

Koenraad Van Doorslaer, PhD

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Current and Recent Positions

Assistant Professor School of Animal and Comparative Biomedical Sciences University of Arizona, College of Agriculture and Life Sciences Tucson, AZ, USA	2016-present
Research fellow Lab of Viral Diseases, NIAID Bethesda, MD Dr. A.A. McBride	2016-2016
Postdoctoral Fellow Lab of Viral Diseases, NIAID Bethesda, MD Dr. A.A. McBride	2011-2016
Graduate Student Albert Einstein College of Medicine, Bronx Thesis: "The evolution of papillomaviral carcinogenicity" Dr. R.D. Burk	2007-2011
Visiting Scientist Graham Brown Cancer centre Louisville, KY Drs. A.B. Jenson and S. Ghim	2004-2005
Research Associate Laboratory of Clinical and Epidemiological Virology Catholic University Leuven Dr. M. Van Ranst	2004-2005

Education

PhD in Biomedical Sciences Albert Einstein College of Medicine Thesis: "The evolution of papillomaviral carcinogenicity" Dr. R.D. Burk	2011
MS in Biomedical Sciences Albert Einstein College of Medicine Dr. R.D. Burk	2007
MS in Biomedical Sciences Catholic University Leuven Thesis: "Genetic characterization of the Procyon lotor papillomavirus type 1" Graduated Magna cum Laude Dr. M. Van Ranst	2004
BS in Biomedical Sciences Catholic University Leuven	2002

Fellowships and Honors

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
Ariana Harari, PhD	Scientific Associate at IMsci

Professional Service

2016	Organizer David J. Heslin memorial symposium, Regeneron
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, Scientific Reports, and Infection, Genetics and Evolution.

Lectures

Invited lectures

- 2016** University of Arizona, Tucson, AZ, 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.

Selected Oral Presentations

- 2016** DNA tumor virus meeting, Montreal Canada.
- 2016** DNA tumor virus meeting, Montreal Canada.
- 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, Malmö, 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. Detection and genotyping of Alpha Human Papillomaviruses from archival formalin fixed tissue samples. **Van Doorslaer K**, Chen Z, and McBride AA. *In press at Current Protocols in Microbiology*
2. Molecular archeological evidence in support of the repeated loss of a papillomavirus gene. **Van Doorslaer K** and McBride AA. **Sci Rep**. 2016 Sep 8;6:33028. doi: 10.1038/srep33028. PMID 27604338
3. The Ancient Evolutionary History of Polyomaviruses. Buck CB, **Van Doorslaer K**, 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
4. 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
5. UbSRD: The Ubiquitin Structural Relational Database. Harrison JS, Jacobs TM, Houlihan K, **Van Doorslaer K** 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.
6. Degradation of Human PDZ-Proteins by Human Alphapapillomaviruses Represents an Evolutionary Adaptation to a Novel Cellular Niche. **Van Doorslaer K**, 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
7. A Proteomic approach to discover and compare interacting partners of Papillomavirus E2 proteins from diverse phylogenetic groups. Jang MK, Anderson DE, **Van Doorslaer K**, McBride AA. **Proteomics**. 2015 Mar 11. doi: 10.1002/pmic.201400613. PMID: 25758368
8. Evolution of the *Papillomaviridae*. **Van Doorslaer K**. **Virology**. 2013 Oct;445(1-2):11-20. doi: 10.1016/j.virol.2013.05.012. Epub 2013 Jun 14. PMID: 23769415
9. Condylomatous genital lesions in cynomolgus macaques from Mauritius. Harari A, Wood CE, **Van Doorslaer K**, Chen Z, Domingue 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
10. 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
11. Association between hTERT activation by HPV E6 proteins and oncogenic risk. **Van Doorslaer K**, Burk RD. **Virology**. 2012 Nov 10;433(1):216-9. doi: 10.1016/j.virol.2012.08.006. Epub 2012 Aug 25. PMID: 22925336
12. Sequence imputation of HPV16 genomes for genetic association studies. Smith B, Chen Z, Reimers L, **Van Doorslaer K**, Schiffrin 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
13. Papillomaviruses: evolution, Linnaean taxonomy and current nomenclature. **Van Doorslaer K**, 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
14. Evolution of human papillomavirus carcinogenicity. **Van Doorslaer K**, Burk RD. **Adv Virus Res.** 2010;77:41-62. doi: 10.1016/B978-0-12-385034-8.00002-8. Review. PMID: 20951869
15. Degradation of p53 by human Alphapapillomavirus E6 proteins shows a stronger correlation with phylogeny than oncogenicity. Fu L, **Van Doorslaer K**, Chen Z, Ristriani T, Masson M, Travé G, Burk RD. **PLoS One.** 2010 Sep 17;5(9). doi: 10.1371/journal.pone.0012816. PMID: 20862247
16. Overexpression of miR-21 promotes an in vitro metastatic phenotype by targeting the tumor suppressor RHOB. Connolly EC, **Van Doorslaer K**, Roger LE, Roger CE. **Mol Cancer Res.** 2010 May;8(5):691-700. doi: 10.1158/1541-7786.MCR-09-0465. Epub 2010 May 11. PMID: 20460403
17. Classification of papillomaviruses (PVs) based on 189 PV types and proposal of taxonomic amendments. Bernard HU, Burk RD, Chen Z, **Van Doorslaer K**, 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
18. Lack of heterogeneity of HPV16 E7 sequence compared with HPV31 and HPV73 may be related to its unique carcinogenic properties. Safaeian M, **Van Doorslaer K**, 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
19. 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
20. Human papillomaviruses: genetic basis of carcinogenicity. Burk RD, Chen Z, **Van Doorslaer K**. **Public Health Genomics.** 2009;12(5-6):281-90. doi: 10.1159/000214919. Epub 2009 Aug 11. Review. PMID: 19684441
21. Serological response to an HPV16 E7 based therapeutic vaccine in women with high-grade cervical dysplasia. **Van Doorslaer K**, 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
22. 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
23. Macaca fascicularis papillomavirus type 1: a non-human primate betapapillomavirus causing rapidly progressive hand and foot papillomatosis. Joh J, Hopper K, **Van Doorslaer K**, 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
24. 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

