

Anton Berns

PERSONAL HISTORY

Nationality: Dutch
Birth date: 1945
Birth place: Schijndel, The Netherlands
Residence: The Netherlands

Education and qualifications

Ph.D. (with honors) Radboud University Nijmegen, The Netherlands. Thesis: Isolation of Calf Lens messenger RNA and its translation in heterologous systems, June 22, 1972

University education Chemistry & Biochemistry. Radboud University Nijmegen, 1963 – 1969

M.Sc. (with honors) 1969 Biochemistry. Radboud University Nijmegen, The Netherlands

B.Sc. 1966 Chemistry. Radboud University Nijmegen, The Netherlands

Employment history

2013- present Director Skoltech Center for Stem Cell Research, Moscow
2012- present Senior Group Leader, Netherlands Cancer Institute
1999 – 2011 Director of Research, Chairman of the Board of Directors Netherlands Cancer Institute & Antoni van Leeuwenhoek Hospital
1992 - 2011 Professor Experimental Molecular Genetic of Inherited Diseases, University of Amsterdam.
1992 - 1994 VP Research and Development, Somatix, Alameda, California, USA
1986 - 1999 Head Division of Molecular Genetics, NKI
1976 - 1985 Staff member Department of Biochemistry, Radboud University Nijmegen, The Netherlands
1979 Visiting staff scientist, Salk Institute, USA
1974 - 1976 Postdoctoral fellow with Rudolf Jaenisch, Salk Institute, USA
1972 - 1974 Postdoctoral fellow with Hans Bloemendal, Radboud University Nijmegen, The Netherlands

Anton Berns studied biochemistry at the University of Nijmegen and received his Masters degree in 1969 (cum laude) and his PhD in 1972 (supervisor Prof. H. Bloemendal) from that same University (cum laude). He did his postdoctoral training in the group of Rudolf Jaenisch at the Salk Institute in La Jolla, CA., where he studied the role of retroviruses in causing lymphomas in mice. In 1976 he returned to the University of Nijmegen where he became junior staff member. His group explored proviral insertional mutagenesis as a means to identify new oncogenes. In 1985 he was appointed as staff scientist at the Netherlands Cancer Institute and in 1986 he became head of the Division of Molecular Genetics of the Institute. Here his group did pioneering work to generate and utilize genetically modified mice as a tool to search for new cancer genes. Currently, his group focuses on the development and use of advanced mouse models for cancer. Themes of his current research are: i. Development of tools to faster generate complex mouse models, ii. High throughput transposon insertional mutagenesis to identify components in signaling pathways relevant for cancer, and iii. The role of tumor heterogeneity and cells-of-origin of lung cancer and mesothelioma. His group consists of approximately 12 members including 4 technicians. In 1999, he was appointed as Director of Research and Chairman of the Board of Directors of the Netherlands Cancer Institute/Antoni van Leeuwenhoek Hospital from which he retired at

the end of 2011. He continued his research a group leader in the Division of Molecular Genetics of the NKI.

Prizes Honors and awards:

2011: Josephine Nefkens Award.
2010: Elected Member of European Academy Cancer Sciences
2008: Queen Wilhelmina Research Prize
2007: Smith Visiting Professor, MSKCC
2006: 1e Massachusetts General Hospital Cancer Award
2002: AKZO Nobel Science Award
1999: Elected to Member of the Academia Europaea
1997: Elected to Member of the Royal Dutch Academy of Sciences.
1993: Prix Antoine de Lacassagne (French Cancer Society)
1990: Elected Member of European Molecular Biology Organization
1973: Gold Medal Royal Dutch Chemical Society
1972: Shell travel award

Editorial boards Scientific Journals

EMBO J.
EMBO Reports
Oncogene
Genes & Development
Cancer Cell
BBA
BMC
Mol. Oncol.

Scientific Advisory boards (from 2001 onwards)

1998 - 2012	SAB Life Science Partners Amsterdam, Investment Fund
2001 -2007	SAB Xenogen/Caliper. Alameda/Palo Alto, USA
2004- present	SAB European Oncology Institute, Milan, Italy
2005- 2012	SAB CNIO Madrid, Spain.
2006- 2010	SAB Genomic Institute Singapore
2006- 2008	SAB Beatson Institute Glasgow, United Kingdom.
2006- 2008	SAB CRI Cambridge, United Kingdom
2007- 2009	Advisory Board Academy of Finland Center of Excellence
2008- 2010	SAB Leeds Institute for Molecular Medicine, United Kingdom
2007- present	SAB Institute Molecular Pathology, Vienna, Austria.
2007- present	SAB Walter and Eliza Hall Institute, Melbourne, Australia
2008- present	International Consulting Committee PEBC Barcelona
2008- present	Member Council Research Strategy Committee CR-UK
2009- present	SAB AMOLF Amsterdam
2009- present	SAB Weatherall Institute of Molecular Medicine, Oxford, UK.
2009- present	SAB IGBMC, Strassbourg, France
2012- present	SAB (chair) Cancer program Sanger Institute, Hinxton, UK
2012- present	SAB Institut Curie, Paris
2013- present	SAB Danish cancer centre, Copenhagen.
2013- present	SAB Max Planck Munich

Selected committees (from 2001 onwards)

2012- present	Board member KIKA (Children cancer fund)
2011- present	Chairman of Scientific Steering committee EUROCAN
2010- present	Trustee CR-UK
2010- 2012	Secretary General EMBO
2009- Present	Member scientific strategy committee CR-UK
2008	Chairman of Inbev-Baillet Latour Prize Jury.
2006	Chairman of Pezcoller –AACR International Award Committee.
2005	Chairmen of committee (KNAW, NWO, Universities) grant coordination
2006- 2009	Member EMBO council (Vice Chair).
2005	Member of Pezcoller Foundation – AACR International Award Committee.
2004- 2007	Member of Wellcome strategy committee Genes and Cells
2003- 2008	Member Gene therapy committee of Medical Research Council.
2003-2007	Member promotions and salaries assessment panel CR-UK
2002- 2010	Member of the board of the Council for Medical Research. (KNAW)
2001- 2012	Member of the board of “Drie Lichten” a research and travel fund for medical students and postdocs.
2001-2005	Member CCMO (council overseeing experiments with embryo;s, gene therapy, xenotranplantation and experiments with children and mentally disabled patients; Ministry of Health, The Netherlands).
2000-present	Member of the board of “Nefkens fund” supporting Cancer, HIV research and projects in third world countries.
2000-2005	Chairman of selection committee of fellows of the Royal Dutch Academy of Sciences.
2000- 2008	Member of Walree committee (travel grants for students).
2000- 2008	Chairman of the committee for selecting new members (Medical Sciences) of the Royal Dutch Academy of Sciences
1999-2007	Member of Scientific program Committee of the Cancer Research Campaign and CR-UK of Britain
1998-2002	Member of General Motors Cancer Research Awards Committee

Invited (reimbursed) and accepted lectures/seminars (2003- 2013)

2013	Jan. 15-17 San Francisco MMHCC
2013	February 5-9 Taos, Keystone meeting Lung Development, Cancer & Disease. Keynote
2013	February Lyon 12-15 CRLC meeting
2013	April 6-10 Washington, AACR Annual Meeting
2013	May 16-17 Seminar Cancerpole Nord-Ouest
2013	July 8-9 conference on SCLC, Washington DC.
2013	July 15-18 Toronto CCD conference meeting on p53
2013	October 27-30 Sidney. World Conference on Lung Cancer (not yet accepted)
2013	Nov. 5-9 San Diego. Translational impact of Model organisms.
2013	Nov. 17-20 San Francisco. Lung model meeting
2013	Dec. 15-16 Seminar DKFZ
2012	Nov. 16. University of Lausanne, seminar series
2012	Nov. 19. Salk Institute
2012	October 11. seminar Oulu, Finland
2012	August 22-24. Biocity Symposium Turki, Finland
2012	July 9-11 Stem cell symposium Cambridge UK
2012	June 29, Seminar CNIO Madrid
2012	May 21 Helsinki. Seminar to the honor of Kari Alitalo
2012	April 30 Lung symposium CR-UK
2012	April 1-4 AACR annual meeting Chicago
2012	March 11-14 Ipsen meeting Ouro Preto Brazil
2012	January 18-19 MMHCC meeting San Francisco

2011 Dec. 2 UCSF seminar Helen Diller Cancer Centre. San Francisco
 2011 Dec. 1 UC Berkeley Novartis Lecture
 2011 Nov. 30 4th Annual Cancer Symposium. Harvard Medical School
 2011 Nov. 29 NCI-MMHCC Workshop. Boston MA.
 2011 Nov. 15 Vogt Lecture Salk Institute, La Jolla, CA.
 2011 Nov. 7-11 Madrid CNIO Frontiers meeting
 2011 Sept. 26-30 Summer school Translational Cancer research. Falesia Portugal
 2011 Sept. 14-16 Conference German Genetics Society Würzburg
 2011 Sept. 8-10 Isrec symposium Lausanne
 2011 July Amsterdam World Lung Cancer Conference
 2011 June 16-18 Trento, Pezcoller conference. Engineering influences Cancer research
 2011 March Wilton UK 6-8 Understanding Cancer as a microevolutionary process
 2011 Jan. 23-27 Gordon conference, Venture CA. Lung cancer models

2010 September 6-10 Les Treilles. Mouse model meeting.
 2010 +June 26 EACR Oslo, Lung cancer models
 2010 May 9-10 Barcelona EMBO workshop. Models for lung cancer.
 2010 April 17-21 AACR meet the expert session. Cancelled because of volcano
 2010 April 9. Brigham & Woman's hospital Boston. Mouse mesothelioma models
 2010 February 26 Genome wide mutation detection.
 2010 February 1 Seminar John Ratcliffe, Oxford
 2010 January 15 CGC meeting, Utrecht

2009 December 11-12 Lung carcinoma symposium Berlin
 2009 October 1. Seminar IMP Vienna
 2009 September 25-26 Genomics of Common diseases Sanger Cambridge
 2009 September 23-24 ECCO ESMO, Berlin
 2009 September 13-17 Gordon conference Stem cells Les Diablerets
 2009 September 4. Introductory lecture Descartes Paris
 2009 September 3-6. Mouse meeting Sanger Cambridge
 2009 July 15 Seminar Rotterdam, Earsmus
 2009 Win meeting Patis
 2009 June 25-26 IMMO meeting Mouse models Leiden
 2009 June 8-12 Centenary meeting ICR London
 2009 April 30-May 2. Hinterzartener Kreis Meeting Cadenabbia, Italy
 2009 April 18-22 AACR annual meeting Denver
 2009 March 28-29 ERS Lung conference Estoril Portugal
 2009 March 4 Lecutre Fondation Pierre-Gilles de Gennes, Paris
 2009 February 25-26 NCI mouse models review Bethesda
 2009 February 15-18 Ipsen meeting, India
 2009 Jan 26 Rotterdam CGC meeting
 2009 Jan 13-15 AACR mouse models San Francisco

2008 October 23 Seminar Max Planck Institute Freiburg
 2008 September 25 IMI congres Mesotheliomas A'dam
 2008 July 14 Genetics Association Cancer Meeting Berlin
 2008 July 6-7 EACR Meeting
 2008 June 20-22 Berlin Transposon Meeting
 2008 June 17 Weizmann Institute Rehovot
 2008 June 2 Seminar Barcelona
 2008 April 17 Special seminar CR-UK London
 2008 April 15 AACR San Diego
 2008 March 9-12 Conference Costa Rica
 2008 February 18 Seminar WEHI
 2008 February 14-16 Lorne Conference Australia
 2008 January 29. Seminar Leeds UK.

