



H. CONSEJO GENERAL UNIVERSITARIO  
P R E S E N T E

A estas Comisiones Permanentes Conjuntas de Educación y de Hacienda ha sido turnado por el Consejo del Centro Universitario de Ciencias de la Salud, el dictamen número 1100/2013, de fecha del 25 de noviembre de 2013, en el que se propone se otorgue al Profesor Harald Zur Hausen, el título de "Doctor Honoris Causa" de esta máxima Casa de Estudios, y

Resultandos:

1. Que en sesión extraordinaria del 2 de diciembre de 2013, el Consejo del Centro Universitario de Ciencias de la Salud aprobó el dictamen 1100/2013, en el que la Comisión de Educación le propusiera otorgar el nombramiento de Dr. Honoris Causa de la Universidad de Guadalajara al Profesor Harald Zur Hausen.
2. Que el Profesor Harald Zur Hausen nació en la ciudad de Gelsenkirchen-Blue, Alemania, el 11 de marzo de 1936. Cursó la educación elemental y media superior en su ciudad natal. Posteriormente, realizó estudios de medicina en la Universidad de Bonn y después en la Universidad de Hamburgo. Obtuvo su doctorado en la Universidad de Düsseldorf en diciembre de 1960.
3. Que al terminar sus estudios de doctorado, trabajó como médico asistente por un lapso de dos años en la misma ciudad, para ingresar después al Instituto de Microbiología de la Universidad de Düsseldorf como asistente científico y posdoctorado.
4. Que después de tres años de colaborar como asistente en dicha universidad, se trasladó a la ciudad de Filadelfia, en los Estados Unidos, donde trabajó en el Laboratorio de Virología del Children's Hospital en 1969 y como profesor asistente en la Universidad de Pennsylvania.
5. Que a los 33 años de edad, decidió regresar a Alemania- en 1969-, en donde consiguió el puesto de profesor titular de la Universidad de Würzburg, como investigador del Instituto de Virología.
6. Que después de tres años, decidió trasladarse a la recién fundada Universidad de Erlangen-Nuremberg, donde se desempeñó como Investigador principal. En el año de 1977 se cambió a la Universidad de Freiburg (Breisgau), donde ostentó la misma posición.

Página 1 de 24



7. Que a partir de 1983 y hasta el año 2003, el Profesor Zur Hausen fungió como Director Científico del Centro Alemán de Investigación del Cáncer (DKFZ), en Heidelberg.
8. Que su ámbito específico de investigación fue el origen del cáncer causado por infecciones de virus. En 1976 publicó la hipótesis de que el virus del papiloma humano jugaba un papel importante en la causa del cáncer de cuello de útero. Sus trabajos científicos llevaron al desarrollo de una vacuna contra dicho virus que llegó al mercado en 2006.
9. Que por sus contribuciones seminales que demostraron el papel oncogénico del Virus del Papiloma Humano en el origen del cáncer del cuello uterino, el Profesor Zur Hausen recibió el **Premio Nobel de Medicina y Fisiología en el año 2008**. Sus descubrimientos contribuyeron al desarrollo de las vacunas que se usan actualmente contra dicho virus.
10. Que por sus méritos académicos, el Profesor Zur Hausen ha sido reconocido con un importante número de premios internacionales, entre ellos el Robert-Koch; el Charles S. Mott, de la General Motors Cancer Research Foundation; el Premio de la Federation of the European Cancer Societies Clinical Research; el Paul Ehrlich-Ludwig Darmstättte; el Premio Jung; el Premio Charles Rudolphe Brupbache; el Premio Principe Mahidol; el Premio Raymond Bourguine; el Premio Coley; Premio de la American Association for Cancer Research y la Orden Especial al Mérito de Alemania, entre otros.
11. Que por su gran calidad científica y humana, el Profesor Zur Hausen ha merecido más de 15 Doctorados Honoris Causa de diferentes Universidades, entre ellas la de Chicago, Umea, Praga, Salford, Helsinki, Erlangen-Nürnberg, Würzburg, Ferrara, Buenos Aires, Madrid, Melbourne, Salerno, Los Ángeles y Jerusalén.
12. Que desde el año 2000 y hasta diciembre de 2009, el Profesor Zur Hausen fungió como editor en jefe de la Revista *International Journal of Cancer* y ha sido miembro de las más importantes academias científicas de diferentes países.
13. Que en la actualidad, el Profesor Zur Hausen se dedica a impartir cursos y conferencias en diferentes partes del mundo y está dispuesto a asesorar y compartir sus conocimientos y experiencias a las nuevas generaciones.



14. Que entre sus mas de 200 publicaciones se destacan las siguientes:

*Publicaciones sobre Adenovirus:*

- H. Zur Hausen: *Induction of specific chromosomal aberrations by adenovirus type 12 in human embryonic kidney cells.* J. Virol. 1, 1174-1185, 1967;
- H. Zur Hausen: *Association of adenovirus type 12 deoxyribonucleic acid with host cell chromosomes.* J. Virol. 2, 218-223, 1968;
- H. Zur Hausen: *Chromosomal aberrations and cloning efficiency in adenovirus type 12-infected hamster cells.* J. Virol. 2, 915-917, 1968;
- H. Zur Hausen: *Persistence of the virus genome in adenovirus type 12-infected hamster cells.* J. Virol. 2, 918-924, 1968;
- B.B. Knowless, H. Zur Hausen, Z. Steplewski, and H. Koprowski: *Interactions of tumor viruses following fusion of transformed cells.* Genetics 60, 194, 1968;
- H. Zur Hausen: *Failure to detect incorporation of host cell DNA into virions of adenovirus type 12.* Virology 38, 194-197, 1969;
- H. Zur Hausen and F. Sokol: *The fate of adenovirus type 12 genome in nonpermissive cells.* J. Virol. 4, 256-263, 1969;
- H. Zur Hausen: *Interactions of adenovirus type 12 with host cell chromosomes.* In: *Oncogenic Adenoviruses*, Progr. Exptl. Tumor Res., S. Karger, Basel-New York, 18, 240-259, 1973;
- G. Werner and H. Zur Hausen: *Deletions and insertions in adenovirus type 12 DNA after viral replication in Vero cells.* Virology 86, 66-78, 1978;
- I. Kruczek, E. Schwarz, and H. Zur Hausen: *Mutants of adenovirus type 12 after adaptation to growth in tumor cell lines: II. Reproducible acquisition of sequences after adaptation to a human cervical cancer cell line.* Int. J. Cancer 27, 139-143, 1981;
- E. Schwarz, C. Reinke, N. Yamamoto, and H. Zur Hausen: *Terminal rearrangements in the genome of adenovirus type 12 mutants adapted to growth in two human tumor cell lines.* Virology 116, 284-296, 1982;
- J.R. Schlehofer and H. Zur Hausen: *Adenovirus infection induces amplification of persistent viral DNA sequences (simian virus 40, hepatitis B virus, bovine papillomavirus) in human and rodent cells.* Virus Res. 17, 53-60, 1990;
- T. Rothmann, A. Hengstermann, N.J. Whitaker, M. Scheffner, and H. Zur Hausen: *Replication of ONYX-015, a potential anticancer adenovirus, is independent of the p53 status in tumor cells.* J. Virol., 72, 9470-9478, 1998;
- Báez-Astúa, A., García Garbi, N., Pasolli, H.A., Herrera-Hernandez, E., Juárez, V., Zur Hausen, H., and Cid-Arregui, A. *Low-dose adenoviral vaccine encoding chimeric HBsAg-HPV16 E7 proteins induces E7-specific antibody and cytotoxic T cell responses.* J. Virol. 79: 12897-12817, 2005.



