

## CURRICULUM VITAE

Name : Johannes Carolus Clevers  
Address : Ruysdaellaan 7, 3712 AP Huis ter Heide, The Netherlands  
Date of Birth : March 27, 1957  
Place of Birth : Eindhoven, The Netherlands  
Marital Status : Married, two children

### **Education**

1982 M.Sc. ("Doctoraal") in Biology. University of Utrecht  
1984 M.D. ("Artsexamen") University of Utrecht  
1985 Ph.D. ("Promotie") University of Utrecht

### **Scientific Training/positions**

1985 – 1989 Research Fellow in Pathology. Dana-Farber Cancer Institute, Harvard Medical School, Boston MA, USA  
1989 – 1991 Universitair Docent, Department of Clinical Immunology, University of Utrecht  
1991 – 2002 Professor and Chairman, Dept. of Immunology, Faculty of Medicine, University of Utrecht  
2002 - Director of Hubrecht Laboratory, Netherlands Institute for Developmental Biology of the Royal Dutch Academy of Sciences, Utrecht  
2002 – Professor in Molecular Genetics. The Academic Biomedical Centre, University of Utrecht  
2002- Honorary professor at Changsha-Hunan, China

### **Awards, fellowship, membership etc**

1984 – 1985 Fellowship from a private organization, "De Drie Lichten"  
1986 – 1988 Fellowship from the Dutch Cancer Society, "Het Koningin Wilhelmina Fonds"  
1988 – 1991 Fellowship from the "Leukemia Society of America"  
1989 – 1991 Huygens-Fellowship, NWO (Dutch Medical Research Council)  
1992 – 1998 "PIONIER" award, NWO  
1999 – 2009 Member of the national top graduation school in biomedical science "Centre for Biomedical Genetics"  
1999 - Member European Molecular Biology Organisation (EMBO)  
2000 - Member of the Royal Dutch Academy of Sciences  
2000 Catharijne-prize for medical science  
2001 Award from the European Society for Clinical Investigations  
2001 Spinoza-award Euro 1.500.000  
2004 Louis-Jeantet Prize for Medicine  
2005 Katharine Berkan Judd Award  
2003 Member of the Editorial Board of the FEBS Journal (Formerly European Journal of Biochemistry)

2004 Member of the Editorial Board of European Journal of Immunology  
2004 Editor of Experimental Cell Research  
2004 In the Advisory Editorial Board of the EMBO Journal and Reports