2007 EUROCAN. Cancer Research in Europe. Lyon, France.
 2007 Elsys European Young Scientist meeting. Enschede, The Netherlands.
 2007 Keystone. Vancouver, Canada.
 2007 AACR Meeting Los Angeles, USA.
 2007 BRIC Seminar. Copenhagen, Denmark.
 2007 Ipsen foundation meeting Toscane, Italy.
 2007 Salk Institute. USA.
 2007 Bar Harbor Maine, USA. Teaching course.

EXTERNAL FUNDING (from 2001 onwards)

Title	Funding source (fellow name)	Total value (€)	Time period
Grants			
Combination therapies for personalized cancer medicine (Joint applic with WTSI)	Synergy-ERC	14,500,000	2013 - 2018
Mouse clinic for Cancer and aging research (joint applic)	NWO Infrastructural grant	14,000,000	2012 - 2017
Mouse models for lung cancer and mesothelioma	Dutch Cancer Society KWO	2,000,000	2009 - 2015
Centre of Biomedical Genetics	Netherlands Organization for Scientific Research	1,000,000	2007 - 2012
Cancer genomics centre	Netherlands genomics initiative	800,000	2007 - 2011
EUROCAN (EU consortium)	FP7	100,000	2011 - 2014
Kinases in Cancer. Validation of drug targets in animal models	TI-Pharma	600,000	2007 - 2011
Mouse models for Non-Small Cell Lung Cancer: Genotype-phenotype correlations as a basis for better therapeutic intervention strategies	Dutch Cancer Society	470,000	2005 - 2009
Dissecting the role of the 9p21 INK4 genes in development and tumor suppression in mouse models	Dutch Cancer Society	400,000	2004 - 2008
Testing small molecule inhibitors in mesothelioma	Merck	400,000	2006 - 2008
Genome-wide mapping of oncogenic pathways by high-throughput insertional mutagenesis.	Netherlands Organization for Scientific Research	1,400,000	2002 - 2007
Cancer Genomics Centre	Netherlands Genomics Initiative	600,000	2002 - 2007
Development of a mouse model to study the genetic basis of mesothelioma	Dutch Cancer Society	600,000	1999 - 2004
Centre of Biomedical Genetics	Netherlands Organization for Scientific Research	500,000	2002 - 2007
Identification of novel target genes for cancer therapy	EU	500,000	2004 - 2007
Identification of Novel Targets for Cancer Therapy.	EU	85,000	2004 - 2007
Identification of the PIM regulatory network by microarray analysis and high throughput retroviral tagging in compound mutant mice	Dutch Cancer Society	400,000	2001 - 2004
Fellowships			
Kate Sutherland	EU	150,000	2007 - 2008
Carla Martins	PGDBM Portugal		2000 - 2003

Publications (including reviews and N&V etc.)

- 271 Ivo J Huijbers, Rahmen Bin Ali, Colin Pritchard, Miranda Cozijnsen, Min-chul Kwon, Natalie Proost, Ji-Ying Song, Hilda de Vries, Jitendra Badhai, Kate Sutherland, Paul Krimpenfort, Ewa M Michalak, Jos Jonkers³ & **Anton Berns** (2013). Rapid target gene validation in complex cancer mouse models using re-derived embryonic stem cells. **EMBO Mol. Med.** *in press*.
- 270 Horn, K.E., Glasgow, S.D., Gobert, D., Bull, S.-J., Luk, T., Girgis, J., Tremblay, M.-E., McEachern, D., Bouchard, J.-F., Haber, M., Hamel, E., Krimpenfort, P., Murai, K., **Berns, A.**, Doucet, G., Chapman, C., Ruthazer, E., and Kennedy, T. (2013). DCC expression by neurons regulates synaptic plasticity in the adult brain. *Cell Rep* **3**, 173–185
- 269 Van Amerongen, R., and **Berns, A.** (2013) Break the loop, escape the cycle? **EMBO J.** **32**, 1967–1969.
- 268 Akhtar, W., de Jong, J., Pindyurin, A.V., Pagie, L., Meuleman, W., de Ridder, J., **Berns, A.**, Wessels, L.F.A., van Lohuizen, M., and van Steensel, B. (2013). Chromatin position effects assayed by thousands of reporters integrated in parallel. *Cell* **154**, 914–927.
- 267 **Berns, A.**, & Barbacid, M. (2013). Mouse models of Cancer. **Mol. Oncol.** **7**, 143-145
- 266 Kwon, M-C, and **Berns, A.** (2013) mouse models of Lung Cancer. **Mol. Oncol.** **7**, 165-177.
- 265 Zeilstra, J., Joosten, S.P.J., van Andel, H., Tolg, C., **Berns A.**, Snoek, M., van de Wetering, M., Spaargaren, M., Clevers, H., and Pals, S.T. (2013). Stem cell CD44v isoforms promote intestinal cancer formation in Apc(min) mice downstream of Wnt signaling. **Oncogene**, doi:10.1038/onc.2012.611.
- 264 Horn, K.E., Glasgow, S.D., Gobert, D., Bull, S.-J., Luk, T., Girgis, J., Tremblay, M.-E., McEachern, D., Bouchard, J.-F., Haber, M., et al. (2013). DCC Expression by Neurons Regulates Synaptic Plasticity in the Adult Brain. **Cell Rep** **3**, 173–185.
- 263 Walf-Vorderwülbecke, V., de Boer, J., Horton, S.J., van Amerongen, R., Proost, N., **Berns, A.**, and Williams, O. (2012). Frat2 mediates the oncogenic activation of Rac by MLL fusions. **Blood** **120**, 4819–4828.
- 262 Krimpenfort, P., Song, J-Y., Proost, N., Zevenhoven, J., Jonkers, J., and **Berns, A.** Deleted in Colorectal Carcinoma (DCC) suppresses metastasis formation in p53 deficient mammary tumors (2012), **Nature** **482**, 538-41.
- 261 De Jong, J., De Ridder, J., van der Weijden, L., Sun, N., Van Uitert, M., **Berns, A.**, van Lohuizen, M., Jonkers, J., Adams, D., and Wessels, L. (2011) Computational identification of insertional mutagenesis targets for cancer gene discovery. **Nucl. Acids Res.** **39**, p e105.
260. Huijbers, I.J., Krimpenfort, P., **Berns, A.**, and Jonkers, J. (2011). A chimeric approach for rapid validation of cancer genes and drug targets in established genetically engineered mouse models of cancer. **Bioassays** **33**, 701-710.
259. Sutherland, K.D., Proost, N., Brouns, I., Adriaensen, D., Song, J-Y., and **Berns, A.** (2011). Cell of Origin of Small Cell Lung Cancer: Inactivation of Trp53 and Rb1 in Distinct Cell Types of Adult Mouse Lung. **Cancer Cell** **19**, 754-64.

258. Calbo, J., van Montfort, E., Proost, N., van Drunen, E., Beverloo, H., Meuwissen, R., and **Berns, A.** (2011) A functional role for tumor cell heterogeneity in a mouse model of Small Cell Lung Cancer. **Cancer Cell**, **19**, 244-56.
257. Nawijn, M., Alendar, A. and **Berns, A.** (2011) For better or worse. The role of Pim in oncogenesis. **Nat. Rev. Cancer** **11**, 23-34.
256. **Berns, A.** (2010) The blind spot of p53. **Nature** **468**, 519-20.
255. De Vries, Nienke A, Bruggeman, Sophia W, Hulsman, Danielle, de Vries, Hilda I, Zevenhoven, John, Buckle, Tessa, Hamans, Bob C, Leenders, William P, Beijnen, Jos H, van Lohuizen, Maarten, **Berns, Anton J M**, van Tellingen, Olaf (2010). Rapid and robust transgenic high-grade glioma mouse models for therapy intervention studies. **Clin. Cancer Res.** **16**, 3431-41.
254. Sutherland, K.D., and **Berns, A.** (2010) Cell of origin of lung cancer, **Molecular Oncology**, ahead of print. doi:10.1016/j.molonc.2010.05.002
253. Dannenberg, Jan-Hermen and **Berns, Anton.** Drugging drug resistance (2010). **Cell**, **141**, 118-20.
252. Kool, Jaap, Uren, Anthony G, Martins, Carla P, Sie, Daoud, de Ridder, Jeroen, Turner, Geoffrey, van Uiter, Miranda, Matentzoglou, Konstantin, Lagcher, Wendy, Krimpenfort, Paul, Gadiot, Jules, Pritchard, Colin, Lenz, Jack, Lund, Anders H, Jonkers, Jos, Rogers, Jane, Adams, David J, Wessels, Lodewyk, **Berns, Anton**, van Lohuizen, Maarten (2010). Insertional mutagenesis in mice deficient for p15Ink4b, p16Ink4a, p21Cip1, and p27Kip1 reveals cancer gene interactions and correlations with tumor phenotypes. **Cancer Research** **70**, 520-31.
251. Mattison, Jenny, Kool, Jaap, Uren, Anthony G, de Ridder, Jeroen, Wessels, Lodewyk, Jonkers, Jos, Bignell, Graham R, Butler, Adam, Rust, Alistair G, Brosch, Markus, Wilson, Catherine H, van der Weyden, Louise, Largaespada, David A, Stratton, Michael R, Futreal, P Andy, van Lohuizen, Maarten, **Berns, Anton**, Collier, Lara S, Hubbard, Tim, Adams, David J (2010). Novel candidate cancer genes identified by a large-scale cross-species comparative oncogenomics approach. **Cancer Research** **70**, 883-95
250. Renée van Amerongen, Martijn C. Nawijn, Jan-Paul Lambooy, Natalie Proost, Jos Jonkers, and **Anton Berns** (2010). Frat oncoproteins act at the crossroad of canonical and noncanonical Wnt-signaling pathways. **Oncogene** **29**, 93-104
249. Meleeneh Kazarian, BS, Joaquim Calbo, PhD, Natalie Proost, Cathy L. Carpenter, PhD, MPH, **Anton Berns**, PhD, and Ite Laird-Offringa, PhD. (2009) Immune response in lung cancer mouse model mimics human anti-Hu reactivity. **J. Neuroimmunology**, **217**, 38-45.
248. Uren, Anthony G, Mikkers, Harald, Kool, Jaap, van der Weyden, Louise, Lund, Anders H, Wilson, Catherine H, Rance, Richard, Jonkers, Jos, van Lohuizen, Maarten, **Berns, Anton**, Adams, David J (2009). **Nat. Protoc.** **4**, 789-798
247. Uren, A. and **Berns, A.** (2009) Jump-starting cancer gene discovery. **Nat. Biotech.** **27**, 251-2.
246. Kool, J., and **Berns, A.** (2009) High-throughput insertional mutagenesis screens in mice to identify oncogenic networks. **Nat. Rev. Cancer** **9**, 389-399.