*Publications Epstein-Barr and other Herpesviruses:*

- H. Zur Hausen, W. Henle, K. Hummler, V. Diehl, and G. Henle: Comparative study of cultured Burkitt tumor cells by immunofluorescence, autoradiography and electronmicroscopy. *J. Virol.* 1, 830-837, 1967;
- W. Henle, V. Diehl, G. Kohn, H. Zur Hausen, and G. Henle: Herpes-type virus and chromosome marker in normal leukocytes after growth with irradiated Burkitt cells. *Science* 157, 1064-1065, 1967;
- R. Waubke, H. Zur Hausen and W. Henle: Chromosomal and autoradiographic studies of cells infected with Herpes simplex virus. *J. Virol.* 2, 1047-1054, 1968;
- W. Henle, G. Henle and H. Zur Hausen: Effect of Herpes simplex virus in cultured Burkitt tumor cells and its failure to influence the EBV carrier state. *Cancer Res.* 29, 4489-494, 1969;
- H. Schulte-Holthausen and H. Zur Hausen: Partial purification of the Epstein-Barr virus and some properties of its DNA. *Virology* 40, 776-779, 1970;
- H. Zur Hausen and H. Schulte-Holthausen: Presence of EB virus nucleic acid homology in a "virus-free" line of Burkitt tumor cells. *Nature (London)* 227, 245-248, 1970;
- H. Zur Hausen, H. Schulte-Holthausen, G. Klein, W. Henle, G. Henle, P. Clifford, and L. Santesson: EBV DNA in biopsies of Burkitt tumours and anaplastic carcinoma of the nasopharynx. *Nature (London)* 228, 1056-1058, 1970;
- H. Zur Hausen: Epstein-Barr virus in human tumor cells. *Intern. Rev. Exptl. Path.* 11, 233-258, 1972;
- H. Zur Hausen, V. Diehl, H. Wolf, H. Schulte-Holthausen, and U. Schneider: Occurrence of EB virus genomes in human lymphoblastoid cell lines. *Nature (London)* 237, 189-190, 1972;
- V. Diehl, H. Wolf, H. Schulte-Holthausen, and H. Zur Hausen: Re-exposure of human lymphoblastoid cell lines to Epstein-Barr virus. *Int. J. Cancer* 10, 641-651, 1972;
- H. Wolf, H. Zur Hausen and V. Becker: EB viral genomes in epithelial nasopharyngeal carcinoma cells. *Nature (London)* 244, 245-247, 1973;
- H. Zur Hausen, H. Schulte-Holthausen, H. Wolf, K. Dörries, and H. Egger: Attempts to detect virus-specific DNA in human tumors: II. Nucleic acid hybridizations with complementary RNA of human herpes group viruses. *Int. J. Cancer* 13, 657-664, 1974;
- G. Klein, F. Wiener, L. Zech, H. Zur Hausen, and B. Reedman: Segregation of EBV-determined nuclear antigen (EBNA) in somatic cell hybrids derived from the fusion of mouse fibroblasts. *Int. J. Cancer* 14, 54-64, 1974;



- H. Wolf, H. Zur Hausen, G.Klein, V. Becker, G. Henle, and W. Henle: Attempts to detect virusspecific DNA sequences in human tumors: III. Epstein-Barr viral DNA in non-lymphoid nasopharyngeal carcinoma cells. *Med. Microbiol. Immunol.* 161, 15-21, 1975;
- H. Zur Hausen: Oncogenic Herpesviruses. *Biochim. Biophys. Acta* 417, 25-53, 1975;
- U. Schneider and H. Zur Hausen: Epstein-Barr virus-induced transformation of human leukocytes after cell fractionation. *Int. J. Cancer* 15, 59-66, 1975;
- M.A. Epstein, H. Zur Hausen, G. Ball, and H. Rabin: Pilot experiments with EB virus in owl monkeys (*Aotus trivirgatus*). III. Serological and biochemical findings in an animal with reticuloproliferative disease. *Int. J. Cancer* 15, 17-22, 1975;
- J. Werner, H. Wolf, J. Apodoca, and H. Zur Hausen: Lymphoproliferative disease in a cottontop marmoset after inoculation with infectious mononucleosis-derived Epstein-Barr virus. *Int. J. Cancer* 15, 1000-1008, 1975;
- C. Desgranges, H. Wolf, G. de Thé, K. Shanmugaratnam, N. Cammoun, R. Ellouz, G. Klein, K. Lennert, N. Munoz, and H. Zur Hausen: Nasopharyngeal carcinoma. X. Presence of Epstein-Barr genomes in separated epithelial cells of tumors from Singapore, Tunisia and Kenya. *Int. J. Cancer* 16, 7-15, 1975 20;
- H. Zur Hausen: DNA viruses in human cancer: biochemical approaches. *Cancer Res.* 36, 414-416, 1976;
- G. Bornkamm, H. Stein, H. Bartels, F. Rüggeberg, K. Lennert, and H. Zur Hausen: Attempts to detect virus-specific DNA sequences in human tumors: IV. EBV DNA in European Burkitt's lymphoma and immunoblastic lymphadenopathy with excessive plasmacytosis. *Int. J. Cancer* 17, 177-181, 1976;
- K.O. Fresen and H. Zur Hausen: Establishment of EBNA-expressing cell lines by infection of Epstein-Barr virus (EBV) genome-negative human lymphoma cells with different EBV strains. *Int. J. Cancer* 17, 161-166, 1976;
- K.O. Fresen, B. Merkt, G.W. Bornkamm, and H. Zur Hausen: Heterogeneity of Epstein-Barr virus originating from P3HR-1 cells. I. Studies on EBNA induction. *Int. J. Cancer* 19, 317-323, 1977;
- K.O. Fresen and H. Zur Hausen: Transient induction of a nuclear antigen unrelated to EBNA in EBV-converted human B-lymphoma cells. *Proc. Nat. Acad. Sci. U.S.* 74, 363-366, 1977;
- H. Zur Hausen and K.O. Fresen: Heterogeneity of Epstein-Barr virus. II. Induction of early antigens (EA) by complementation. *Virology* 81, 138-143, 1977;
- H. Zur Hausen, F.J. O'Neill, U. Freese, and E. Hecker: Persisting oncogenic herpesvirus induced by the tumor promoter TPA. *Nature* 272, 373-375, 1978;
- K.O. Fresen, M.S. Cho, and H. Zur Hausen: Heterogeneity of Epstein-Barr virus. IV. Induction of a specific antigen by EBV from two transformed marmoset cell lines in Ramos cells. *Int. J. Cancer* 22, 160-165, 1978;



- K.O. Fresen, M.S. Cho, and H. Zur Hausen: Recovery of transforming EBV from nonproducer cells after superinfection with nontransforming P3HR-1 EBV. *Int. J. Cancer* 22, 378-383, 1978;
- H. Zur Hausen and K.O. Fresen: Heterogeneity of Epstein-Barr virus. *Biochim. Biophys. Acta, Reviews on Cancer* 560, 343-353, 1979;
- H. Zur Hausen, G.W. Bornkamm, R. Schmidt, and E. Hecker: Tumor initiators and promoters in the induction of Epstein-Barr virus. *Proc. Nat. Acad. Sci. U.S.* 76, 782-785, 1979;
- K. Bister, N. Yamamoto, and H. Zur Hausen: Correlation between genome number and inducibility of Epstein-Barr virus in nonproducer cells. *Int. J. Cancer* 23, 818-825, 1979;
- N. Yamamoto, K. Bister, and H. Zur Hausen: Retinoic acid inhibition of Epstein-Barr virus production. *Nature* 278, 553-554, 1979;
- K.O. Fresen, M.S. Cho, L. Gissmann, and H. Zur Hausen: NC37-R1 EB virus: a possible recombinant between intracellular NC37 viral DNA and superinfecting P3HR-1 EBV. *Intervirology* 12, 303-310, 1979;
- N. Müller-Lantzsch, N. Yamamoto, and H. Zur Hausen: Analysis of early and late induced EBV polypeptides. *Virology* 97, 378-387, 1979;
- N. Yamamoto and H. Zur Hausen: Tumor promoter TPA enhances transformation of human leukocytes by Epstein-Barr virus. *Nature* 280, 244-245, 1979;
- J. Hudewentz, G.W. Bornkamm, and H. Zur Hausen: Effect of the diterpene ester TPA on Epstein-Barr virus DNA synthesis in producer and nonproducer cell lines. *Virology* 100, 175-178, 1980;
- N. Yamamoto and H. Zur Hausen: Effect of inhibition of DNA synthesis on Epstein-Barr virus induction of tumor promoters. *Virology* 101, 104-110, 1980;
- J.F. Böcker, K.H. Tiedemann, G.W. Bornkamm, and H. Zur Hausen: Characterization of an EBV-like virus from African green monkey lymphoblasts. *Virology* 101, 291-295, 1980;
- N. Müller-Lantzsch, B. Georg, N. Yamamoto, and H. Zur Hausen: Epstein-Barr virus induced proteins: II. Analysis of surface polypeptides from P3HR-1 superinfected NC37 cells by immunoprecipitation. *Virology* 102, 401-411, 1980;
- N. Müller-Lantzsch, B. Georg, Y. Yamamoto, and H. Zur Hausen: Epstein-Barr virus induced proteins. III. Analysis of polypeptides from P3HR-1 superinfected NC37 cells by immunoprecipitation. *Virology* 102, 291-295, 1980;
- N. Yamamoto, N. Müller-Lantzsch, and H. Zur Hausen: Effect of actinomycin D and cycloheximide on Epstein-Barr virus induction in lymphoblastoid cells. *J. Gen. Virol.* 51, 255-261, 1980;
- N. Yamamoto, N. Müller-Lantzsch, and H. Zur Hausen: Differential inhibition of Epstein-Barr virus induction by the amino acid analogue, L-canavanine. *Int. J. Cancer* 25, 439-443, 1980;



