomedical Science Day symposium, National Institutes of Health,
	Bethesda, MD, USA.
2013	Octet User meeting, Bethesda, MD, USA.
2012	Plenary talk, 28th International Papillomavirus conference, San Juan, Puerto Rico.
2012	"PaVE Breakfast session" at 28th International Papillomavirus Conference, San
	Juan, Puerto Rico.
2009	Ecole Supérieure de Biotechnologies de Strasbourg, Strasbourg, France.
2008	Presentation at Microbial Evolution & Genomics NYC Area Symposium.
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Selected Oral Presentations

2016	DNA tumor virus meeting, Montreal, Canada.
2016	DNA tumor virus meeting, Montreal, Canada.
	O , ,
2015	ICGEB DNA tumor virus meeting, Trieste, Italy.
2015	ICGEB DNA tumor virus meeting, Trieste, Italy.
2015	29th International Papillomavirus conference, Seattle, USA.
2014	29th International Papillomavirus conference, Seattle, USA.
2014	DNA tumor virus meeting, Madison, USA.
2013	DNA tumor virus meeting, Birmingham, UK.
2012	28th International Papillomavirus Conference, San Juan, Puerto Rico.
2012	DNA tumor virus meeting, Montreal, Canada.
2011	ICGEB DNA tumor virus meeting, Trieste, Italy.
2010	26th International Papillomavirus Conference, Montreal, Canada.
2009	25th International Papillomavirus Conference, Malmo, Sweden.
2007	24th International Papillomavirus Conference, Beijing, China.
2005	22nd International Papillomavirus Conference, Vancouver, Canada.
2004	8th MMSRC, Maastricht, The Netherlands.

Courses and workshops

2004 Computational Genomics workshop

Charles University

Prague, the Czech Republic

2009 Workshop on Molecular Evolution

Marine Biology Laboratories,

Woodshole, MA

2014 NIH FAES Next Generation Sequencing analysis

NIH

Bethesda, MD

Online Resources

The papillomavirus Episteme (PaVE)

http://pave.niaid.nih.gov

Publications

Peer Reviewed Articles

- 1. The Ancient Evolutionary History of Polyomaviruses. Buck CB, <u>Van Doorslaer K</u>, Peretti A, An P, Katz JP, Pipas JM, McBride AA, Camus A, McDermott A, Delwart E, Ng T, Farkas K, Austin C, Kraberger S, Davison W, Pastrana DV, and Varsani A. **PLoS Pathog**. 2016 Apr 19;12(4):e1005574. doi: 10.1371/journal.ppat.1005574. eCollection 2016 Apr. PMID 27093155
- 2. Papillomavirus Evolution Driven by the Host Restriction Factor APOBEC3 and DNA Methylation. **Van Doorslaer K**, Warren C and Pyeon D. **Virus Evol** (2015) 1 (1): vev015
- 3. UbSRD: The Ubiquitin Structural Relational Database. Harrison JS, Jacobs TM, Houlihan K, <u>Van Doorslaer K</u> and Kuhlman B. **J Mol Biol**. 2015 Sep 18. pii: S0022-2836(15)00522-7. doi: 10.1016/j.jmb.2015.09.011. PMID 26392143.
- Degradation of Human PDZ-Proteins by Human Alphapapillomaviruses Represents an Evolutionary Adaptation to a Novel Cellular Niche. <u>Van Doorslaer K</u>, DeSalle R, Einstein MH, Burk RD. PLoS Pathog. 2015 Jun 18;11(6):e1004980. doi: 10.1371/journal.ppat.1004980. eCollection 2015 Jun. PMID:26086730
- A Proteomic approach to discover and compare interacting partners of Papillomavirus E2 proteins from diverse phylogenetic groups. Jang MK, Anderson DE, <u>Van Doorslaer K</u>, McBride AA. <u>Proteomics</u>. 2015 Mar 11. doi: 10.1002/pmic.201400613. PMID: 25758368
- 6. Evolution of the *Papillomaviridae*. <u>Van Doorslaer K</u>. Virology. 2013 Oct;445(1-2):11-20. doi: 10.1016/j.virol.2013.05.012. Epub 2013 Jun 14. PMID: 23769415
- 7. Condylomatous genital lesions in cynomolgus macaques from Mauritius. Harari A, Wood CE, <u>Van Doorslaer K</u>, Chen Z, Domaingue MC, Elmore D, Koenig P, Wagner JD, Jennings RN, Burk RD. **Toxicol Pathol**. 2013 Aug;41(6):893-901. doi: 10.1177/0192623312467521. Epub 2012 Dec 21. PMID: 23262641
- 8. The Papillomavirus Episteme: a central resource for papillomavirus sequence data and analysis. **Van Doorslaer K**, Tan Q, Xirasagar S, Bandaru S, Gopalan V, Mohamoud Y, Huyen Y, McBride AA. **Nucleic Acids Res**. 2013 Jan;41(Database issue):D571-8. doi: 10.1093/nar/gks984. Epub 2012 Oct 23. PMID: 23093593
- 9. Association between hTERT activation by HPV E6 proteins and oncogenic risk. <u>Van</u> <u>Doorslaer K</u>, Burk RD. <u>Virology</u>. 2012 Nov 10;433(1):216-9. doi: 10.1016/j.virol.2012.08.006. Epub 2012 Aug 25. PMID: 22925336
- 10. Sequence imputation of HPV16 genomes for genetic association studies. Smith B, Chen Z, Reimers L, <u>Van Doorslaer K</u>, Schiffman M, Desalle R, Herrero R, Yu K, Wacholder S,