245. **Berns** (2008) A. Kras and Hras – What is the difference. **Nature Genetics**, **40**,1149-50.
244. Boyle, P., Anderson, B.O., Andersson, L.C., Ariyaratne, Y., Auleley, G.R., Barbacid, M., Bartelink, H., Baselga, J., Behbehani, K., Belardelli, F., *et al.* (2008). Need for global action for cancer control. **Ann Oncol** **19**, 1519-1521.
243. Lehembre, F., Yilmaz, M., Wicki, A., Schomber, T., Strittmatter, K., Ziegler, D., Kren, A., Went, P., Derksen, P.W., **Berns**, A., *et al.* (2008). NCAM-induced focal adhesion assembly: a functional switch upon loss of E-cadherin. **EMBO J.** **27**, 2603-15.
242. Uren, A.G., Kool, J., Matentzogy, K., de Ridder, J., Mattison, J, van Uitert, M., Lagcher, W., Sie, D., Tanger, E., Cox, T., Reinders, M., Hubbard, T.J., Rogers, J., Jonkers, J., Wessels, L., Adams, D.J., van Lohuizen, M., and **Berns**, A. (2008). Large-scale mutagenesis in *p19^{ARF}* and *p53* deficient mice identifies cancer genes and their collaborative networks. **Cell**, **133**, 727-41.
241. **Berns A.** (2008). A tRNA with oncogenic capacity. **Cell**, **133**, 29-30.
240. Jongsma, J., van Montfort, E., Vooijs, M., Zevenhoven, J., Krimpenfort, P., Van der Valk, M., Van de Vijver, M., and **Berns**, A. (2008). A conditionele mouse model for malignant mesothelioma. **Cancer Cell**, **13**: 261-271.
239. Van Amerongen, R., and **Berns**, A. (2008) Targeted anticancer therapies: mouse models help uncover the mechanisms of tumor escape. **Cancer Cell**: **13(1)**:5-7.
238. Krimpenfort, P., IJpenburg, a., Song, J-Y., van der Valk, M., Nawijn, M., Zevenhoven, J., and **Berns**, A. (2007). P15Ink4b is a critical tumour suppressor in the absence of p16Ink4a. (2007) **Nature**, 448, 943-6.
237. Muraski JA, Rota M, Misao Y, Fransioli J, Cottage C, Gude N, Esposito G, Delucchi F, Arcarese M, Alvarez R, Siddiqi S, Emmanuel GN, Wu W, Fischer K, Martindale JJ, Glembotski CC, Leri A, Kajstura J, Magnuson N, **Berns A**, Beretta RM, Houser SR, Schaefer EM, Anversa P, Sussman MA. (2007) Pim-1 regulates cardiomyocyte survival downstream of Akt. *Nat. Med.* **13**, 1467-75.
236. Liao CP, Zhong C, Saribekyan G, Bading J, Park R, Conti PS, Moats R, **Berns A**, Shi W, Zhou Z, Nikitin AY, Roy-Burman P. Mouse models of prostate adenocarcinoma with the capacity to monitor spontaneous carcinogenesis by bioluminescence or fluorescence. **Cancer Res.** 2007; **67**: 7525-33
235. Liao, C.P., Zhong, C., Saribekyan, G., Bading, J., Park, R., Conti, P.S., Moats, R., **Berns**, A., Shi, W., Zhou, Z., A.Y. Nikitin, and P. Roy-Burman. (2007). Mouse models of prostate adenocarcinoma with the capacity to monitor spontaneous carcinogenesis by bioluminescence or fluorescence. **Cancer Res** **67**, 7525-7533.
234. Liu, X., Holstege, H., van der Gulden, H., Treur-Mulder, M., Zevenhoven, J., Velds, A., Kerkhoven, R.M., van Vliet, M.H., Wessels, L.F., Peterse, J.L., **Berns**, A., and Jonkers, J. (2007). Somatic loss of BRCA1 and p53 in mice induces mammary tumors with features of human BRCA1-mutated basal-like breast cancer. **Proc Natl Acad Sci U S A** **104**, 12111-12116.
233. Hameyer, D., Loonstra, A., Eshkind, L. Schmitt, A., Antunes, C., Groen, A., Bindels, E., Jonkers, J., Krimpenfort, P., Meuwissen, R., Rijswijk, R., Bex, A., **Berns**, A., and Bockamp E. (2007) Toxicity of ligand-dependent Cre-recombinase and generation of a conditional Cre-deleter mouse allowing mosaic recombination in peripheral tissues. **Phys. Genomics**, **31**:32-41.
232. van Amerongen, R., and **Berns**, A. (2006). Knockout mouse models to study Wnt signal transduction. **Trends Genet** **22**, 678-689.
231. **Berns**, A. (2006). Cancer biology: can less be more for p53? **Nature** **443**, 153-154.

230. Boyle, P., Ariyaratne, M. A., Barrington, R., Bartelink, H., Bartsch, G., **Berns**, A., de Valeriola, D., Dinshaw, K. A., Eggermont, A. M., Gray, N., et al. (2006). Tobacco: deadly in any form or disguise. **Lancet** 367, 1710-1712.
229. Huijbers, I. J., Krimpenfort, P., Chomez, P., van der Valk, M. A., Song, J. Y., Inderberg-Suso, E. M., Schmitt-Verhulst, A. M., **Berns**, A., and Van den Eynde, B. J. (2006). An inducible mouse model of melanoma expressing a defined tumor antigen. **Cancer Res** 66, 3278-3286.
228. Peeper, D., and **Berns**, A. (2006). Cross-species oncogenomics in cancer gene identification. **Cell** 125, 1230-1233.
227. Shakhova, O., Leung, C., van Montfort, E., **Berns**, A., and Marino, S. (2006). Lack of Rb and p53 delays cerebellar development and predisposes to large cell anaplastic medulloblastoma through amplification of N-Myc and Ptch2. **Cancer Res** 66, 5190-5200.
226. Van Amerongen R and **Berns** A., (2006) TXR1-mediated thrombospondin repression: a novel mechanism of resistance to taxanes? **Genes & Development** 20: 1975-81.
225. Derksen, P.W., Liu, X., Saridin, F., van der Gulden, H., Zevenhoven, J., Evers, B., van Beijnum, J.R., Griffioen, A.W., Vink, J., Krimpenfort, P., Peterse, R.D. Cardiff, A. **Berns**, and J. Jonkers. (2006). Somatic inactivation of E-cadherin and p53 in mice leads to metastatic lobular mammary carcinoma through induction of anoikis resistance and angiogenesis. **Cancer Cell** 10, 437-449.
224. van Amerongen, R., and **Berns**, A. (2005). Re-evaluating the role of Frat in Wnt-signal transduction. **Cell Cycle** 4, 1065-1072.
223. van Amerongen, R., Nawijn, M., Franca-Koh, J., Zevenhoven, J., van der Gulden, H., Jonkers, J., and **Berns**, A. (2005). Frat is dispensable for canonical Wnt signaling in mammals. **Genes & Development** 19, 425-430.
222. **Berns**, A. (2005a). Cancer: two in one. **Nature** 436, 787-789.
221. **Berns**, A. (2005b). Stem cells for lung cancer? **Cell** 121, 811-813.
220. Boyle, P., Ariyaratne, M., Bartelink, H., Baselga, J., **Berns**, A., Brawley, O. W., Burns, H., Davidov, M., Dinshaw, K. A., Dresler, C., et al. (2005). Curbing tobacco's toll starts with the professionals: World No Tobacco Day. **Lancet** 365, 1990-1992.
219. Linnoila, R. I., Naizhen, X., Meuwissen, R., **Berns**, A., and DeMayo, F. J. (2005). Mouse lung neuroendocrine carcinomas: distinct morphologies, same transcription factors. **Exp Lung Res** 31, 37-55.
218. Luiten, R. M., Kueter, E. W., Mooi, W., Gallee, M. P., Rankin, E. M., Gerritsen, W. R., Clift, S. M., Nooijen, W. J., Weder, P., van de Kastele, W. F., Sein, J., van den Berk, P.C., Nieweg, O.E., **Berns**, A., Spits, H., and De Gast, G.C. (2005). Immunogenicity, Including Vitiligo, and Feasibility of Vaccination With Autologous GM-CSF-Transduced Tumor Cells in Metastatic Melanoma Patients. **J Clin Oncol**. 23: 8978-91.
217. Ma, X., Ziel-van der Made, A. C., Autar, B., van der Korput, H. A., Vermeij, M., van Duijn, P., Cleutjens, K. B., de Krijger, R., Krimpenfort, P., **Berns**, A., et al. (2005). Targeted biallelic inactivation of Pten in the mouse prostate leads to prostate cancer accompanied by increased epithelial cell proliferation but not by reduced apoptosis. **Cancer Res** 65, 5730-5739.
216. Meuwissen, R., and **Berns**, A. (2005). Mouse models for human lung cancer. **Genes & Development** 19, 643-664.
215. Calbo, J., Meuwissen, R., van Montfort, E., van Tellingen, O., and **Berns**, A. (2005). Genotype-phenotype relationships in a mouse model for human small-cell lung cancer. **Cold Spring Harb. Symp. Quant. Biol.** 70:225-232.

214. Uren, A. G., Kool, J., **Berns**, A., and van Lohuizen, M. (2005). Retroviral insertional mutagenesis: past, present and future. **Oncogene** 24, 7656-7672.
213. Ruiz, S., Santos, M. M., Segrelles, C., Leis, H., Luis Jorcano, J., **Berns**, A., Paramio, J. M., and Vooijs, M. (2004). Unique and overlapping functions of pRb and p107 in the control of proliferation and differentiation in epidermis. **Development** 131, 2737-2748.
212. **Berns**, A. (2004). Good news for gene therapy. **N Engl J Med** 350, 1679-1680.
211. Mikkers, H., Nawijn, M., Allen, J., Brouwers, C., Verhoeven, E., Jonkers, J., and **Berns** A. (2004). Mice deficient for all PIM kinases display reduced body size and impaired responses to hematopoietic growth factors. **Mol. Cell. Biol.** 24: 6104-15.
210. van Amerongen, R., van der Gulden, H., Bleeker, F., Jonkers, J., and **Berns**, A. (2004). Characterization and functional analysis of the murine Frat2 gene. **J Biol Chem** 279, 26967-26974.
209. Auwerx, J., Avner, P., Baldock, R., Ballabio, A., Balling, R., Barbacid, M., **Berns**, A., Bradley, A., Brown, S., Carmeliet, P., et al. (2004). The European dimension for the mouse genome mutagenesis program. **Nature Genetics** 36, 925-927.
208. Robanus-Maandag, E., Giovannini, M., van der Valk, M., Niwa-Kawakita, M., Abramowski, V., Antonescu, C., Thomas, G., and **Berns**, A. (2004). Synergy of Nf2 and p53 mutations in development of malignant tumours of neural crest origin. **Oncogene** 23, 6541-6547.
207. Jonkers, J. and **Berns**, A (2004). Oncogene addiction: sometimes a temporary slavery. **Cancer Cell** 6, 535-538.
206. Mikkers, H., and **Berns**, A. (2003) Retroviral insertional mutagenesis: Tagging cancer pathways. **Adv. Cancer. Res.** 88: 53-99
205. Marino, S., Hoogervorst, D., Brandner, S., and **Berns**, A. (2003). Rb and p107 are required for normal cerebellar development and granule cell survival but not for Purkinje cell persistence. **Development** 130, 3359-3368.
204. **Berns**, A. (2003). Tumour suppressors: timing will tell. **Nature** 424, 140-141.
203. Meuwissen, R., Linn, S. C., Linnoila, R. I., Zevenhoven, J., Mooi, W. J., and **Berns**, A. (2003). Induction of small cell lung cancer by somatic inactivation of both Trp53 and Rb1 in a conditional mouse model. **Cancer Cell** 4, 181-189.
202. Lyons S.K., Meuwissen, R., Krimpenfort, P., and **Berns**, A. (2003) The generation of a conditional reporter that enables bioluminescence imaging of Cre/Lox-dependent tumorigenesis in mice. **Cancer Res.** 63, 7042-6
201. Jonkers, J. and Berns, A. (2003) Animal models of Cancer. **Cell. & Mol. Biol. of Cancer**,
200. **Berns**, A. (2002). "Senescence: a companion in chemotherapy?" **Cancer Cell** 1(4): 309-11.
199. Jonkers, J. and A. **Berns** (2002). "Conditional mouse models of sporadic cancer." **Nature Rev Cancer** 2(4): 251-65.
198. Marino, S., P. Krimpenfort, C. Leung, H. A. Van Der Korput, J. Trapman, I. Camenisch, A. **Berns** and S. Brandner (2002). "PTEN is essential for cell migration but not for fate determination and tumourigenesis in the cerebellum." **Development** 129(14): 3513-3522.