- M.S. Cho, K.O. Fresen, and H. Zur Hausen: Multiplicity-dependent biological and biochemical properties of Epstein-Barr virus (EBV) rescued from non-producer lines after superinfection with P3HR-1 EBV. *Int. J. Cancer* 26, 357-363, 1980;
- N. Müller-Lantzsch, B. Georg-Fries, H. Herbst, H. Zur Hausen, and D. Braun: Epstein-Barr strain and group specific antigenic determinants detected by monoclonal antibodies. *Int. J. Cancer* 28, 321-327, 1981;
- N. Yamamoto and H. Zur Hausen: Induction of Epstein-Barr virus early antigens by intercalating chemicals in B95-8 cells. *Virology* 115, 390-394, 1981;
- G. Bauer, P. Höfler, and H. Zur Hausen: Epstein-Barr virus induction by a serum factor. I. Induction and cooperation with additional inducers. *Virology* 121, 184-194, 1982;
- J.R. Schlehofer and H. Zur Hausen: Induction of mutations within the host cell genome by partially inactivated herpes simplex virus type 1. *Virology* 122, 471-475, 1982;
- H. Zur Hausen: Human genital cancer - synergism between two virus infections or synergism between a virus infection and initiating events. *Lancet* 2, 1370-1373, 1982;
- J.R. Schlehofer, L. Gissmann, B. Matz, and H. Zur Hausen: Herpes simplex virus induced amplification of SV40 sequences in transformed Chinese hamster cells. *Int. J. Cancer* 32, 99-103, 1983;
- M. von Knebel Doeberitz, G.W. Bornkamm, and H. Zur Hausen: Establishment of spontaneously outgrowing lymphoblastoid cell lines with cyclosporin A. *Med. Microbiol. Immunol.* 172, 87-99, 1983;
- H. Zur Hausen: Herpes simplex virus in human genital cancer. *Int. Rev. Exptl. Path.* 25, 307-326, 1983;
- B. Matz, J.R. Schlehofer, and H. Zur Hausen: Identification of a gene function of herpes simplex virus type 1 essential for amplification of simian virus 40 DNA sequences in transformed hamster cells. *Virology* 134, 328-337, 1984;
- L.W. Daniel, G. Bauer, and H. Zur Hausen: Effect of indomethacin on Epstein-Barr virus early antigen induction. *Cancer Res.* 44, 981-983, 1984;
- V. Takada and H. Zur Hausen: Induction of Epstein-Barr virus antigens by tumor promoters for epidermal and non-epidermal tissues. *Int. J. Cancer* 33, 491-496, 1984;
- M.S. Cho, G.W. Bornkamm, and H. Zur Hausen: Structure of defective DNA molecules in Epstein-Barr virus preparations from P3HR-1 cells. *J. Virol.* 51, 199-207, 1984;





- J. Skare, J. Farley, J.L. Strominger, K.O. Fresen, M.S. Cho, and H. Zur Hausen: Transformation by Epstein-Barr virus requires DNA sequences in the region of Bam HI fragments Y and H. *J. Virol.* 55, 286-297, 1985;
- B. Matz, J.R. Schlehofer, H. Zur Hausen, B. Huber, and F. Fanning: HSV- and chemical carcinogenesis-induced amplification of SV40 DNA sequences in transformed cells is cell-linedependent. *Int. J.Cancer* 35, 521-525, 1985;
- J.R. Schlehofer, M. Ehrbar, and H. Zur Hausen: Vaccinia virus, herpes simplex virus and carcinogens induce DNA amplification in a human cell line and support replication of a helperdependent parvovirus. *Virology* 152, 110-117, 1986;
- R. Heilbronn, G. Jahn, A. Bürkle, U.-K. Freese, B. Fleckenstein, and H. Zur Hausen: Genomic localization, sequence analysis, and transcription of the human cytomegalovirus-induced DNA polymerase. *J. Virol.* 61, 119-124, 1987;
- H. Zur Hausen and J.R. Schlehofer: The role of DNA amplification in tumor development: Prospects from virological studies. In: *Accomplishments in Oncology*, H. Zur Hausen and J.R. Schlehofer, eds. Lippincott Co., Philadelphia, pp. 1-8, 1987;
- U. Bantel-Schaal and H. Zur Hausen: Adeno-associated viruses inhibit SV 40 DNA amplification and replication of herpes simplex virus in SV 40-transformed hamster cells. *Virology* 164, 64-74, 1988;
- J. Schmitt, K. Mergener, L. Gissmann, J.R. Schlehofer, and H. Zur Hausen: Amplification of bovine papillomavirus DNA by N-methyl-N'-nitro-N-nitrosoguanidine, UV-irradiation, or infection by herpes simplex virus. *Virology* 172, 73-81, 1989;
- R. Heilbronn and H. Zur Hausen: A subset of herpes simplex virus replication genes induces amplification within the host cell genome. *J. Virol.* 63, 3683-3692, 1989;
- J. Wolf, M. Pawlita, J. Bullerdiek, and H. Zur Hausen: Suppression of the malignant phenotype in somatic cell hybrids between Burkitt's lymphoma cells and EBV-immortalized lymphoblastoid cells despite deregulated c-myc expression. *Cancer Res.* 50, 3095-3100, 1990;
- R. Heilbronn, S. Weller, and H. Zur Hausen: Herpes simplex virus type 1 mutants for origin binding protein induce DNA amplification in the absence of viral replication. *Virology* 179, 478-481, 1990;
- R. Heilbronn, A. Bürkle, S. Stephan, and H. Zur Hausen: The adeno-associated replication suppresses herpes simplex virus induced DNA amplification. *J. Virol.* 64, 3012-3018, 1990;
- J. Wolf, B. Klevenz, M. Pawlita, D. Komitowski, G. Moldenhauer, and H. Zur Hausen: Regressing nude mouse grafts of Burkitt's lymphoma x lymphoblastoid cell hybrids show deregulation of the cmyc gene and expression of the EBV latent membrane protein. *Int. J. Cancer* 47, 99-104, 1991;





- J. Wolf, M. Pawlita, B. Klevenz, B. Frech, U.-K. Freese, N. Müller-Lantzsch, V. Diehl, and H. ZurHausen: Downregulation of integrated Epstein-Barr virus nuclear antigen 1 and 2 genes in a Burkitt's lymphoma cell line after somatic cell fusion with autologous EBV-immortalized lymphoblastoid cells. *Int. J. Cancer* 53, 621-627, 1993;
- R. Heilbronn, I. Albrecht, S. Stephan, A. Bürkle, and H. Zur Hausen: Human cytomegalovirus induces JC virus replication in human fibroblasts. *Proc. Nat. Acad. Sci. U.S.* 90, 11406-11410, 1993;
- H. Zur Hausen: *Infections Causing Human Cancer*. Wiley-VCH, Weinheim/New York (Publ.), pp.1-517, 2006.

*Publicaciones sobre Papilomavirus:*

- H. Zur Hausen, W. Meinhof, W. Scheiber, and G.W. Bornkamm: Attempts to detect virus-specific DNA sequences in human tumors: I. Nucleic acid hybridizations with complementary RNA of human wart virus. *Int. J. Cancer* 13, 650-656, 1974;
- H. Zur Hausen, L. Gissmann, W. Steiner, W. Dippold, and J. Dregger: Human papilloma viruses and cancer. *Bibliotheca Haematologica*, J. Clemensen and D.S. Yohn (eds.) 43, 569-571, 1975;
- H. Zur Hausen: Condylomata acuminata and human genital cancer. *Cancer Res.* 36, 530, 1976;
- L. Gissmann and H. Zur Hausen: Human papilloma viruses: physical mapping and genetic heterogeneity. *Proc. Nat. Acad. Sci. U.S.* 73, 1310-1313, 1976;
- L. Gissmann, H. Pfister, and H. Zur Hausen: Human papilloma viruses (HPV): Characterization of four different isolates. *Virology* 76, 569-580, 1977;
- H. Zur Hausen: Human papilloma viruses and their possible role in squamous cell carcinomas. *Current Topics in Microbiol. Immunol.* 78, 1-30, 1977;
- H. Pfister, L. Gissmann, and H. Zur Hausen: Partial characterization of the proteins of human papilloma viruses (HPV) 1-3. *Virology* 83, 131-137, 1977;
- L. Gissmann and H. Zur Hausen: Inverted repetitive sequences in human papilloma virus (HPV) DNA. *Virology* 83, 271-276, 1977;
- H. Zur Hausen, L. Gissmann, H. Pfister, W. Steiner, and S. Ojwang: Papilloma viruses and squamous cell carcinomas in man. *Perspectives in Virology*, M. Pollard (ed.), 10, 93-101, 1977;
- H. Zur Hausen: Cell-virus gene balance hypothesis of carcinogenesis. *Behring Inst. Mitt.* 61, 23-30, 1977;
- H. Pfister and H. Zur Hausen: Seroepidemiological studies of human papilloma virus (HPV-1) infections. *Int. J. Cancer* 21, 161-165, 1978;