- Wang T, Burk RD. **PLoS One**. 2011;6(6):e21375. doi: 10.1371/journal.pone.0021375. Epub 2011 Jun 23. PMID: 21731721
- 11. Papillomaviruses: evolution, Linnaean taxonomy and current nomenclature. <u>Van Doorslaer K</u>, Bernard HU, Chen Z, de Villiers EM, zur Hausen H, Burk RD. **Trends Microbiol**. 2011 Feb;19(2):49-50; author reply 50-1. doi: 10.1016/j.tim.2010.11.004. Epub 2010 Dec 7. PMID: 21144754
- 12. Evolution of human papillomavirus carcinogenicity. <u>Van Doorslaer K</u>, Burk RD. **Adv Virus Res**. 2010;77:41-62. doi: 10.1016/B978-0-12-385034-8.00002-8. Review. PMID: 20951869
- 13. Degradation of p53 by human Alphapapillomavirus E6 proteins shows a stronger correlation with phylogeny than oncogenicity. Fu L, <u>Van Doorslaer K</u>, Chen Z, Ristriani T, Masson M, Travé G, Burk RD. **PLoS One**. 2010 Sep 17;5(9). doi:pii: e12816. 10.1371/journal.pone.0012816. PMID: 20862247
- 14. Overexpression of miR-21 promotes an in vitro metastatic phenotype by targeting the tumor suppressor RHOB. Connolly EC, <u>Van Doorslaer K</u>, Rogler LE, Rogler CE. <u>Mol Cancer Res</u>. 2010 May;8(5):691-700. doi: 10.1158/1541-7786.MCR-09-0465. Epub 2010 May 11. PMID: 20460403
- 15. Classification of papillomaviruses (PVs) based on 189 PV types and proposal of taxonomic amendments. Bernard HU, Burk RD, Chen Z, <u>Van Doorslaer K</u>, zur Hausen H, de Villiers EM. **Virology**. 2010 May 25;401(1):70-9. doi: 10.1016/j.virol.2010.02.002. Epub 2010 Mar 5. PMID: 20206957
- 16. Lack of heterogeneity of HPV16 E7 sequence compared with HPV31 and HPV73 may be related to its unique carcinogenic properties. Safaeian M, <u>Van Doorslaer K</u>, Schiffman M, Chen Z, Rodriguez AC, Herrero R, Hildesheim A, Burk RD. Arch Virol. 2010 Mar;155(3):367-70. doi: 10.1007/s00705-009-0579-2. Epub 2010 Jan 6. PMID: 20049619
- 17. Genomic diversity and interspecies host infection of alpha12 Macaca fascicularis papillomaviruses (MfPVs). Chen Z, **Van Doorslaer K**, DeSalle R, Wood CE, Kaplan JR, Wagner JD, Burk RD. **Virology**. 2009 Oct 25;393(2):304-10. doi: 10.1016/j.virol.2009.07.012. Epub 2009 Aug 28. PMID: 19716580
- 18. Human papillomaviruses: genetic basis of carcinogenicity. Burk RD, Chen Z, <u>Van Doorslaer K</u>. Public Health Genomics. 2009;12(5-6):281-90. doi: 10.1159/000214919. Epub 2009 Aug 11. Review. PMID: 19684441
- Serological response to an HPV16 E7 based therapeutic vaccine in women with high-grade cervical dysplasia. <u>Van Doorslaer K</u>, Reimers LL, Studentsov YY, Einstein MH, Burk RD. Gynecol Oncol. 2010 Feb;116(2):208-12. doi: 10.1016/j.ygyno.2009.05.044. Epub 2009 Jun 24. PMID: 19555999