197. Vooijs, M., J. Jonkers, S. Lyons and A. **Berns** (2002). "Noninvasive imaging of spontaneous retinoblastoma pathway-dependent tumors in mice." **Cancer Res** **62**(6): 1862-7.
196. Vooijs, M., H. Te Riele, M. Van Der Valk and A. **Berns** (2002). "Tumor formation in mice with somatic inactivation of the retinoblastoma gene in interphotoreceptor retinol binding protein-expressing cells." **Oncogene** **21**(30): 4635-45.
195. Martins, C. P. and A. **Berns** (2002). "Loss of p27(Kip1) but not p21(Cip1) decreases survival and synergizes with MYC in murine lymphomagenesis." **EMBO J** **21**: 3739-48.
194. Hwang, H. C., C. P. Martins, Y. Bronkhorst, E. Randel, A. **Berns**, M. Fero and B. E. Clurman (2002). "Identification of oncogenes collaborating with p27Kip1 loss by insertional mutagenesis and high-throughput insertion site analysis." **Proc Natl Acad Sci U S A**. **99**: 11293-98.
193. Mikkers, H., Allen, J., Knipscheer, P., Romeyn, L., Hart, A., Vink, E., and **Berns**, A. (2002). High throughput retroviral tagging to identify components of specific signaling pathways. **Nature Genetics** **32**, 153-159.
192. Mikkers, H., Allen, J., and **Berns** A. (2002) Proviral activation of the tumor suppressor E2A contributes to T cell lymphomagenesis in Em-Myc transgenic mice. **Oncogene**, **21**, 6559-66
191. Bex, A., Vooijs, M., Horenblas, S., and **Berns**, A. (2002). Controlling gene expression in the urothelium using transgenic mice with inducible bladder specific Cre-lox recombination. **J. Urololy** **168**, 2641-2644.
190. Akagi, K., Kanai, M., Saya, H., Kozu, T., and **Berns**, A. (2001). A novel tetracycline-dependent transactivator with E2F4 transcriptional activation domain, **Nucleic Acids Res** **29**, E23.
189. Akasaka, T., van Lohuizen, M., van der Lugt, N., Mizutani-Koseki, Y., Kanno, M., Taniguchi, M., Vidal, M., Alkema, M., **Berns**, A., and Koseki, H. (2001). Mice doubly deficient for the Polycomb Group genes *Mei18* and *Bmi1* reveal synergy and requirement for maintenance but not initiation of Hox gene expression, **Development** **128**, 1587-97.
188. **Berns**, A. (2001). Cancer. Improved mouse models, **Nature** **410**, 1043-4.
187. Meuwissen, R., Jonkers, J., and **Berns**, A. (2001). Mouse models for sporadic cancer, **Exp Cell Res.** **264**, 100-10.
186. Vooijs, M., Jonkers, J., and **Berns**, A. (2001). A highly efficient ligand-regulated Cre recombinase mouse line shows that LoxP recombination is position dependent, **EMBO Reports** **2**, 292-7.
185. Loonstra, A., Vooijs, M., Berna Beverloo, H., Al Allak, B., van Drunen, E., Kanaar, R., Berns, A. and Jonkers, J. (2001) Growth inhibition and DNA Damage Induced by Bacteriophage P1 Cre-Recombinase in mammalian cells. **Proc. Natl. Acad. Sci. USA**, **98**, 9209-14.
184. Krimpenfort, P., Quon, K. C., Mooi, W. J., Loonstra, A., and **Berns**, A. (2001). Loss of p16Ink4a confers susceptibility to metastatic melanoma in mice, **Nature** **413**, 83-6.
183. Meuwissen, R., Linn, S., van der Valk, M., Mooi, W., and **Berns**, A. (2001). Mouse model for lung tumorigenesis through Cre/Lox controlled sporadic activation of the K-Ras oncogene, **Oncogene**, **20**, 6551-8.

182. Jonkers, J., Meuwissen, R., Van der Gulden, H., Peterse, H., Van der Valk, M., and **Berns**, A. (2001) Induction of mammary tumors by somatic mutation of *Brca2* and *p53*. **Nature Genetics**, 29, 418-25.
181. Quon, K., and **Berns**, A. (2001) Haplo-insufficiency? Let me count the ways. **Genes & Development**. 15, 2917-21.
180. **Berns**, A. Gene expression in diagnosis. **Nature**. 2000 Feb 3;403(6769):491-2.
179. Marino S, Vooijs M, van Der Gulden H, Jonkers J, **Berns**, A Induction of medulloblastomas in p53-null mutant mice by somatic inactivation of Rb in the external granular layer cells of the cerebellum. **Genes & Development** 2000 Apr 15;14(8):994-1004
178. Cheng NC, van De Vrugt HJ, van Der Valk MA, Oostra AB, Krimpenfort P, de Vries Y, Joenje H, **Berns** A, Arwert F. Mice with a targeted disruption of the fanconi anemia homolog fanca. **Hum Mol Genet** 2000 Jul 22;9(12):1805-11
177. Giovannini M, Robanus-Maandag E, van der Valk M, Niwa-Kawakita M, Abramowski V, Goutebroze L, Woodruff JM, **Berns** A, Thomas G Conditional biallelic Nf2 mutation in the mouse promotes manifestations of human neurofibromatosis type 2. **Genes & Development** 2000;14(13):1617-30.
176. Berns K, Martins C, Dannenberg J-H, **Berns** A, Te Riele H, Bernards R. p27^{kip1}-independent cell cycle regulation by MYC. **Oncogene** 2000 19:4822-7.
175. Giovannini, M., Robanus Maandag, E., Niwa-Kawakita, M., Van der Valk, M., Woodruff, J., **Berns**, A., and Thomas, G. (1999) Schwann cell hyperplasia and tumors in transgenic mice expressing a naturally occurring mutant NF2 protein. **Genes & Development**. 13(8):978-86.
174. **Berns**, A., Mikkers, H., Krimpenfort, P., Scheijen, B., and Jonkers, J.. (1999) Identification and characterization of collaborating oncogenes in compound mutant mice. **Cancer Res**.;59 (7 Suppl):1773s-1777s.
173. Konietzko, U., Kauselmann, G., Scafidi, J., Staubli, U., Mikkers, H., **Berns**, A., Schweizer, M., Waltereit, R., and Kuhl, D (1999). Pim kinase expression is induced by LTP stimulation and required for the consolidation of enduring LTP. **EMBO J**. 8(12):3359-3369.
172. Quon K., and **Berns**, A. CSH Meeting on Cancer Genetics 1998. (1999) **Biochim Biophys Acta**. 1423(2):R53-61
171. and the Mutant Mouse: New Methods, New Models, New Insights, Keystone Colorado, USA, 31 January-5 February 1999. **Trends Genet** 15(5):177
170. **Berns**, A. Turning on tumors to study cancer progression **Nature Medicine** 5(9):989-90
169. Vooijs M, **Berns** A (1999) Developmental defects and tumor predisposition in Rb mutant mice. **Oncogene** 18(38):5293-303
168. Jacobs, H., Krimpenfort, P., Haks, M., Allen, J., Blom, B., , Démollière, C., Kruisbeek, A., Spits, H., and **Berns**, A. (1999) PIM1 Reconstitutes Thymus Cellularity in Interleukin 7- and Common gamma Chain-Mutant Mice and Permits Thymocyte Maturation in Rag- but Not CD3gamma-deficient Mice. **J Exp Med**. 190(8):1059-1068.
167. Jonkers, J., Weening, J.J., van der Valk, M., Bobeldijk, R.C., and **Berns**, A. (1999). Overexpression of Frat1 in transgenic mice leads to glomeruloscleroses and nephrotic syndrome, and provides direct evidence for involvement of Frat1 in lymphoma progression. **Oncogene**.;18(38):5293-303.

166. Jacobs, J., Scheijen, B., Voncken, J-W., Kieboom, K., **Berns**, A., Van Lohuizen, M. (1999). Bmi-1 collaborates with c-Myc in tumorigenesis by inhibiting c-Myc induced apoptosis via INK4a/ARF. **Genes & Development** 13, 2687-2690.
165. Jonkers, J., van Amerongen, R., van der Valk, M., Robanus Maandag, E., Molenaar, M., Destrée, O., and **Berns**, A. (1999). In vivo analysis of Frat1 deficiency suggests compensatory activity of Frat3. **Genes Mechan. of Devel.** 88: 183-194.
164. Hanson RD, Hess JL, Yu BD, Ernst P, van Lohuizen M, **Berns** A, van der Lugt NM, Shashikant CS, Ruddle FH, Seto M, Korsmeyer SJ (1999) Mammalian Trithorax and polycomb-group homologues are antagonistic regulators of homeotic development. **Proc Natl Acad Sci U S A** 96:14372-7
163. Vooijs, M. Van der Valk, M. te Riele, H., and **Berns**, A. (1998) Flp-mediated tissue-specific inactivation of the retinoblastoma tumor suppressor gene in the mouse. **Oncogene**, 17. 1-12.
162. Robanus Maandag, E., Dekker, M., van der Valk, M., Carozza M-L., Jeanny J-C., Dannenberg J-H, **Berns**, A., and H. te Riele. (1998) p107 is a suppressor of retinoblastoma development in pRb-deficient mice. **Genes & Development** 12, 1599-1609.
161. Gil-Gómez G, **Berns**, A, Brady HJM. A link between cell cycle and cell death: Bax and Bc12 modulate Cdk2 activation during thymocyte apoptosis. **EMBO J.** 17 7209-18, 1998
160. Acton, D., Jacobs, H., Domen, J., and **Berns**, A. (1997). Bcl-2 reduces lymphomagenesis in deltaV-TCRbeta transgenic mice. **Oncogene.** 14, 2497-2501.
159. Akagi, K., Sandig, V., Vooijs, M., Van der Valk, M., Giovannini, M., Strauss, M., and **Berns**, A. (1997). Cre-mediated somatic site-specific recombination in mice. **Nucleic Acids Res.** 25, 1766-1773.
158. Alkema, M.J., Jacobs, H., van Lohuizen, M., and **Berns**, A. (1997). Perturbation of B and T cell development and predisposition to lymphomagenesis in Emu Bmi1 transgenic mice require the Bmi1 RING finger. **Oncogene.** 15, 899-910.
157. Alkema, M.J., Bronk, M., Verhoeven, E., Otte, A., van't Veer, L.J., **Berns**, A., and van Lohuizen, M. (1997). Identification of Bmi1-interacting proteins as constituents of a multimeric mammalian polycomb complex. *Genes. Dev.* 11, 226-240.
156. Allen, J.D., Verhoeven, E., Domen, J., Van der Valk, M., and **Berns**, A. (1997). Pim-2 transgene induces lymphoid tumors, exhibiting potent synergy with c-myc. **Oncogene.** 15, 1133-1141.
155. Carozza, M.L., Jacobs, H., Acton, D., Verma, I., and **Berns**, A. (1997). Overexpression of the FosB2 gene in thymocytes causes aberrant development of T cells and thymic epithelial cells. **Oncogene.** 14, 1083-1091.
154. Dranoff, G., Soiffer, R., Lynch, T., Mihm, M., Jung, K., Kolesar, K., Liebster, L., Lam, P., Duda, R., Mentzer, S., Singer, S., Tanabe, K., Johnson, R., Sober, A., Bhan, A., Clift, S., Cohen, L., Parry, G., Rokovich, J., Richards, L., Drayer, J., **Berns**, A., and Mulligan, R.C. (1997). A phase I study of vaccination with autologous, irradiated melanoma cells engineered to secrete human granulocyte-macrophage colony stimulating factor. **Hum. Gene Ther.** 8, 111-123.
153. Jonkers, J., Korswagen, H.C., Acton, D., Breuer, M., and **Berns**, A. (1997). Activation of a novel proto-oncogene, Frat1, contributes to progression of mouse T-cell lymphomas. **EMBO J.** 16, 441-450.