- L. Gissmann and H. Zur Hausen: Physical characterization of different human papilloma viruses. *Med. Microbiol. Immunol.* 166, 3-11, 1978;
- H. Pfister and H. Zur Hausen: Characterization of proteins of human papilloma viruses (HPV) and antibody response to HPV 1. *Med. Microbiol. Immunol.* 166, 13-19, 1978;
- H. Pfister, B. Huchthausen, G. Gross, and H. Zur Hausen: Seroepidemiological studies of bovine papilloma virus infections. *J. Natl. Cancer Inst.* 62, 1423-1425, 1979;
- H. Pfister, U. Linz, L. Gissmann, B. Huchthausen, D. Hofmann, and H. Zur Hausen: Partial characterization of a new type of bovine papillomaviruses. *Virology*, 96, 1-8, 1979;
- E.I. Grussendorf and H. Zur Hausen: Localization of viral DNA replication in sections of human warts by nucleic acid hybridization with complementary RNA of human papilloma virus type 1. *Arch.Derm Res.* 264, 55-63, 1979;
- J.R. Coggins jr. and H. Zur Hausen: Workshop on papillomaviruses and cancer. *Cancer Res.* 39,545-546, 1979;
- L. Gissmann and H. Zur Hausen: Partial characterization of viral DNA from human genital warts (condylomata acuminata). *Int. J. Cancer* 25, 605-609, 1980;
- H. Pfister, F. Nürnberger, L. Gissmann, and H. Zur Hausen: Characterization of a human papillomavirus from Epidermodysplasia verruciformis lesions of a patient from Upper Volta. *Int. J.Cancer* 27, 645-650, 1981;
- H. Zur Hausen, E.-M. de Villiers, and L. Gissmann: Papillomavirus infections and human genital cancer. *J. Gyn. Oncol.* 12, 124-128, 1981;
- E.-M. de Villiers, L. Gissmann, and H. Zur Hausen: Molecular cloning of viral DNA from human genital warts. *J. Virol.* 40, 932-935, 1981;
- L. Gissmann, E.-M. de Villiers, and H. Zur Hausen: Analysis of human genital warts (condylomata acuminata) and other genital tumors for human papillomavirus type 6 DNA. *Int. J. Cancer* 29,143-146, 1982;
- L. Gissmann, V. Diehl, H. Schultz-Coulon, and H. Zur Hausen: Molecular cloning and characterization of human papillomavirus DNA from a laryngeal papilloma. *J. Virol.* 44, 393-400,1982;
- L. Gissmann, L. Wolnik, H. Ikenberg, U. Koldovsky, H.G. Schnürch, and H. Zur Hausen: Human papillomavirus type 6 and 11 sequences in genital and laryngeal papillomas and in some cervical cancers. *Proc. Nat. Acad. Sci. U.S.* 80, 560-563, 1983;
- M. Dürst, L. Gissmann, H. Ikenberg, and H. Zur Hausen: A papillomavirus DNA from a cervical carcinoma and its prevalence in cancer biopsy samples from different geographic regions. *Proc. Nat. Acad. Sci. U.S.* 80, 3812-3815, 1983;



- H. Ikenberg, L. Gissmann, G. Gross, E.-I. Grussendorf-Conen, and H. Zur Hausen: Humanpapillomavirus type 16 related DNA in genital Bowen's disease and in Bowenoid papulosis. *Int. J. Cancer* 32, 563-564, 1983;
- E. Schwarz, M. Dürst, C. Demankowski, O. Lattermann, R. Zech, E. Wolfsberger, S. Suhai, and H.Zur Hausen: DNA sequence and genome organization of genital human papillomavirus type 6b. *EMBO J.* 2, 2341-2348, 1983;
- M. Boshart, L. Gissmann, H. Ikenberg, A. Kleinheinz, W. Scheurlen, and H. Zur Hausen: A newtype of papillomavirus DNA, its presence in genital cancer and in cell lines derived from genitalcancer. *EMBO J.* 3, 1151-1157, 1984;
- L. Gissmann, M. Boshart, M. Dürst, H. Ikenberg, D. Wagner, and H. Zur Hausen: Presence of human papillomavirus in genital tumors. *J. Invest. Dermatol.* 83, 26-28, 1984;
- A. Stremiau, L. Gissmann, H. Ikenberg, E. Stark, and H. Zur Hausen: Human papillomavirus type 16 DNA in an anaplastic carcinoma of the lung. *Cancer* 55, 1737-1740, 1985;
- E. Schwarz, U.K. Freese, L. Gissmann, W. Mayer, B. Roggenbuck, and H. Zur Hausen: Structure and transcription of human papillomavirus type 18 and 16 sequences in cervical carcinoma cells. *Nature* 314, 111-114, 1985;
- T. Löning, H. Ikenberg, J. Becker, L. Gissmann, I. Hoepfner, and H. Zur Hausen: Analysis of oral papillomas, leukoplakias and invasive carcinomas for human papillomavirus typerelated DNA. *J. Invest. Dermatol.* 84, 417-420, 1985;
- H. Ikenberg, D. Neumann-Haefelin, B. Richthammer, W. Wolfahrt, C.P. Adler, G. Bodo, L.Gissmann, and H. Zur Hausen: Interferon therapy for bronchial papillomatosis controlled by papillomavirus DNA hybridization. *Arch. Otolaryngol.* 111, 96-98, 1985;
- E.-M. de Villiers, H. Weidauer, H. Otto, and H. Zur Hausen: Papillomavirus DNA in human tongue carcinomas. *Int. J. Cancer* 36, 575-578, 1985;
- K. Dartmann, E. Schwarz, L. Gissmann, and H. Zur Hausen: The nucleotide sequence and genome organization of human papillomvirus type 11. *Virology* 151, 124-130, 1986;
- E.-M. de Villiers, A. Schneider, G. Gross, and H. Zur Hausen: Analysis of benign and malignant urogenital tumors for human papillomavirus infection by labelling cellular DNA. *Med. Microbiol. Immunol.* 174, 281-286, 1986;
- E.-M. de Villiers, C. Neumann, J.Y. Le, H. Weidauer, and H. Zur Hausen: Infection of the oral mucosa with defined types of human papillomaviruses. *Med. Microbiol. Immunol.* 174, 287-294, 1986;



- E.-M. de Villiers, T. Oltersdorf, C. Neumann, G. Fierlbeck, and H. Zur Hausen: Butcher's wartvirus (HPV7) infections in non-butchers. *J. Invest. Dermatol.* 87, 236-238, 1986;
- Y. Tsunokawa, N. Takebe, S. Nozawa, T. Kasamatsu, L. Gissmann, H. Zur Hausen, M. Terada, and T. Sugimura: Presence of human papillomavirus type 16 and 18 sequences and their expression in cervical cancers and cell lines from Japanese patients. *Int. J. Cancer* 37, 499-503, 1986;
- T. Kahn, E. Schwarz, and H. Zur Hausen: Molecular cloning and characterization of the DNA of a new human papillomavirus (HPV 30) from a laryngeal carcinoma. *Int. J. Cancer* 37, 61-65, 1986;
- E. Schwarz, A. Schneider-Gaedecke, B. Roggenbuck, W. Mayer, L. Gissmann, and H. Zur Hausen: Expression of human papillomavirus DNA in cervical carcinoma cell lines. *Banbury Report 21: Viral Etiology of Cervical Cancer* (R. Peto and H. Zur Hausen, eds.) pp. 281-290, 1986;
- W. Scheurlen, A. Stremlau, L. Gissmann, D. Höhn, H.-P. Zenner, and H. Zur Hausen: Rearranged HPV 16 molecules in an anal carcinoma and in a laryngeal carcinoma. *Int. J. Cancer* 38, 671-676, 1986;
- W. Scheurlen, L. Gissmann, G. Gross, and H. Zur Hausen: Molecular cloning of two new HPV types (HPV 37 and HPV 38) from a keratoacanthoma and a malignant melanoma. *Int. J. Cancer* 37, 505-510, 1986;
- H. Zur Hausen: Evidence for an association between human papillomaviruses and neoplasia. *Int. Med. for the Specialist* 7, 66-79, 1986;
- E.-M. de Villiers, H. Weidauer, J.-Y. Le, C. Neumann, and H. Zur Hausen: Papillomaviren in benignen und malignen Tumoren des oberen Respirationstraktes. *Laryng. Rhinol. Otol.* 65, 177-179, 1986;
- M. Boshart and H. Zur Hausen: Human papillomaviruses (HPV) in Buschke-Loewenstein tumors: physical state and identification of a tandem duplication in the non-coding region of a HPV 6-subtype. *J. Virol.* 58, 963-966, 1986;
- H. Zur Hausen: Intracellular surveillance of persisting viral infections: Human genital cancer resulting from failing cellular control of papillomavirus gene expression. *Lancet* 2, 489-491, 1986;
- A. Mincheva, L. Gissmann, and H. Zur Hausen: Chromosomal integration sites of human papillomavirus DNA in three cervical cancer cell lines mapped by in-situ hybridization. *Medical Microbiol. Immunol.* 176, 245-256, 1987;
- R. Klingel, A. Mincheva, T. Kahn, L. Gissmann, W. Dippold, T. Meyer, K.H. zum Büschenfelde, and H. Zur Hausen: An amplification unit in human melanoma cells showing partial homology with sequences of human papillomavirus type 9 and Epstein-Barr virus nuclear antigen. *Cancer Res.* 47, 4485-4492, 1987;