- 20. Identification of unusual E6 and E7 proteins within avian papillomaviruses: cellular localization, biophysical characterization, and phylogenetic analysis. **Van Doorslaer K**, Sidi AO, Zanier K, Rybin V, Deryckère F, Rector A, Burk RD, Lienau EK, van Ranst M, Travé G. **J Virol**. 2009 Sep;83(17):8759-70. doi: 10.1128/JVI.01777-08. Epub 2009 Jun 24. PMID: 19553340
- 21. Macaca fascicularis papillomavirus type 1: a non-human primate betapapillomavirus causing rapidly progressive hand and foot papillomatosis. Joh J, Hopper K, <u>Van Doorslaer</u> <u>K</u>, Sundberg JP, Jenson AB, Ghim SJ. **J Gen Virol**. 2009 Apr;90(Pt 4):987-94. doi: 10.1099/vir.0.006544-0. Epub 2009 Mar 4. PMID: 19264664
- 22. A single amino acid substitution in a segment of the CA protein within Gag that has similarity to human immunodeficiency virus type 1 blocks infectivity of a human endogenous retrovirus K provirus in the human genome. Heslin DJ, Murcia P, Arnaud F, Van Doorslaer K, Palmarini M, Lenz J. J Virol. 2009 Jan;83(2):1105-14. doi: 10.1128/JVI.01439-08. Epub 2008 Nov 12. PMID: 19004950
- 23. Genomic characterization of two novel reptilian papillomaviruses, Chelonia mydas papillomavirus 1 and Caretta caretta papillomavirus 1. Herbst LH, Lenz J, <u>Van Doorslaer</u> <u>K</u>, Chen Z, Stacy BA, Wellehan JF Jr, Manire CA, Burk RD. <u>Virology</u>. 2009 Jan 5;383(1):131-5. doi: 10.1016/j.virol.2008.09.022. Epub 2008 Oct 29.PMID: 18973915
- 24. Genomic characterization of novel dolphin papillomaviruses provides indications for recombination within the Papillomaviridae. Rector A, Stevens H, Lacave G, Lemey P, Mostmans S, Salbany A, Vos M, <u>Van Doorslaer K</u>, Ghim SJ, Rehtanz M, Bossart GD, Jenson AB, Van Ranst M. <u>Virology</u>. 2008 Aug 15;378(1):151-61. doi: 10.1016/j.virol.2008.05.020. Epub 2008 Jun 24. PMID: 18579177
- 25. Ancient papillomavirus-host co-speciation in Felidae. Rector A, Lemey P, Tachezy R, Mostmans S, Ghim SJ, <u>Van Doorslaer K</u>, Roelke M, Bush M, Montali RJ, Joslin J, Burk RD, Jenson AB, Sundberg JP, Shapiro B, Van Ranst M. **Genome Biol**. 2007;8(4):R57. PMID: 17430578
- 26. Complete genomic characterization of a murine papillomavirus isolated from papillomatous lesions of a European harvest mouse (Micromys minutus). <u>Van Doorslaer K</u>, Rector A, Jenson AB, Sundberg JP, Van Ranst M, Ghim SJ. **J Gen Virol**. 2007 May;88(Pt 5):1484-8. PMID: 17412977
- 27. Genetic characterization of the first chiropteran papillomavirus, isolated from a basosquamous carcinoma in an Egyptian fruit bat: the Rousettus aegyptiacus papillomavirus type 1. Rector A, Mostmans S, <u>Van Doorslaer K</u>, McKnight CA, Maes RK, Wise AG, Kiupel M, Van Ranst M. **Vet Microbiol**. 2006 Oct 31;117(2-4):267-75. Epub 2006 Jul 18. PMID: 16854536

- 28. Genetic characterization of the Capra hircus papillomavirus: a novel close-to-root artiodactyl papillomavirus. **Van Doorslaer K**, Rector A, Vos P, Van Ranst M. **Virus Res**. 2006 Jun;118(1-2):164-9. Epub 2006 Jan 23. PMID: 16430985
- 29. Isolation and cloning of the raccoon (Procyon lotor) papillomavirus type 1 by using degenerate papillomavirus-specific primers. Rector A, <u>Van Doorslaer K</u>, Bertelsen M, Barker IK, Olberg RA, Lemey P, Sundberg JP, Van Ranst M. **J Gen Virol.** 2005 Jul;86(Pt 7):2029-33. PMID: 15958682
- 30. Isolation and cloning of a papillomavirus from a North American porcupine by using multiply primed rolling-circle amplification: the Erethizon dorsatum papillomavirus type 1. Rector A, Tachezy R, **Van Doorslaer K**, MacNamara T, Burk RD, Sundberg JP, Van Ranst M. **Virology**. 2005 Jan 20;331(2):449-56. PMID: 15629787

Review chapters

- 1. Machado FS, Rodriquez NE, Adesse D, Garzoni LR, Esper L, Lisanti MP, Burk RD, Albanese C, <u>Van Doorslaer K</u>, Weiss LM, Nagajyothi F, Nosanchuk JD, Wilson ME, Tanowitz HB., 2010. Recent developments in the interactions between caveolin and pathogens. *In* Caveolins and caveolae: Role in signaling and Disease mechanisms. Edited by Jasmin JF, Frank PG and Lisanti MP. Landes Bioscience. Pubmed PMID: 22411314
- 2. <u>Van Doorslaer K</u>, Sekhar V, Khan J, McBride AA., 2012. **Replication and Maintenance of Viral Genomes by Association with Host Chromatin**. *In* Small DNA Viruses. Edited by Kevin L. Gaston. Horizon Press.

Community education

1. McBride AA, <u>Van Doorslaer K,</u> PaVE the papillomavirus episteme, **HPV today** (number 26). http://www.hpvtoday.com

Professional references

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