152. Kirberg, J., **Berns**, A., and Boehmer, H. (1997). Peripheral T cell survival requires continual ligation of the T cell receptor to major histocompatibility complex-encoded molecules. **J. Exp. Med.** *186*, 1269-1275.
151. Scheijen, B., Jonkers, J., Acton, D., and **Berns**, A. (1997). Characterization of pal-1, a common proviral insertion site in murine leukemia virus-induced lymphomas of c-myc and Pim-1 transgenic mice. **J. Virol.** *71*, 9-16.
150. Schwarz, E.M., Krimpenfort, P., **Berns**, A., and Verma, I.M. (1997). Immunological defects in mice with a targeted disruption in Bcl-3. **Genes & Development.** *11*, 187-197.
149. Brady, H.J., Salomons, G.S., Bobeldijk, R.C., and **Berns**, A.J.M. (1996). T cells from baxalpha transgenic mice show accelerated apoptosis in response to stimuli but do not show restored DNA damage-induced cell death in the absence of p53. gene product in. **EMBO J.** *15*, 1221-1230.
148. Brady, H.J., Gil-Gomez, G., Kirberg, J., and **Berns**, A.J.M. (1996). Bax alpha perturbs T cell development and affects cell cycle entry of T cells. **EMBO J.** *15*, 6991-7001.
147. Jacobs, H., Ossendorp, F., De Vries, E., Ungewiss, K., von Boehmer, H., Borst, J., and **Berns**, A. (1996). Oncogenic potential of a pre-T cell receptor lacking the TCR beta variable domain. **Oncogene.** *12*, 2089-2099.
146. Jacobs, H., Iacomini, J., van de Ven, M., Tonegawa, S., and **Berns**, A. (1996). Domains of the TCR beta-chain required for early thymocyte development. **J. Exp. Med.** *184*, 1833-1843.
145. Jansen, G., Groenen, P.J., Bachner, D., Jap, P.H., Coerwinkel, M., Oerlemans, F., van den Broek, W., Gohlsch, B., Pette, D., Plomp, J.J., Molenaar, P.C., Nederhoff, M.G., van Echteld, C.J., Dekker, M., **Berns**, A., Hameister, H., and Wieringa, B. (1996). Abnormal myotonic dystrophy protein kinase levels produce only mild myopathy in mice. **Nature Genetics** *13*, 316-324.
144. Jonkers, J. and **Berns**, A. (1996). Retroviral insertional mutagenesis as a strategy to identify cancer genes. [Review]. **Biochim. Biophys. Acta.** *1287*, 29-57.
143. Smit, J.J., Baas, F., Hoogendijk, J.E., Jansen, G.H., van der Valk, M.A., Schinkel, A.H., **Berns**, A.J.M., Acton, D., Nooter, K., Burger, H., Smith, S.J., and Borst, P. (1996). Peripheral neuropathy in mice transgenic for a human MDR3 P-glycoprotein mini-gene. **J. Neurosci.** *16*, 6386-6393.
142. Tourne, S., van Santen, H.M., van Roon, M., **Berns**, A., Benoist, C., Mathis, D., and Ploegh, H. (1996). Biosynthesis of major histocompatibility complex molecules and generation of T cells in Ii TAP1 double-mutant mice. **Proc. Natl. Acad. Sci. U. S. A.** *93*, 1464-1469.
141. van der Lugt, N.M., Alkema, M., **Berns**, A., and Deschamps, J. (1996). The Polycomb-group homolog Bmi-1 is a regulator of murine Hox gene expression. **Mech. Dev.** *58*, 153-164.
140. Allen, J., and **Berns**, A. (1996) Complementation tagging of cooperating oncogenes in knockout mice. **Semin. in Cancer Biology** *7*, 299-306.
139. Alkema, M.J., van der Lugt, N.M., Bobeldijk, R.C., **Berns**, A., and van Lohuizen, M. (1995). Transformation of axial skeleton due to overexpression of bmi-1 in transgenic mice. **Nature** *374*, 724-727.
138. **Berns**, A.J., Clift, S., Cohen, L.K., Donehower, R.C., Dranoff, G., Hauda, K.M., Jaffee, E.M., Lazenby, A.J., Levitsky, H.I., and Marshall, F.F. (1995). Phase I study

of non-replicating autologous tumor cell injections using cells prepared with or without GM-CSF gene transduction in patients with metastatic renal cell carcinoma. **Hum. Gene Ther.** 6, 347-368.

137. De Wind, N., Dekker, M., **Berns**, A., Radman, M., and te Riele, H. (1995). Inactivation of the mouse Msh2 gene results in mismatch repair deficiency, methylation tolerance, hyperrecombination, and predisposition to cancer. **Cell** 82, 321-330.
136. Dwarki, V.J., Belloni, P., Nijjar, T., Smith, J., Couto, L., Rabier, M., Clift, S., **Berns**, A., and Cohen, L.K. (1995). Gene therapy for hemophilia A: production of therapeutic levels of human factor VIII in vivo in mice. **Proc. Natl. Acad. Sci. USA** 92, 1023-1027.
135. Holtmaat, A.J., Dijkhuizen, P.A., Oestreicher, A.B., Romijn, H.J., van der Lugt, N.M., **Berns**, A., Margolis, F.L., Gispén, W.H., and Verhaagen, J. (1995). Directed expression of the growth-associated protein B-50/GAP-43 to olfactory neurons in transgenic mice results in changes in axon morphology and extraglomerular fiber growth. **J. Neurosci.** 15, 7953-7965.
134. Lie-Venema, H., Labruyere, W.T., van Roon, M.A., de Boer, P.A., Moorman, A.F., **Berns**, A.J.M, and Lamers, W.H. (1995). The spatio-temporal control of the expression of glutamine synthetase in the liver is mediated by its 5'-enhancer. **J. Biol. Chem.** 270, 28251-28256.
133. van Santen, H.M., Woolsey, A., Rickardt, P.G., Van Kaer, L., Baas, E.J., **Berns**, A., Tonegawa, S., and Ploegh, H.L. (1995). Increase in positive selection of CD8+ T cells in TAP1-mutant mice by human beta 2-microglobulin transgene. **J. Exp. Med.** 181, 787-792.
132. Migchielsen, A.A., Breuer, M.L., van Roon, M.A., te Riele, H., Zurcher, C., Ossendorp, F., Toutain, S., Hershfield, M.S., **Berns**, A., and Valerio, D. (1995). Adenosine-deaminase-deficient mice die perinatally and exhibit liver-cell degeneration, atelectasis and small intestinal cell death. **Nature Genetics** 10, 279-287.
131. van der Lugt, N.M., Domen, J., Verhoeven, E., Linders, K., van der Gulden, H., Allen, J., and **Berns**, A. (1995). Proviral tagging in E mu-myc transgenic mice lacking the Pim-1 proto- oncogene leads to compensatory activation of Pim-2. **EMBO J.** 14, 2536-2544.
130. **Berns**, A., van der Lugt, N., Alkema, M., van Lohuizen, M., Domen, J., Acton, D., Allen, J., Laird, P.W., and Jonkers, J. (1994). Mouse model systems to study multistep tumorigenesis. **Cold Spring Harb. Symp. Quant. Biol.** 59, 435-447.
129. **Berns**, A. (1994). Cancer genetics. Is p53 the only real tumor suppressor gene? **Curr. Biol.** 4584, 137-139.
128. Bain, G., Robanus Maandag, E.C., Izon, D.J., Amsen, D., Kruisbeek, A.M., Weintraub, B.C., Krop, I., Schlissel, M.S., Feeney, A.J., van Roon, M., van der Valk, M., te Riele, H.P.J., **Berns**, A. and Murre, C. E2A Proteins required for proper B cell development and initiation of immunoglobulin gene rearrangements. **Cell** 79, 885-892 (1994).
127. De Wind, N., Peeters, B.P., Zuderveld, A., Gielkens, A.L., **Berns**, A.J., and Kimman, T.G. (1994). Mutagenesis and characterization of a 41-kilobase-pair region of the pseudorabies virus genome: transcription map, search for virulence genes, and comparison with homologs of herpes simplex virus type 1. **Virology.** 200, 784-790.
126. Habets, G.G.M., Scholtes, E.H.M., Zuydgeest, D., van der Kammen, R.A., Stam, J.C., **Berns**, A., and Collard, J.G. (1994). Identification of an invasion-inducing