- E.-M. de Villiers, D. Wagner, A. Schneider, H. Wesch, H. Micklaw, J. Wahrendorf, U. Papendick, and H. Zur Hausen: Human papillomavirus infections in women without and with abnormal cervical cytology. *Lancet* 2, 703-706, 1987;
- E. Schwarz, A. Schneider-Gaedecke, and H. Zur Hausen: Human papillomavirus type 18 transcription in cervical carcinoma cell lines and human cell hybrids. *Cancer Cells: Papillomaviruses*, Cold Spring Harbor Lab. Press, Vol. 5, 47-53, 1987;
- A. Strelau, H.P. Zenner, L. Gissmann, and H. Zur Hausen: Nachweis und Organisationsstruktur der DNS menschlicher Papillomviren beim Kehlkopf- und Hypopharynxcarcinom. *Laryngol. Rhinol. Otol.* 66, 311-315, 1987;
- M. Grimmel, E.-M. de Villiers, M. Pawlita, C. Neumann and H. Zur Hausen: Characterization of a new human papillomavirus type (HPV 41) isolated from disseminated warts and the detection of closely related sequences in some squamous cell carcinomas. *Int. J. Cancer* 41, 5-9, 1988;
- F. Rösl, M. Dürst, and H. Zur Hausen: Selective suppression of human papillomavirus transcription in non-tumorigenic cells by 5-azacytidine. *EMBO J.* 7, 1321-1328, 1988;
- H. Zur Hausen: Papillomaviruses in human cancers. *Mol. Carcinogenesis* 1, 147-150, 1988;
- D. Greenspan, E.-M. de Villiers, J.S. Greenspan, Y.G. De Souza, and H. Zur Hausen: Unusual HPV types in oral warts in association with HIV infection. *J. Oral Path.* 17, 482-487, 1988;
- E.-M. de Villiers, A. Hirsch-Behnam, C. von Knebel Doeberitz, and H. Zur Hausen: Two newly identified human papillomavirus types (HPV 40 and 57) isolated from mucosal lesions. *Virology* 171, 248-259, 1989;
- F. Rösl, E.-M. Westphal, and H. Zur Hausen: Chromatin structure and transcriptional regulation of human papillomavirus type 18 DNA in HeLa cells. *Mol. Carcinogenesis* 2, 72-80, 1989;
- J. Schmitt, K. Mergener, L. Gissmann, J.R. Schlehofer, and H. Zur Hausen: Amplification of bovine papillomavirus DNA by N-methyl-N'-nitro-N-nitrosoguanidine, UV-irradiation, or infection by herpes simplex virus. *Virology* 172, 73-81, 1989;
- H. Zur Hausen: Papillomaviruses in anogenital cancer: A model to understand the role of viruses in human cancers. *Cancer Res.* 49, 4677-4681, 1989;
- H. Zur Hausen: Papillomaviruses as carcinomaviruses. In: *Advances Viral Oncol.* G. Klein, ed., Raven Press, New York, Vol. 8, 1-26, 1989;
- H. Zur Hausen: Papillomaviruses in anogenital cancer - the dilemma of epidemiological approaches. *J. Nat. Cancer Inst.* 81, 1680-1682, 1989;
- M. von Knebel Doeberitz and H. Zur Hausen: Growth-regulating functions of human papillomavirus early gene products in cervical cancer cells acting dominant over enhanced epidermal growth factor receptor expression. *Cancer Res.* 50, 3730-3736, 1990;



- F. Bosch, E. Schwarz, P. Boukamp, N.E. Fusenig, D. Bartsch, and H. Zur Hausen: Suppression *in vivo* of human papillomavirus type 18 E6-E7 gene expression in nontumorigenic HeLa-fibroblast hybrid cells. *J. Virol.* 64, 4743-4754, 1990;
- M. Dürst, F.X. Bosch, D. Gilitz, A. Schneider, and H. Zur Hausen: Inverse relationship between human papillomavirus (HPV) type 16 early gene expression and cell differentiation in nude mouse epithelial cysts and tumors induced by HPV positive human cell lines. *J. Virol.* 65, 796-804, 1991;
- M. von Knebel Doeberitz, T. Bauknecht, D. Bartsch, and H. Zur Hausen: Influence of chromosomal integration on glucocorticoid regulated transcription of growth-stimulating papillomavirus E6-E7 genes in cervical carcinoma cells. *Proc. Nat. Acad. Sci. U.S.* 88, 1411-1415, 1991;
- H. Zur Hausen: Papillomavirus-host cell interactions in the pathogenesis of anogenital cancer. In: *Origins of Human Cancer II*, J. Brugge, T. Curren, E. Harlow, and F. McCormick, eds. Cold Spring Harbor Lab. Press, pp. 685-705, 1991;
- F. Rösl, T. Achtstetter, K.-J. Hutter, T. Bauknecht, G. Futterman, and H. Zur Hausen: Extinction of the HPV 18 upstream regulating region in cervical carcinoma cells after fusion with non-tumorigenic human keratinocytes under non-selective conditions. *EMBO J.* 10, 1337-1345, 1991;
- H. Zur Hausen: Human papillomaviruses in the pathogenesis of anogenital cancer. *Virology* 184, 9-13, 1991;
- F. Hoppe-Seyler, K. Butz, and H. Zur Hausen: Repression of human papillomavirus type 18 enhancer by the cellular transcription factor Oct-1. *J. Virol.* 65, 5613-5618, 1991;
- S. Reutter, H. Dellus, T. Kahn, B. Hofmann, H. Zur Hausen, and E. Schwarz: Characterization of a novel human papillomavirus DNA in the cervical carcinoma cell line ME 180. *J. Virol.* 65, 5564-5568, 1991;
- F.X. Bosch, M. Dürst, E. Schwarz, P. Boukamp, N.E. Fusenig, and H. Zur Hausen: The early genes E6 and E7 of cancer associated papillomaviruses as targets of tumor suppression? *Behring Inst. Mitt.* 89, 108-121, 1991;
- E.-M. de Villiers, D. Wagner, A. Schneider, F. Munz, H. Micklaw, and H. Zur Hausen: Human papillomavirus DNA in women without and with cytological abnormalities: Results of a five year follow-up study. *Gynecol. Oncol.* 44, 33-39, 1992;
- D. Bartsch, B. Boye, C. Baust, H. Zur Hausen, and E. Schwarz: Retinoic acid-mediated repression of human papillomavirus 18 transcription and different ligand regulation of the retinoic acid receptor  $\beta$  gene in nontumorigenic and tumorigenic HeLa hybrid cells. *EMBO J.* 11, 2283-2291, 1992;