25. Genomic characterization of two novel reptilian papillomaviruses, *Chelonia mydas* papillomavirus 1 and *Caretta caretta* papillomavirus 1. Herbst LH, Lenz J, **Van Doorslaer K**, Chen Z, Stacy BA, Welohan JF Jr, Manire CA, Burk RD. **Virology**. 2009 Jan 5;383(1):131-5. doi: 10.1016/j.virol.2008.09.022. Epub 2008 Oct 29. PMID: 18973915
26. 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, **Van Doorslaer K**, Ghim SJ, Rehtanz M, Bossart GD, Jenson AB, Van Ranst M. **Virology**. 2008 Aug 15;378(1):151-61. doi: 10.1016/j.virol.2008.05.020. Epub 2008 Jun 24. PMID: 18579177
27. Ancient papillomavirus-host co-speciation in Felidae. Rector A, Lemey P, Tachezy R, Mostmans S, Ghim SJ, **Van Doorslaer K**, 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
28. Complete genomic characterization of a murine papillomavirus isolated from papillomatous lesions of a European harvest mouse (*Micromys minutus*). **Van Doorslaer K**, Rector A, Jenson AB, Sundberg JP, Van Ranst M, Ghim SJ. **J Gen Virol**. 2007 May;88(Pt 5):1484-8. PMID: 17412977
29. 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, **Van Doorslaer K**, 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
30. 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
31. Isolation and cloning of the raccoon (*Procyon lotor*) papillomavirus type 1 by using degenerate papillomavirus-specific primers. Rector A, **Van Doorslaer K**, 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
32. 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, Rodriguez NE, Adesse D, Garzoni LR, Esper L, Lisanti MP, Burk RD, Albanese C, **Van Doorslaer K**, 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. **Van Doorslaer K**, 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, **Van Doorslaer K.** PaVE the papillomavirus episteme, **HPV today** (number 26).
<http://www.hpvtoday.com>

Professional reference

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