- gene, *Tiam-1*, that encodes a protein with homology to GDP-GTP exchangers for rho-like proteins. **Cell** 77, 537-549.
125. Jacobs, H., Vandeputte, D., Tolkamp, L., De Vries, E., Borst, J., and **Berns**, A. (1994). CD3 components at the surface of pro-T cells can mediate pre-T cell development in vivo. **Eur. J. Immunol.** 24, 934-939.
 124. Klein, J.C., Bleeker, M.J., Roelen, H.C.P.F., Rafferty, J.A., Margison, G.P., Brugghe, H.F., Vandenberg, H., Vandermaarel, G.A., Vanboom, J.H., Kriek, E., and **Berns**, A.J.M. (1994). Role of nucleotide excision repair in processing of o4- alkylthymines in human cells. **J. Biol. Chem.** 269, 25521-25528.
 123. Robanus Maandag, E.C., Van der Valk, M., Vlaar, M., Feltkamp, C., O'Brien, J., van Roon, M., van der Lugt, N., **Berns**, A., and te Riele, H. (1994). Developmental rescue of an embryonic-lethal mutation in the retinoblastoma gene in chimeric mice. **EMBO J.** 13, 4260-4268.
 122. Renauld, J.C., van der Lugt, N., Vink, A., van Roon, M., Godfraind, C., Warnier, G., Merz, H., Feller, A., **Berns**, A., and Van Snick, J. (1994). Thymic lymphomas in interleukin 9 transgenic mice. **Oncogene** 9, 1327-1332.
 121. van der Lugt, N.M.T., Domen, J., Linders, K., van Roon, M., Robanus Maandag, E., te Riele, H., Van der Valk, M., Deschamps, J., Sofroniew, M., van Lohuizen, M., and **Berns**, A. (1994). Posterior transformation, neurological abnormalities, and severe hematopoietic defects in mice with a targeted deletion of the *bmi-1* proto-oncogene. **Genes & Development** 8, 757-769.
 120. Alkema, M.J., Wiegant, J., Raap, A.K., **Berns**, A., and Vanlohuizen, M. (1993). Characterization and chromosomal localization of the human Proto-Oncogene BMI-1. **Hum. Mol. Genet.** 2, 1597-1603.
 119. De Wind, N., **Berns**, A., Gielkens, A., and Kimman, T. (1993). Ribonucleotide reductase-deficient mutants of pseudorabies virus are avirulent for pigs and induce partial protective immunity. **J. gen. Virol.** 74, 351-359.
 118. Domen, J., Vanderlugt, N.M.T., Laird, P.W., Saris, C.J.M., and **Berns**, A. (1993). Analysis of pim-1 function in mutant mice. **Leukemia** 7, S108-S112.
 117. Domen, J., Vanderlugt, N.M.T., Acton, D., Laird, P.W., Linders, K., and **Berns**, A. (1993). Pim-1 levels determine the size of early B-Lymphoid compartments in bone marrow. **J. Exp. Med.** 178, 1665-1673.
 116. Domen, J., van der Lugt, N.M., Laird, P.W., Saris, C.J., Clarke, A.R., Hooper, M.L., and **Berns**, A. (1993). Impaired interleukin-3 response in Pim-1-deficient bone marrow-derived mast cells. **Blood** 82, 1445-1452.
 115. Laird, P.W., Vanderlugt, N.M.T., Clarke, A., Domen, J., Linders, K., Mcwhir, J., **Berns**, A., and Hooper, M. (1993). In vivo analysis of pim-1 deficiency. **Nucleic Acids Res.** 21, 4750-4755.
 114. Smit, J.J.M., Schinkel, A.H., Elferink, R.P.J.O., Groen, A.K., Wagenaar, E., Vandeemter, L., Mol, C.A.A.M., Ottenhoff, R., Vanderlugt, N.M.T., Vanroon, M.A., Vandervalk, M.A., Offerhaus, G.J.A., **Berns**, A.J.M., and Borst, P. (1993). Homozygous disruption of the murine *mdr2* P-Glycoprotein gene leads to a complete absence of phospholipid from bile and to liver disease. **Cell** 75, 451-462.
 113. Acton, D., Domen, J., Jacobs, H., Vlaar, M., Korsmeyer, S., and **Berns**, A. (1992). Collaboration of pim-1 and bcl-2 in lymphomagenesis. **Curr. Top. Microbiol. Immunol.** 182, 293-298.

112. Clarke, A.R., Maandag, E.R., van Roon, M., van der Lugt, N.M., Van der Valk, M., Hooper, M.L., **Berns**, A., and te Riele, H. (1992). Requirement for a functional Rb-1 gene in murine development. **Nature** 359, 328-330.
111. De Wind, N., Domen, J., and **Berns**, A. (1992). Herpesviruses encode an unusual protein-serine/threonine kinase which is nonessential for growth in cultured cells. **J. Virol.** 66, 5200-5209.
110. De Wind, N., Wagenaar, F., Pol, J., Kimman, T., and **Berns**, A. (1992). The pseudorabies virus homology of the herpes simplex virus UL21 gene product is a capsid protein which is involved in capsid maturation. **J. Virol.** 66, 7096-7103.
109. Kimman, T.G., De Wind, N., Oei-Lie, N., Pol, J.M., **Berns**, A.J., and Gielkens, A.L. (1992). Contribution of single genes within the unique short region of Aujeszky's disease virus (suid herpesvirus type 1) to virulence, pathogenesis and immunogenicity. **J. gen. Virol.** 73, 243-251.
108. Kimman, T.G., Pol, J.M., De Wind, N., Oei-Lie, N., **Berns**, A.J., and Gielkens, A.L. (1992). Role of different genes in the virulence and pathogenesis of Aujeszky's disease virus. *Vet. Microbiol.* 33, 45-52.
107. Klein, J.C., Bleeker, M.J., Saris, C.P., Roelen, H.C.P.F., Brugghe, H.F., van der Elst, H., van der Marel, G.A., van Boom, J.H., Westra, J.G., Kriek, E., and **Berns**, A.J.M. (1992). Repair and replication of plasmids with site-specific 8-oxodG and 8-AAFdG residues in normal and repair-deficient human cells. **Nucl. Acids Res.** 20, 4437-4443.
106. Ossendorp, F., Jacobs, H., van der Horst, G., De Vries, E., **Berns**, A., and Borst, J. (1992). T cell receptor-alpha beta lacking the beta-chain V domain can be expressed at the cell surface but prohibits T cell maturation. **J. Immunol.** 148, 3714-3722.
105. te Riele, H., Maandag, E.R., and **Berns**, A. (1992). Highly efficient gene targeting in embryonic stem cells through homologous recombination with isogenic DNA constructs. **Proc. Natl. Acad. Sci. U. S. A.** 89, 5128-5132.
104. Verbeek, S., M. van Lohuizen, M. van der Valk, J. Domen, G. Kraal, A. **Berns**. Mice bearing the E μ -myc and E μ -pim-1 transgenes develop pre-B-cell leukemia prenatally. **Mol. Cell. Biol.** 11: 1176-1179, 1991.
103. Breuer, M., E. Wientjens, S. Verbeek, R. Slebos, A. **Berns**. Carcinogen-induced lymphomagenesis in pim-1 transgenic mice: dose dependence and involvement of myc and ras. **Cancer Res.** 51: 958-963, 1991.
102. Saris, C.J.M., J. Domen, A. **Berns**. The pim-1 oncogene encodes two related protein-serine/threonine kinases by alternative initiation at AUG and CUG. **EMBO J.** 10: 655-664, 1991.
101. **Berns**, A. Separating the wheat from the chaff. **Current Biology** 1: 28-29, 1991.
100. van Lohuizen, M., S. Verbeek, B. Scheijen, E. Wientjens, H. van der Gulden, A. **Berns**. Identification of cooperating oncogenes in E μ -myc transgenic mice by provirus tagging. **Cell** 65: 737-752, 1991.
99. **Berns**, A., M. van Lohuizen, S. Verbeek, J. Domen, C. Saris. Transgenic mice as a model system to study synergism between oncogenes. In: CSH "Origins of Human Cancer, a Comprehensive Review. Eds. J. Brugge, T. Curran, E. Harlow, F. McCormick, pp. 791-801, 1991.
98. van der Lugt, N., E. Robanus Maandag, H. te Riele, P.W. Laird, A. **Berns**. pgk-hprt as a selectable marker for targeting of genes in mouse embryonic stem cells: disruption of the T-cell receptor β -chain-encoding gene. **Gene** 105: 263-267, 1991.

97. van Zijl, M., G. Wensvoort, E. de Kluiver, M. Hulst, H. van der Gulden, A. Gielkens, A. **Berns**, R. Moormann. Live attenuated Pseudorabies virus expressing envelope glycoprotein E1 of hog cholera virus protects swine against both Pseudorabies and hog cholera. **J. Virol.** 65: 2761-2765, 1991.
96. Möröy, T., S. Verbeek, A. Ma, P. Achacoso, A. **Berns**, F. Alt. Eμ N- and Eμ L-myc cooperate with Eμ pim-1 to generate lymphoid tumors at high frequency in double transgenic mice. **Oncogene** 6: 1941-1948, 1991.
95. **Berns**, A. Tumorigenesis in transgenic mice: Identification and characterization of synergizing oncogenes. **J. Cell. Biochem.** 47: 130-135, 1991.
94. Laird, P.W., A. Zijderveld, K. Linders, M. Rudnicki, R. Jaenisch, A. **Berns**. Simplified mammalian DNA isolation procedure. **Nucl. Acids Res.** 19: 4294, 1991.
93. Van Lohuizen, M., M. Frasch, E. Wientjens, A. **Berns**. Sequence similarity between the mammalian bmi-1 proto-oncogene and the Drosophila regulatory genes Psc and Su(z)2. **Nature** 353: 353-355, 1991.
92. **Berns**, A. The search for complementing oncogenes. In: Hereditary Tumors. Eds. M.L. Brandi and R. White. Serono Symposia Publications from Raven Press. Vol. 83 pp. 101-107, 1991.
91. Bonneville, M., I. Ishida, S. Itohara, S. Verbeek, A. **Berns**, O. Kanagawa, W. Haas, S. Tonegawa. Self-tolerance to transgenic gd T cells by intrathymic inactivation. **Nature** 344: 163-165, 1990.
90. Bonneville, M., S. Itohara, E.G. Krecko, P. Mombaerts, I. Ishida, M. Katsuki, A. **Berns**, A.G. Farr, C.A. Janeway, Jr., Tonegawa, S. Transgenic mice demonstrate that epithelial homing of gd T cells is determined by cell lineages independent of T cell receptor specificity. **J. Exp. Med.** 171: 1015-1026, 1990.
89. Ishida, I., S. Verbeek, M. Bonneville, S. Itohara, A. **Berns**, S. Tonegawa. T-cell receptor α gd and gd transgenic mice suggest a role of a g gene silencer in the generation of $\alpha\beta$ T cells. **Proc. Natl. Acad. Sci. USA** 87: 3067-3071, 1990.
88. Wu, H., J.F. Bateman, A. Schnieke, A. Sharpe, D. Barker, T. Mascara, D. Eyre, R. Bruns, P. Krimpenfort, A. **Berns**, R. Jaenisch. Human-mouse interspecies collagen I heterotrimer is functional during embryonic development of Mov13 mutant mouse embryos. **Mol. Cell. Biol.** 10: 1452-1460, 1990.
87. van Zijl, M., H. van der Gulden, N. de Wind, A. Gielkens, A. **Berns**. Identification of two of two genes in the unique short region of pseudorabies virus; comparison with herpes simplex virus and varicella-zoster virus. **J. Gen. Virol.** 71: 1747-1755, 1990.
86. de Wind, N., A. Zijderveld, K. Glazenburg, A. Gielkens, A. **Berns**. Linker insertion mutagenesis of herpesviruses: inactivation of single genes within the Us region of pseudorabies virus. **J. Virol.** 64: 4691-4696, 1990.
85. Klein, J.C., M.J. Bleeker, J.T. Lutgerink, W.J. van Dijk, H.F. Brugghe, H. van den Elst, G.A. van der Marel, J.H. van Boom, J.G. Westra, A.J.M. **Berns**, E. Kriek. Use of shuttle vectors to study the molecular processing of defined carcinogen-induced DNA damage: mutagenicity of single O⁴-ethylthymine adducts in HeLa cells. **Nuc. Acids Res.** 18: 4131-4137, 1990.
84. te Riele, H., E. Robanus Maandag, A. Clarke, M. Hooper, A. **Berns**. Consecutive inactivation of both alleles of the *pim-1* proto-oncogene by homologous recombination in embryonic stem cells. **Nature** 348: 649-651, 1990.