- T. Kahn, H. Friesl, N.G. Kopeland, D.J. Gilbert, N.A. Jenkins, L. Gissmann, J. Kramer, and H. ZurHausen: Molecular cloning, analysis and chromosomal localization of a mouse genomic sequencerelated to the human papillomavirus type 18 E5 region. *Mol. Carcinogenesis* 6, 88-99, 1992;
- M. Dürst, D. Glitz, A. Schneider, and H. Zur Hausen: Human papillomavirus type 16 (HPV 16) gene expression and DNA replication in cervical neoplasia: analysis by in situ hybridization. *Virology* 189, 132-140, 1992;
- T. Bauknecht, P. Angel, H.-D. Royer, and H. Zur Hausen: Identification of a negative regulatory domain in the human papillomavirus type 18 promoter: Interaction with the transcriptional repressor YY1. *EMBO J.* 11, 4607-4617, 1992;
- M. von Knebel Doeberitz, C. Rittmüller, D. Glitz, H. Zur Hausen, and M. Dürst: Inhibition of tumorigenicity by cervical cancer cells in nude mice by HPV 18 E6-E7 antisense RNA. *Int. J. Cancer* 51, 831-834, 1992;
- B.C. Das, J.K. Sharma, V. Gopalkrishna, D.K. Das, V. Singh, L. Gissmann, H. Zur Hausen, and U.K. Luthra: A high frequency of human papillomavirus DNA sequences in cervical carcinomas of Indian women as revealed by Southern blot hybridization and polymerase chain reaction. *J. Med. Virol.* 36, 239-245, 1992;
- F. Rösl, A. Arab, B. Klevenz, and H. Zur Hausen: The effect of DNA methylation on gene regulation of human papillomaviruses. *J. Gen. Virol.* 74, 791-801, 1993;
- H. Zur Hausen: Molecular pathogenesis of cancer of the cervix and its causation by specific HPV types. *Curr. Topics Microbiol. Immunol.* 186, 131-156, 1994;
- F. Rösl, M. Lengert, J. Albrecht, K. Kleine, R. Zawatzky, B. Schraven, and H. Zur Hausen: Differential regulation of the JE gene encoding the monocyte chemoattractant protein (MCP-1) in cervical carcinoma cells and derived hybrids. *J. Virol.* 68, 2142-2150, 1994;
- H. Zur Hausen: Disrupted dichotomous intracellular control of human papillomavirus infection in cancer of the cervix. *Lancet* 343, 955-957, 1994;
- T. Kahn, E. Turazza, R. Ojeda, A. Bercovich, A. Stremmlau, P. Lichter, A. Poustka, S. Grinstein, and H. Zur Hausen: Integration of human papillomavirus type 6a DNA in a tonsillar carcinoma: chromosomal localization and nucleotide sequence of the genomic target region. *Cancer Res.* 54, 1305-1312, 1994;
- H. Zur Hausen and E.-M. de Villiers: Human papillomaviruses. *Ann. Rev. Microbiol.* 48, 427-447, 1994;
- H. Kitasato, H. Delli, H. Zur Hausen, K. Sorger, F. Rösl, and E.-M. de Villiers: Sequence rearrangements in the HPV 6 URR: Are these involved in malignant transition? *J. Gen. Virol.* 75, 1157-1162, 1994;





- V. Shamanin, M. Glover, C. Rausch, C. Proby, I.M. Leigh, H. Zur Hausen, and E.-M. de Villiers: Specific types of HPV found in benign proliferations and in carcinomas of the skin in immunosuppressed patients. *Cancer Res.*, 54,4610-4613, 1994;
- H. Delius, M.A. van Ranst, A.B. Jenson, H. Zur Hausen, and J.P. Sundberg: Canine oralpapillomavirus genome sequence: a unique 1.5-kb intervening sequence between the E2 and L2 openreading frame. *Virology* 204, 447-452, 1994;
- H. Zur Hausen and F. Rösl: Pathogenesis of cancer of the cervix. *Cold Spring Harbor Symp.Quantit. Biol.* 59, 623-628, 1994;
- T. Bauknecht, F. Jundt, I. Herr, T. Oehler, H. Delius, Y. Shi, P Angel, and H. Zur Hausen: A"switch region" determines cell type specific positive or negative action of YY1 on the activity of theHPV-18 promoter. *J. Virol.* 69, 1-12, 1995;
- M. Dürst, S. Seagon, S. Wanschura, H. Zur Hausen, and J. Bullerdiek: Malignant progression of anHPV 16-immortalized human keratinocyte cell line (HPK IA) in vitro. *Cancer Genetics &Cytogenetics*, 85, 105-112, 1995;
- Kleine, K., König, G., Kreuzer, J., Komitowski, D., Zur Hausen, H., and Rösl, F.: The role of theJE (MCP-1) gene encoding the monocyte chemoattractant protein-1 on the growth behaviour of HeLacells and derived somatic cell hybrids in nude mice.*Molecular Carcinogenesis*, 14, 179-189, 1995;
- H. Zur Hausen: Are human papillomavirus infections not necessary or sufficient causal factors forinvasive cancer of the cervix (Letter to the Editor). *Int. J. Cancer*, 63, 315-316, 1995;
- F. Jundt, I. Herr, P. Angel, H. Zur Hausen, and T. Bauknecht: Transcriptional control of humanpapillomavirus type 18 oncogene expression in different cell lines: role of transcription factor YY1.*Virus Genes* 11, 53-58, 1995;
- H. Zur Hausen: Roots and perspectives of contemporary papillomavirus research. *J. Cancer Res.Clin. Oncol.* 122, 3-13, 1996;
- V. Shamanin, V., Zur Hausen, H., Lavergne, D., Proby, C., Leigh, I.M., Neumann, C., Hamm, H.,Goos, M., Haustein, U.-F., Jung, E.G., Plewig, G., Wolff, H., and de Villiers, E.-M. 1996: Humanpapillomavirus infections in non-melanoma skin cancers from renal transplant recipients and nonimmunosuppressed patients. *J. Natl. Cancer Inst.*, 88, 802-811;
- H. Zur Hausen: Papillomavirus infections - a major cause of human cancers. *Biochem. Biophys.Acta, Rev. on Cancer*, 1288, F55-F78, 1996;
- F. Rösl, B.C. Das, M. Lengert, K. Geletneky, and H. Zur Hausen: Antioxidant-induced changes inAP-1 composition result in a selective suppression of human papillomavirus transcription. *J. Virol.* 71,362-370, 1997;



- T. Maehama, A. Patzelt, M. Lengert, K.-J. Hutter, K. Kanazawa, H. Zur Hausen, and F. Rösl: Selective down-regulation of the human papillomavirus transcription by 2-deoxyglucose. *Int. J.Cancer*, 76, 639-646, 1998;
- H. Zur Hausen: Cervical cancer: Papillomaviruses and p53. *News and Views, Nature*, 393, 217, 1998;
- U. Soto, B.C. Das, M. Lengert, F. Finzer, H. Zur Hausen, and F. Rösl: Conversion of HPV 18 positive non-tumorigenic HeLa-fibroblast hybrids to invasive growth involves loss of TNF- $\alpha$  mediated repression of viral transcription and modification of the AP-1 transcription complex. *Oncogene*, 18, 3187-3198, 1999;
- Zur Hausen, H.: Papillomaviruses in human cancers. *Proc. Assoc. Am. Phys.* 111, 581-587, 1999;
- Zur Hausen, H: Papillomaviruses causing cancer: evasion from host cell control in early events in carcinogenesis. *J. Nat. Cancer Inst.* 92, 690-698, 2000;
- Soto, U., Denk, C., Lengert, M., Finzer, P., Hutter, K.-J., Zur Hausen, H., and Rösl, F: Genetic complementation to non-tumorigenicity in cervical carcinoma cells correlates with alterations in AP-1 composition. *Int. J. Cancer*, 86, 811-817, 2000;
- Finzer, P., Soto, U., Delius, H., Patzelt, A., Coy, J.F., Poustka, A., Zur Hausen, H., and Rösl, F: Differential transcriptional regulation of the monocyte-chemoattractant protein-1 (MCP-1) gene in tumorigenic and non-tumorigenic HPV 18 positive cells: The role of chromatin structure and AP-1 composition. *Oncogene* 19: 3235-3244, 2000;
- Aguilar-Lemarroy, A., Kirchhoff, S., Whitaker, N., Gariglio, P., Zur Hausen, H., Krammer, P.H., and Rösl, F: Differential sensitivity of human papillomavirus type 16 and 18-positive cervical carcinoma cells to CD95-mediated apoptosis. *Int. J. Cancer* 93: 823-831, 2001. 107;
- Finzer, P., Kuntzen, C., Soto, U., Zur Hausen, H., and Rösl, F: Inhibitors of histone deacetylase arrest cell cycle and induce apoptosis in cervical carcinoma cells circumventing human papillomavirus oncogene expression. *Oncogene* 20: 4768-4776, 2001;
- Bosch, F.X., Rohan, T., Schneider, A., Frazer, I., Pfister, H., Castellsagué, X., de Sanjosé, S., Moreno, V., Puig-Tintore, L.M., Smith, P.G., Muñoz, N., and Zur Hausen, H: Papillomavirus research update: highlights of the Barcelona HPV 2000 international papillomavirus conference. *J. Clin.Pathol.* 54: 164-175, 2001;
- Zur Hausen, H. Cervical carcinoma and human papillomavirus: on the road to preventing a major human cancer. *Invited Editorial, J. Nat. Cancer Inst.* 93: 252-253, 2001;



- Zur Hausen, H: Oncogenic DNA viruses. *Oncogene* 20: 7820-7823, 2001;
- Bachmann, A., Hanke, B. Rawatzky, R., Soto, U., van Riggelen, J., Zur Hausen, H., and Rösl, F: Disturbance of tumor necrosis factor alpha-mediated interferon beta signaling in cervical carcinoma cells. *J. Virol.*, 76:280-291, 2002;
- Aguilar-Lemarroy, A., Gariglio, P., Whitaker, N., Eichhorst, S., Zur Hausen, H., Krammer, P.H., and Rösl, F: Restoration of p53 expression sensitizes human papillomavirus type 16 immortalized human keratinocytes to CD95-mediated apoptosis. *Oncogene*, 21:165-175, 2002;
- Zur Hausen, H: Papillomaviruses and cancer: from basic studies to clinical application. *Nature Rev. Cancer* 2:342-350, 2002;
- Cid-Arregui, A., Juárez, V. and Zur Hausen, H: A synthetic E7 gene of human papillomavirus type 16 that yields enhanced expression of the protein in mammalian cells and its application to DNA immunization studies. *J. Virol.* 77: 4928-4937, 2003.115;
- Helfrich, I., Chen, M., Schmidt, R., Fürstenberger, G., Kopp-Schneider, A., Trick, D., Gröne, H.-J, Zur Hausen, H., and Rösl, F: Increased incidence of squamous cell carcinomas in Mastomys natalensis papillomavirus E6 transgenic mice during two-stage skin carcinogenesis. *J. Virol.* 78:4797-4805, 2004;
- De Villiers, E.-M., Fauquet, C., Broker, T.R., Bernard, H.-U., and Zur Hausen: H. Classification of papillomaviruses. *Virology*, 324: 17-27, 2004;
- DeCastro Arce J., Soto U., Van Riggelen J., Schwarz E., Zur Hausen H., Rösl F: Ectopic expression of non-liganded RAR- $\beta$  abrogates AP-1 activity by selective degradation of c-Jun in cervical carcinoma cells. *J Biol Chem.* 279: 45408-45416, 2004;
- De Villiers, E.-M., Sandstrom, R.E., Zur Hausen, H., and Buck, C.E: Presence of papillomavirus sequences in condylomatous lesions of the mamillae and in invasive carcinoma of the breast. *Breast Cancer Res.*, 7: R1-11, 2005;
- Mossman, B.T., Klein, G. and Zur Hausen, H: Modern criteria to determine the etiology of human carcinogens. *Semin. Cancer Biol.* 14: 449-452, 2004;
- Van Riggelen, J., Buchwalter, G., Soto, U., DeCastro Arce, J., Zur Hausen, H., Wasyluk, B., and Rösl, F: Loss of Net as repressor leads to constitutive increased c-fos transcription in cervical carcinoma cells. *J. Biol. Chem.*, 280: 3286-3294, 2004;
- Báez-Astúa, A., García Garbi, N., Pasolli, H.A., Herraez-Hernandez, E., Juárez, V., Zur Hausen, H., and Cid-Arregui, A: Low-dose adenoviral vaccine encoding chimeric HBsAg-HPV16 E7 proteins induces E7-specific antibody and cytotoxic T cell responses. *J. Virol.* 79: 12897-12817, 2005;



- H. Zur Hausen: Perspectives of contemporary papillomavirus research. Vaccine, 24: Suppl 3: iiiiv, 2006;
- H. Zur Hausen: Infections Causing Human Cancer. Wiley-VCH, Weinheim/New York (Publ.), pp. 1-517, 2006;

*Otras Publicaciones Relevantes:*

- H. Zur Hausen and A. Lange : Die Isolierung eines Fibroblasten-ähnlichen Zellstammes mit heteroploider Transformation aus einer Primärkultur menschlicher Monozyten. Naturwissenschaften 52, 95, 1964;
- H. Zur Hausen, A. Lange, and J. Fröhlich: Cytolyse und Cyto-Agglutination permanenter Mäusefibroblasten (L-strain) durch Humanserum. Naturwissenschaften 52, 558-559, 1964;
- A. Lange and H. Zur Hausen: Über den Verlust der Neutralisierbarkeit von Poliomyelitisviren im Verlauf ihrer Adsorption an Nierenepithelzellen von M. rhesus. Zeitschr. f. Hygiene 150, 179-184, 1964;
- H. Zur Hausen, H. Reinauer, J. Fröhlich, and A. Lange: Lipidspeicherung in permanenten Mäusefibroblasten (L-strain, Earle) in Abhängigkeit von der Serumkonzentration. Histochemische und quantitative Untersuchungen. Zeitschr. f. Naturforschung 19b, 1129-1134, 1964;
- H. Zur Hausen, W. Mohrmann, and A. Lange: Eine Agartechnik zur Isolierung von genetisch reinen Stämmen aus etablierten Gewebekulturzellen. Exp. Cell Res. 40, 138-139, 1965;
- H. Zur Hausen and B. Störmer: Cytogenetische Untersuchungen an L-Zellen nach Vaccinia-Virus-Infektion. Path. et Mikrobiol. 28, 962-973, 1965;
- H. Zur Hausen and A. Lange: Isolierung eines permanenten Zellstammes aus Affeninnereingewebe und sein Verhalten gegenüber Polioviren (Wildvirus und attenuiertes Virus). Zentralbl. f. Bakteriol. I. Ref. 201, 336, 1966;
- H. Zur Hausen, E. Lanz and B. Störmer: Chromosomale Aberrationen bei L-Zellen nach Vaccinia-Virus-Infektion. Z. Med. Mikrobiol. Immunol. 152, 60-65, 1966;
- H. Zur Hausen, E. Lanz and B. Störmer: Chromosomale Aberrationen nach latenter Infektion eines klonierten L-Zellstammes mit Vaccinia-Virus. Z. Med. Mikrobiol. Immunol. 152, 66-72, 1966;
- H. Zur Hausen, A. Lange and J. Fröhlich: Die Serumkonzentration als Auslesefaktor in der Gewebekultur. Cytogenetische Untersuchungen an Mäusefibroblasten (strain L). Cytology (Tokyo) 31, 339-348, 1966;



- H. Zur Hausen: Chromosomal changes of similar nature in 7 established cell lines derived from the peripheral blood of patients with leukemia. *J. Natl. Cancer Inst.* 38, 683-696, 1967;
- H. Zur Hausen: Werner Henle 70 years. *Med. Microbiol. Immunol.* 168, 235-237, 1980;
- D. Neumann-Haefelin, A. Rethwilm, G. Bauer, F. Gudat, and H. Zur Hausen: Characterization of a foamy virus isolated from Cercopithecus aethiops lymphoblastoid cells. *Med. Microbiol. Immunol.* 172, 75-86, 1983;
- N. Yamamoto, Y. Hinuma, H. Zur Hausen, J. Schneider, and G. Hunsmann: African green monkeys are infected with adult T-cell leukemia virus or a closely related agent. *Lancet* 1, 240-241, 1983;
- R.C. Gallo, V.S. Klayaraman, M.G. Sarngadharan, A. Sliiski, E.C. Vonderheid, M. Maeda, Y. Nakao, K. Yamada, Y. Ito, N. Gutensohn, S. Murphy, P.A. Bunn, jr., D. Catovsky, M.F. Greaves, D.W. Blayney, W. Blattner, W.F.H. Jarrett, H. Zur Hausen, M. Selligmann, R.C. Brouet, B.F. Haynes, B.V. Jegasothy, E. Jaffe, J. Cossmann, S. Broder, R.I. Fisher, D.W. Golde, and M. Robert-Guroff: Association of human type C retrovirus with a subset of adult T-cell cancers. *Cancer Res.* 43, 3892-3899, 1983;
- U. Bantel-Schaal and H. Zur Hausen: Characterization of the DNA of a defective human parvovirus isolated from genital sites. *Virology* 134, 52-63, 1984;
- B. Georg-Fries, S. Biederlack, J. Wolf, and H. Zur Hausen: Analysis of proteins, helper dependence and seroepidemiology of a new human parvovirus. *Virology* 134, 64-71, 1984;
- R. Brossmer, B. Bohn, A. Sauer, and H. Zur Hausen: A comparison of established human lymphoma lines by flow cytometry: quantitation of ricinus communis agglutinine binding and the effect of specific glycosidases. *Eur. J. Cancer Clin. Oncol.* 7, 825-831, 1985;
- H. Zur Hausen: Wie gesund sind "gesunde Bergschafe"? *Münch. Med. Wochenschrift* 129, 437-439, 1987;
- A.Ö. Yalkinoglu, R. Heilbronn, A. Bürkle, J.R. Schlehofer, and H. Zur Hausen: DNA amplification of adeno-associated virus as a response to cellular genotoxic stress. *Cancer Res.* 48, 3123-3129, 1988;
- M. von Knebel Doeberitz, S. Koch, H. Drzonek, and H. Zur Hausen: Glucocorticoid hormones reduce the expression of major histocompatibility class I antigens on human epithelial cells. *Europ. J. Immunol.* 20, 35-40, 1990;
- S. Faisst, S. Barnitzke, J.R. Schlehofer, and H. Zur Hausen: Persistence of parvovirus H-1 in human B- and T-lymphoma cells. *Virus Res.* 16, 211-224, 1990;