83. Jacobs, H., H. Von Boehmer, C.J.M. Melief, A. **Berns**. Mutations in the major histocompatibility complex class I antigen-presenting groove affect both negative and positive selection of T cells. **Eur. J. Immunol.** 20: 2333-2337, 1990.
82. van Lohuizen, M., A. **Berns**. Tumorigenesis by slow-transforming retroviruses - an update. **BBA Reviews in Cancer** 1032: 213-235, 1990.
81. **Berns**, A., P. Krimpenfort. Transgenic mice as an instrument to study genetic defects. In: Gorrod/Albano/Papa, eds. *Molecular Aspects of Human Disease*. Chichester, England: Ellis Horwood Limited. Vol.1, 1989: 129-133.
80. **Berns**, A., M. Breuer, S. Verbeek, M. van Lohuizen. Synergism between oncogenes in T-cell lymphomagenesis. In: H. Lothar, R. Dernick, W. Ostertag (eds.), *NATO Advanced Study Institute Series, subserie Cell Biology*, Vol. 34, pp. 343-353. Springer Verlag, Berlin, 1989.
79. **Berns**, A., M. Breuer, S. Verbeek, M. van Lohuizen. Transgenic mice as a means to study synergism between oncogenes. **Int. J. Cancer**, Suppl. 4: 22-25, 1989.
78. van Lohuizen, M., M. Breuer, A. **Berns**. N-myc is frequently activated by proviral insertion in MuLV-induced T cell lymphomas. **EMBO J.** 8: 133-136, 1989.
77. van Lohuizen, M., S. Verbeek, P. Krimpenfort, J. Domen, C. Saris, T. Radaszkiewicz, A. **Berns**. Predisposition to lymphomagenesis in pim-1 transgenic mice: cooperation with c-myc and N-myc in murine leukemia virus-induced tumors. **Cell** 56: 673-682, 1989.
76. Breuer, M.L., H.T. Cuypers, A. **Berns**. Evidence for the involvement of pim-2, a new common proviral insertion site, in progression of lymphomas. **EMBO J.** 8: 743-747, 1989.
75. Breuer, M., R. Slebos, S. Verbeek, M. van Lohuizen, E. Wientjens, A. **Berns**. Very high frequency of lymphoma induction by a chemical carcinogen in pim-1 transgenic mice. **Nature** 340: 61-63, 1989.
74. Pieper, F.R., G. Schaart, P.J. Krimpenfort, J.B. Henderik, H.J. Moshage, A. van de Kemp, F.C. Raemakers, A. **Berns**, H. Bloemendal. Transgenic expression of the muscle-specific intermediate filament protein desmin in nonmuscle cells. **J. Cell. Biol.** 108: 1009-1024, 1989.
73. Krimpenfort, P., Y. Uematsu, Z. Dembic, M. Steinmetz, A. **Berns**. The transcription of the T cell receptor β -chain gene is controlled by a downstream regulatory element. In: A.L. Beaudet, R. Mulligan, I.M. Verma (eds.) *Gene Transfer and Gene Therapy*. UCLA Symposia on Molecular and Cellular Biology, New Series, Volume 87, pp.117-127 (Alan R. Liss, Inc. New York, 1989).
72. Krimpenfort, P., F. Ossendorp, J. Borst, C. Melief, A. **Berns**. T-cell depletion in transgenic mice carrying a mutant for TCR β . **Nature** 341: 742-746, 1989.
71. Bonneville, M., I. Ishida, P. Mombaerts, M. Katsuki, S. Verbeek, A. **Berns**, S. Tonegawa. Blockage of $\alpha\beta$ T-cell development by TCR $\gamma\delta$ transgenes. **Nature** 342: 931-934, 1989.
70. Tonegawa, S., A. **Berns**, M. Bonneville, A. Farr, I. Ishida, K. Ito, S. Itohara, C.A. Janeway, Jr., O. Kanagawa, M. Katsuki, R. Kubo, J. Lafaille, P. Mombaerts, D. Murphy, N. Nakanishi, Y. Takagaki, L. Van Kaer, S. Verbeek. Diversity, development, ligands, and probable functions of $\gamma\delta$ T cells. In: **Cold Spring Harbor Symposia on Quantitative Biology**, Volume LIV, pp. 31-44 (Cold Spring Harbor Laboratory Press, 1989).

69. **Berns**, A. Identification of synergizing oncogenes in T- and B-cell lymphomagenesis. In: Mechanisms of B cell neoplasia 1989 (Roche, Basel, Switzerland): 243-250, 1989.
68. **Berns**, A., G. Selten, H.T. Cuyppers, J. Domen. The pim-1 oncogene. In: E.P. Reddy, A.M. Skalka, T. Curran, eds. The Oncogene Handbook. Amsterdam, Elsevier, 1988: 121-134.
67. **Berns**, A. The generation of transgenic animals and their use in fundamental research. In: A.C. Beynen, H.A. Solleveld, eds. New Developments in Biosciences: Their Implications for Laboratory Animal Science. Proceedings of the Third Symposium of the FELASA. Dordrecht, M.Nijhoff, 1988: 175-183.
66. **Berns**, A. Provirus tagging as an instrument to identify oncogenes and to establish synergism between oncogenes. Review in: Archives of Virology 102: 1-18, 1988.
65. **Berns** A. De muis als proefmodel voor oncogenen. In: De smalle grens tussen gezond en kwaadaardig: over nieuwe ontwikkelingen in het kankeronderzoek. Borst P, ed. Rapport No A88/4 Gezondheidsraad, 1988; 17-23.
64. Blüthmann, H., P. Kisielow, Y. Uematsu, M. Malissen, P. Krimpenfort, A. **Berns**, H. von Boehmer, M. Steinmetz. T-cell-specific deletion of T-cell receptor transgenes allows functional rearrangements of endogenous α - and β -genes. **Nature** 334: 156-159, 1988.
63. Krimpenfort, P., R. de Jong, Y. Uematsu, Z. Dembic, S. Ryser, H. von Boehmer, M. Steinmetz, A. **Berns**. Transcription of T cell receptor β -chain genes is controlled by a downstream regulatory element. **EMBO J.** 7: 745-750, 1988.
62. Krimpenfort, P.J., G. Schaart, F.R. Pieper, F.C. Raemakers, H.T. Cuyppers, R.M. van den Heuvel, W.T. Vree Egberts, G.J. van Eys, A. **Berns**, H. Bloemendal. Tissue-specific expression of a vimentin-desmin hybrid gene in transgenic mice. **EMBO J.** 7: 941-947, 1988.
61. Nusse, R., A. **Berns**. Cellular oncogene activation by insertion of retroviral DNA; Genes identified by provirus tagging. In: G. Klein, ed. Cellular Oncogene Activation. New York, Marcel Dekker, 1988: 95-119.
60. Steinmetz, M., Z. Dembic, S. Ryser, P. Krimpenfort, A. **Berns**, Y. Uematsu, H. von Boehmer. Transfer of T-cell receptor genes into cloned T-cells and fertilized mouse eggs. In: M.M. Davis, J. Kappler, eds. The T-cell receptor. New York: Alan R. Liss Inc. UCLA 73: 199-207, 1988.
59. Uematsu, Y., S. Ryser, Z. Dembic, P. Borgulya, P. Krimpenfort, A. **Berns**, H. von Boehmer, M. Steinmetz. In transgenic mice the introduced functional T cell receptor β gene prevents expression of endogenous β genes. **Cell** 52: 831-841, 1988.
58. Van Zijl, M., W. Quint, J. Briaire, T. de Rover, A. Gielkens, A. **Berns**. Regeneration of herpesviruses from molecularly cloned subgenomic fragments. **J. Vir.** 62: 2191-2195, 1988.
57. Domen, J., M. von Lindern, A. Hermans, M. Breuer, G. Grosveld, A. **Berns**. Comparison of the human and mouse pim-1 cDNA's: nucleotide sequence and immunological identification of the 'in vitro' synthesized pim-1 protein. **Oncogene Research** 1: 103-112, 1987.
56. Krimpenfort, P., and A. **Berns**. Gene transfer into mammalian embryos. **Human Reproduction** 2: 333-339, 1987.
55. Krimpenfort, P., G. Rudenko, F. Hochstenbach, D. Guessow, A. **Berns**, H. Ploegh. Crosses of two independently derived transgenic mice demonstrate functional

- complementation of the genes encoding heavy (HLA-B27) and light (β 2-microglobulin) chains of HLA class I antigens. **EMBO J** 6: 1673-1676, 1987.
54. Quint, W., A. Gielkens, J. van Oirschot, A. **Berns** and H.T. Cuypers. Construction and characterization of deletion mutants of Pseudorabies virus: A new generation of 'live' vaccines. **J. Gen. Vir.** 68: 523-534, 1987.
 53. Kievits, F., P. Ivanyi, P. Krimpenfort, A. **Berns**, and H.L. Ploegh. HLA-restricted recognition of viral antigens in HLA transgenic mice. **Nature** 329: 447-449, 1987.
 52. **Berns**, A., H.Th. Cuypers, G. Selten and J. Domen. Pim-1 activation in T-cell lymphomas. In: N.O. Kjeldgaard, J. Forchhammer, eds. Viral Carcinogenesis, Alfred Benzon Symposium 24. Munksgaard, Copenhagen: 211-224, 1987.
 51. Hilkens, J., H.Th. Cuypers, G. Selten, V. Kroezen, J. Hilgers and A. **Berns**. Genetic mapping of Pim-1 putative oncogene to mouse chromosome 17. **Somatic Cell and Molecular Genetics** 12: 81-88, 1986.
 50. Cuypers, H.T., G. Selten, A. **Berns** and A.H.M. Geurts van Kessel. Assignment of the human homologue of Pim-1, a mouse gene implicated in leukemogenesis, to the pter-q12 region of chromosome 6. **Hum. Genet.** 72: 262-265, 1986.
 49. Pals, S.T., M. Zijlstra, Th. Radaszkiewicz, W. Quint, H.Th. Cuypers, H.J. Schoenmakers, C.J.M. Melief, A. **Berns** and E. Gleichmann. Immunological induction of malignant lymphoma: Graft-vs-host reaction-induced B cell lymphomas contain integrations of predominantly ecotropic murine leukemia proviruses. **J. Immunol.** 136: 331-339, 1986.
 48. Selten, G., H.Th. Cuypers, W. Boelens, E. Robanus-Maandag, J. Verbeek, J. Domen, Ch. van Beveren and A. **Berns**. The primary structure of the putative oncogene pim-1 shows extensive homology with protein kinases. **Cell** 46: 603-611, 1986.
 47. Cuypers, H.Th.M., G.C. Selten, M. Zijlstra, R.E. de Goede, C.J. Melief and A.J. **Berns**. Tumor progression in murine leukemia virus-induced T-cell lymphomas: Monitoring clonal selections with viral and cellular probes. **J. Vir.** 60: 230-241, 1986.
 46. Gielkens, A.L.J., J.T. van Oirschot and A.J.M. **Berns**. Genome differences among field isolates and vaccine strains of pseudorabies virus. **J. Gen. Virol.** 66: 69-82, 1985.
 45. Selten, G., H.Th. Cuypers and A. **Berns**. Proviral activation of the putative oncogene Pim-1 in MuLV induced T-cell lymphomas. **EMBO J.** 4: 1793-1798, 1985.
 44. **Berns**, A., A. van der Ouweland, W. Quint, J. van Oirschot and A. Gielkens. Presence of markers for virulence in the unique short region or repeat region or both of pseudorabies hybrid viruses. **J. Virol.** 53: 89-93, 1985.
 43. **Berns**, A. Onderzoek van lymfoom bij muis toont aan: bepaalde integraties van provirus in DNA van gastheer leiden tot kanker. Tijdschrift Kanker Vol.9 nr. 3: 27-28, 1985.
 42. Krimpenfort, P. and A. **Berns**. Inbrengen van kankergenen in muis leert hoe deze genen werken. Tijdschrift Kanker Vol.9 nr. 4: 27-28, 1985.
 41. Quint, W., W. Boelens, P. van Wezenbeek, E. Robanus Maandag and A. **Berns**. Generation of AKR mink cell focus-forming virus: Nucleotide sequence of the 3' end of a somatically acquired AKR-MCF. **Virology** 136: 425-434, 1984.