- A.Ö. Yalkinoglu, J.R. Schlehofer, and H. Zur Hausen: Inhibition of methyl-N'-nitro-Nitrosoguanidine-induced methotrexate- and adriamycin-resistance in CHO cells by adenoassociated virus type 2. *Int. J. Cancer* 45, 1195-1203, 1990;
- R. Heilbronn, A. Bürkle, S. Stephan, and H. Zur Hausen: The adeno-associated represses herpes simplex virus induced DNA amplification. *J. Virol.* 64, 3012-3018, 1990;
- A. Bürkle, R. Heilbronn, and H. Zur Hausen: Carcinogen-induced methotrexate resistance and dihydrofolate reductase gene amplification: potentiation by inhibitors of poly (ADP-ribose) polymerase. *Cancer Res.* 50, 5756-5760, 1990;
- C. Walz, J.R. Schlehofer, M. Flentje, and H. Zur Hausen: Adeno-associated virus sensitizes HeLa cell tumors to gamma rays. *J. Virol.* 66, 5651-5657, 1992;
- P. Klein-Bauernschmitt, H. Zur Hausen, and J.R. Schlehofer: Induction of differentiation associated changes in established human cells by infection with adeno-associated virus type 2. *J. Virol.* 66, 4191-4200, 1992;
- H. Zur Hausen: Viruses in human tumors - personal reflections. *Behring Inst. Mitt.* 91, 21-27, 1992;
- J. Hermanns, P. Jansen-Dürr, J.A. Kleinschmidt, R. Schmidt, A. Schulze and H. Zur Hausen: Infection of primary cells by AAV2 results in a modulation of cell-cycle regulating proteins. *J. Virol.* 71, 620-627, 1997;
- U. Bantel-Schaal, H. Delius, R. Schmidt, and H. Zur Hausen: Human adeno-associated virus type 5 is only distantly related to other known primate helper dependent parvoviruses. *J. Virol.*, 73, 939-94, 1999;
- Zur Hausen, H: Proliferation-inducing viruses in non-permissive systems as possible causes of human cancers. *Lancet* 2001; 357: 381-384;
- De Villiers, E.-M., Schmidt, R., Delius, H., and Zur Hausen, H: Heterogeneity of TT virus-like sequences isolated from human tumour biopsies. *J. Mol. Med.* 2002; 80: 44-50;
- Jelcic, I., Hotz-Wagenblatt, A., Hunzicker, A., Zur Hausen, H., and de Villiers, E.-M: Isolation of multiple TV genotypes from a spleen biopsy of a Hodgkin patient: Genome reorganization and diversity in the hypervariable region; *J. Virol.*, 2004, 78: 7498-7507
- Mossman, B.T., Klein, G. and Zur Hausen, H: Modern criteria to determine the etiology of human carcinogens. *Semin. Cancer Biol.* 14: 449-452, 2004;
- Zur Hausen, H. and de Villiers, E.-M: A virus target cell conditioning model to explain some epidemiological characteristics in childhood leukemias and lymphomas. *Int J. Cancer*, 115: 1-5, 2005;
- Sospedra, M., Zhao, Y., Zur Hausen, H., Muraro, P.A., Hamashin, P., de Villiers, E.-M., Pinilla, C., and Martin, R: Recognition of conserved amino acid motifs of common viruses and its role in autoimmunity. *PLOS Pathol.* 1: 1-14, 2005;



- H. Zur Hausen. Streptococcus bovis (also S. infantarius): Causal or incidental involvement in cancer of the colon? Editorial. Int. J. Cancer, 119: xi-xii, 2006;
- Prusty, B.K., Zur Hausen, H., Schmidt, R., Kimmel, R., and de Villiers, E.-M: Transcription of HERV-E and HERV-E-related sequences in malignant and non-malignant haematopoietic cells. February 2008.

15. Que la Universidad de Guadalajara, al otorgar dicho doctorado, promueve, reconoce y se compromete a consolidar líneas de investigación en torno al cáncer y a vincularse con el equipo del Profesor Zur Hausen, y otras redes internacionales de investigación, para resolver problemas prioritarios para nuestro país y el mundo.

En virtud de los resultados antes expuestos, y

Considerando:

- I. Que la Universidad de Guadalajara es un organismo descentralizado del Gobierno del Estado de Jalisco con autonomía, personalidad jurídica y patrimonio propios, de conformidad con lo dispuesto en el artículo 1 de su Ley Orgánica, promulgada por el Ejecutivo local el día 15 de enero de 1994, en ejecución del decreto número 15319 del H. Congreso del Estado de Jalisco;
- II. Que es atribución del Consejo General Universitario conferir títulos honoríficos con las categorías de Eméritos y Honoris Causa, de conformidad con lo dispuesto en su Ley Orgánica, artículo 31, fracción X;
- III. Que son funciones y atribuciones de la Comisión de Educación, conforme lo establece el Estatuto General, artículo 85, fracción IV, conocer y dictaminar acerca de las propuestas de los Consejeros, Rector General o de los titulares de los Centros, Divisiones y Escuelas.
- IV. Que el Consejo General Universitario funciona en pleno o por comisiones, las que pueden ser permanentes o especiales, como lo señala el artículo 27 del referido ordenamiento legal;
- V. Que de conformidad a lo previsto en la fracción VI, artículo 52 de la Ley Orgánica, es atribución de los Consejos de Centro presentar candidatos para el otorgamiento de títulos honoríficos, con la categoría de eméritos y honoris causa al Consejo General Universitario.





- VI. Que tal y como lo dispone el numeral 6 del Reglamento para Otorgar Galardones y Méritos Universitarios, el Consejo de Centro Universitario presentará la propuesta para el otorgamiento de títulos honoríficos ante el Presidente del H. Consejo General Universitario, para someterla a discusión de las Comisiones de Educación y de Hacienda.

Por lo anteriormente expuesto y fundado, estas Comisiones Permanentes Conjuntas de Educación y de Hacienda nos permitimos proponer al pleno del H. Consejo General Universitario los siguientes:

Resolutivos:

**PRIMERO.** Se otorga el título de "**Doctor Honoris Causa**" de la Universidad de Guadalajara al **Profesor Harald Zur Hausen**, ejemplo a seguir para las nuevas generaciones por su contribución a la **salud pública**, al realizar investigaciones que dieron origen a la vacuna contra el virus del papiloma humano.

**SEGUNDO.** Llévase a cabo, en ceremonia solemne y pública, la entrega del título de "Doctor Honoris Causa" al Profesor Harald Zur Hausen.



TERCERO. De conformidad a lo dispuesto en el último párrafo del artículo 35 de la Ley Orgánica, solicítese al C. Rector General resuelva provisionalmente la presente propuesta, en tanto la misma es aprobada por el pleno del H. Consejo General Universitario.

Atentamente  
"PIENSA Y TRABAJA"

**"Año del Centenario de la Escuela Preparatoria de Jalisco"**  
Guadalajara, Jal., 28 de enero de 2014  
Comisiones Permanentes Conjuntas de Educación y de Hacienda

Mtro. Itzcóatl Tonatiuh Bravo Padilla  
Presidente

Dr. Héctor Raúl Solís Gadea

Mtro. Javier Espinoza de los Monteros  
Cárdenas

Dra. Leticia Leal Moya

Mtro. José Alberto Castellanos Gutiérrez

Dr. Héctor Raúl Pérez Gómez

Dr. Martín Vargas Magaña

C. Dejanira Zichuen Romero Lupercio

C. José Alberto Galarza Villaseñor

Mtro. José Alfredo Peña Ramos  
Secretario de Actas y Acuerdos