40. Selten, G., H.Th. Cuypers, M. Zijlstra, C. Melief and A. **Berns**. Involvement of c-myc in MuLV-induced T cell lymphomas in mice: Frequency and mechanisms of activation. **EMBO J.** 3: 3215-3222, 1984.
39. Quint, W., W. Boelens, P. van Wezenbeek, Th. Cuypers, E. Robanus Maandag, G. Selten and A. **Berns**. Generation of AKR mink cell focus-forming viruses: A conserved single-copy xenotrope-like provirus provides recombinant long terminal repeat sequences. **J. Virol** 50: 432-438, 1984.
38. Cuypers, H.Th., G. Selten, W. Quint, M. Zijlstra, E. Robanus Maandag, W. Boelens, P. van Wezenbeek, C. Melief and A. **Berns**. Murine leukemia virus-induced T-cell lymphomagenesis: Integration of proviruses in a distinct chromosomal region. **Cell** 37: 141-150, 1984.
37. **Berns**, A., E. Robanus Maandag, H. van der Putten and W. Quint. The role of the long terminal repeat of retroviruses in integration and expression. In: Biological consequences of DNA structure and rearrangements. The Fifth John Innes Symposium. K. F. Chater, C.A. Cullis, D.A. Hopwood, A.W.B. Johnston and H.W. Woulhouse (eds.). Croom Helm, London, 1983, pp. 93-106.
36. Gielkens, A.L.J. and A. **Berns**. Differentiation of Aujeszky's disease virus strains by restriction endonuclease analysis of the viral DNAs. In: Aujeszky's disease. G. Wittmann and S.A. Hall (eds.) Current topics in veterinary medicine and animal science. Vol. 17. Martinus Nijhoff, The Hague, 1982, pp. 3-13.
35. Van der Putten, H., W. Quint, I.M. Verma and A. **Berns**. Moloney murine leukemia virus-induced tumors: Recombinant proviruses in active chromatin regions. **Nucl. Acids Res.** 10: 577-592, 1982.
34. Mariman, E.C.M., Ch.A.G. van Eekelen, R.J. Reinders, A.J.M. **Berns** and W.J. van Venrooij. Adenoviral heterogeneous nuclear RNA is associated with the host nuclear matrix during splicing. **J. Mol. Biol.** 154: 103-119, 1982.
33. Quint, W., H. van der Putten, F. Janssen and A. **Berns**. Mobility of endogenous ecotropic murine leukemia viral genomes within mouse chromosomal DNA and integration of a mink cell focus-forming virus-type recombinant provirus in the germ line. **J. Virol.** 41: 901-908, 1982.
32. Van der Hoorn, F.A., E. Hulsebos, A.J.M. **Berns** and H.P.J. Bloemers. Molecularly cloned c-mos(rat) is biologically active. **EMBO J.** 1: 1313-1317, 1982.
31. Van Beveren, Ch., J.A. Galleshaw, V. Jonas, A.J.M. **Berns**, R.F. Doolittle, D.J. Donoghue and I.M. Verma. Nucleotide sequence and formation of the transforming gene of a mouse sarcoma virus. **Nature** 289: 258-262, 1981.
30. Van der Putten, H., W. Quint, J. van Raaij, E. Robanus Maandag, I.M. Verma and A. **Berns**. M-MuLV-induced leukemogenesis: Integration and structure of recombinant proviruses in tumors. **Cell** 24: 729-739, 1981.
29. Quint, W., W. Quax, H. van der Putten and A. **Berns**. Characterization of AKR-murine leukemia virus sequences in AKR mouse substrains and structure of integrated recombinant genomes in tumor tissues. **J. Virol.** 39: 1-10, 1981.
28. Jones, M., R.A. Bosselman, F.A. van der Hoorn, A.J.M. **Berns**, H. Fan and I.M. Verma. Identification and molecular cloning of Moloney mouse sarcoma virus-specific sequences from uninfected mouse cells. **Proc. Natl. Acad. Sci. USA** 77: 2651-2655, 1980.
27. **Berns**, A.J.M., M.H.T. Lai, R.A. Bosselman, M.A. McKennett, L.T. Bacheler, H. Fan, E.C. Robanus Maandag, H. van der Putten and I.M. Verma. Molecular cloning of

- unintegrated and a portion of integrated Moloney murine leukemia viral DNA in bacteriophage lambda. **J. Virol.** 36: 254-263, 1980.
26. Verma, I.M., M.-H.T. Lai, R.A. Bosselman, M.A. McKennett, H. Fan and A. **Berns**. Molecular cloning of unintegrated Moloney mouse sarcoma viral DNA in bacteriophage λ . **Proc. Natl. Acad. Sci. USA** 77: 1773-1777, 1980.
 25. Van Beveren, Ch., J.G. Goddard, A. **Berns** and I.M. Verma. Structure of Moloney murine leukemia viral DNA: Nucleotide sequence of the 5' long terminal repeat and adjacent cellular sequences. **Proc. Natl. Acad. Sci. USA** 77: 3307-3311, 1980.
 24. Van der Putten, H., E. Terwindt, A.J.M. **Berns** and R. Jaenisch. The integration sites of endogenous and exogenous Moloney murine leukemia virus. **Cell** 18: 109-116, 1979.
 23. Colombatti, A., A. Dux, A. **Berns**, P. Demant and J. Hilgers. H-2 dependent regulation of high ecotropic MuLV expression. **J. Natl. Cancer Inst.** 63, 869-873, 1979.
 22. Jaenisch, R. and A.J.M. **Berns**. Tumor virus expression during mammalian embryogenesis. In: *Concepts in Mammalian Embryogenesis*. M.I. Sherman (ed.). MIT Press, Cambridge, Mass. 1977, pp. 267-314.
 21. Jaenisch, R., A. **Berns**, J. Dausman and V. Cox. Germ line integration and leukemogenesis of exogenous and endogenous murine leukemia viruses. ICN-UCLA conference on Animal Virology. D. Baltimore, A.S. Huang and T. Fos (eds.). Acad. Press, New York, 1976, pp. 283-310.
 20. **Berns**, A.J.M. and H. Bloemendal. Cytoplasmic Messenger RNA. In: *Handbook of Genetics Vol.5*, R.C. King (ed.). Plenum Press, New York, 1976, pp. 267-303.
 19. **Berns**, A.J.M. and R. Jaenisch. Increase of AKR-specific sequences in tumor tissues of leukemic AKR mice. **Proc. Natl. Acad. Sci. USA** 73: 2448-2452, 1976.
 18. **Berns**, A., M. Salden, D. Bogdanovsky, M. Raymondjean, G. Schapira and H. Bloemendal. Non-specific stimulation of cell-free protein synthesis by a dialyzable factor isolated from reticulocyte initiation factors ("iRNA"). **Proc. Natl. Acad. Sci. USA** 72: 714-718, 1975.
 17. Salden, M., T. Bisseling, A. **Berns** and H. Bloemendal. Requirement of a dialyzable component from crude initiation factors for the translation of viral and eukaryotic messenger RNA. **Biochem. Biophys. Res. Commun.** 65: 317-322, 1975.
 16. Favre, A., U. Bertazzoni, A.J.M. **Berns** and H. Bloemendal. A poly A content and secondary structure of the 14S calf lens messenger RNA. **Biochem. Biophys. Res. Commun.** 56: 273-280, 1974.
 15. Piperno, G., U. Bertazzoni, A.J.M. **Berns** and H. Bloemendal. Calf lens crystallin messenger RNA's contain polynucleotide sequences rich in adenylic acid. **Nucl. Acids Res.** 1: 245-256, 1974.
 14. Strous, G.J.A.M., A.J.M. **Berns** and H. Bloemendal. N-terminal acetylation of the nascent chains of α -crystallin. **Biochem. Biophys. Res. Commun.** 58: 876-884, 1974.
 13. **Berns**, A., P. Jansen and H. Bloemendal. The separation of α - and β -rabbit globin mRNA by polyacrylamide gel electrophoresis. **FEBS Letters** 47: 343-347, 1974.
 12. **Berns**, A. and H. Bloemendal. Translation of mRNA from vertebrate eye lens. **Enzymology** 30: 675, 1974.

11. **Berns**, A.J.M., V.V.A.M. Schreurs, M.W.G. van Kraaikamp and H. Bloemendal. Synthesis of lens protein in vitro. Translation of calf-lens messengers in heterologous systems. **Eur. J. Biochem.** 33: 551-557, 1973.
10. **Berns**, A.J.M., H. Bloemendal, S.J. Kaufman and I.M. Verma. Synthesis of DNA complementary to 14S calf lens crystallin messenger RNA by reverse transcriptase. **Biochem. Biophys. Res. Comm.** 52: 1013-1019, 1973.
9. Bloemendal, H., A.J.M. **Berns**, G. Strous, M. Mathews, and C.D. Lane. Translation of eukaryotic messenger RNA in various heterologous systems. In: RNA Viruses/Ribosomes. North Holland, Amsterdam, 1972, pp. 237-250.
8. Bloemendal, H., A.J.M. **Berns**, A. Zweers, H. Hoenders and E.L. Benedetti. The state of aggregation of a-crystallin detected after large-scale preparation by zonal centrifugation. **Eur. J. Biochem** 24: 401-406, 1972.
7. Mathews, M.B., M. Osborn, A.J.M. **Berns** and H. Bloemendal. Translation of two messenger RNAs from lens in a cell free system from Krebs II ascites cells. **Nature New Biology** 236: 5-7, 1972.
6. **Berns**, A.J.M., G.J.A.M. Strous and H. Bloemendal. Heterologous in vitro synthesis of lens a-crystallin polypeptide. **Nature New Biology**, 236: 7-9, 1972.
5. **Berns**, A.J.M., M. van Kraaikamp, H. Bloemendal and C.D. Lane. Calf crystallin synthesis in frog cells: The translation of lens-cell 14S RNA in Oocytes. **Proc. Nat. Acad. Sci. USA** 69: 1606-1609, 1972.
4. Strous, G.J.A.M., A.J.M. **Berns**, H. van Westreenen and H. Bloemendal. Synthesis of lens protein in vitro. Role of methionyl-tRNAs in the synthesis of calf-lens a-crystallin. **Eur. J. Biochem.** 30: 48-52, 1972.
3. Bloemendal, H., A.J.M. **Berns**, F. van der Oudera and W.W.W. de Jong. Evidence for a 'non-genetic' origin of the A1 chains of a-crystallin. **Exp. Eye Res.** 14: 80-81, 1972.
2. **Berns**, A.J.M., A. Zweers, A.A.M. Gribnau and H. Bloemendal. Proteolytic activity of partly purified ribonuclease inhibitor from rat liver. **Biochim. Biophys. Acta** 247: 62-65, 1971.
1. **Berns**, A.J.M., R.A. de Abreu, M. van Kraaikamp, E.L. Benedetti and H. Bloemendal. Synthesis of lens protein in vitro. V. Isolation of messenger-like RNA from lens by high resolution zonal centrifugation. **FEBS Letters**, 18: 159-163, 1971.