## Key Publications J.C. Clevers:

- 1) van de Wetering, M., Oosterwegel, M., Dooijes, D., and Clevers, H.C. Identification and cloning of TCF-1, a T cell-specific transcription factor containing a sequence-specific HMG box.  
**EMBO J.**, 10:123-132 (1991)
- 2) Verbeek, J.S., Ison, D., Hofhuis, F., Robanus-Maandag, E., te Riele, H., van de Wetering, M., Oosterwegel, M., Wilson, A., MacDonald, H.R. and Clevers, H.C. An HMG box containing T-cell factor required for thymocyte differentiation.  
**Nature** 374: 70-74 (1995)
- 3) Schilham, M., Oosterwegel, M., Moerer, P., Jing Ya, de Boer, P., van de Wetering, M., Verbeek, S., S., Lamers, W., Kruisbeek, A., Cumano, A., and Clevers, H. *Sox-4* gene is required for cardiac outflow tract formation and pro-B lymphocyte expansion.  
**Nature**, 380: 711-714 (1996)
- 4) Molenaar, M., Van de Wetering, M., Oosterwegel, M., Peterson-Maduro, J., Godsave, S., Korinek, V., Roose, J., Destree, O. And Clevers, H. Xtcf-3 Transcription factor mediates beta-catenin-induced axis formation in xenopus embryos.  
**Cell**, 86, 391-399 (1996)
- 5) Korinek, V, Barker, N., Morin, P.J., van Wichen, D., de Weger, R., Kinzler, K.W., Vogelstein, B., and Clevers, H. Constitutive Transcriptional Activation by a beta-catenin-Tcf complex in APC<sup>-/-</sup> Colon Carcinoma.  
**Science**, 275: 1784-1787 (1997)
- 6) van de Wetering, M., Cavallo, R., Dooijes, D., van Beest, M., van Es, J., Loureiro, J., Ypma, A., Hursh, D., Jones, T., Bejsovec, A., Peifer, M., Mortin, M., and Clevers, H. Armadillo co-activates transcription driven by the product of the *Drosophila* segment polarity gene *dTCF*.  
**Cell**, 88, 789-799 (1997)
- 7) Korinek, V., Barker, N., Moerer, P., van Donselaar, E., Huls, G., Peters, P.J. and Clevers, H. Depletion of epithelial stem-cell compartments in the small intestine of mice lacking Tcf-4.  
**Nat Genet** 19(4): 379-383 (1998)
- 8) Roose, J., Molenaar, M., Peterson, J., Hurenkamp, J., Brantjes, H., Moerer, P., van de Wetering, M., Destree, O., and Clevers, H. The *Xenopus* Wnt effector XTcf-3 interacts with Groucho-related transcriptional repressors.  
**Nature** 395(6702): 608-612 (1998)
- 9) Roose, J., Huls, G., van Beest, M., Moerer, P., van der Horn, K., Goldschmeding, R., Logtenberg, T., and Clevers, H. Synergie between tumor suppressor APC and the beta-catenin/Tcf4 target gene Tcf1.  
**Science** 285: 1923-1926 (1999)
- 10) Korswagen, R., Herman, M. and Clevers, H. Separate beta-catenins mediate Wnt signaling and cadherin adhesion in *C. elegans*.  
**Nature** 406: 527-532 (2000)
- 11) Bienz, M., and Clevers, H. Linking colorectal cancer to Wnt signaling. Review  
**Cell** 103: 311-320 (2000)
- 12) van de Wetering, M., Sancho, E., Verweij, C., de Lau, W., Oving, I., Hurlstone, A., van der Horn, K., Batlle, E., Coudreuse, D., Haramis, A-P., Tjon-Pon-Fong, M., Moerer, P., van den Born, M., Soete, G., Pals, S., Eilers, M., Medema, R., Clevers, H. The beta-catenin/TCF4

- complex imposes a crypt progenitor phenotype on colorectal cancer cells.  
**Cell** 111: 241-250 (2002)
- 13) Battle, E., Henderson, J.T., Begthel, H., van den Born, M., Sancho, E., Huls, G., Meeldijk, J., Robertson, J., van de Wetering, M., Pawson, T., Clevers, H. Beta- catenin and TCF mediate cell positioning in the intestinal epithelium by controlling the expression of EphB/ephrinB.  
**Cell** 111: 251-263 (2002)
  - 14) Hurlstone A.F., Haramis A.P., Wienholds E., Begthel H., Korving J., Van Eeden F., Cuppen E., Zivkovic D., Plasterk R.H., Clevers H., The Wnt/beta-catenin pathway regulates cardiac valve formation.  
**Nature** 425:633-7 (2003)
  - 15) Baas A.F., Kuipers J., van der Wel N.N., Battle E., Koerten H.K., Peters P.J., Clevers H.C., Complete polarization of single intestinal epithelial cells upon activation of LKB1 by STRAD.  
**Cell**. 116:457-66 (2004)
  - 16) Haramis A.P., Begthel H., van den Born M., van Es J., Jonkheer S., Offerhaus G.J., Clevers H., De novo crypt formation and Juvenile Polyposis upon BMP inhibition  
**Science**. 303:1684-6 (2004)
  - 17) Radtke, F and Clevers, H., Self-renewal and cancer of the gut: Two sides of a coin. Review  
**Science**. 307:1904-1909 (2005)
  - 18) Reya T., Clevers H., Wnt signalling in stem cells and cancer. Review  
**Nature** 434:843-850 (2005)
  - 19) Van Es J.H., Van Gijn M.E., Riccio O., Van den Born M., Vooijs M., Begthel H., Cozijnsen M., Robine S., Winton D.J., Radtke F., Clevers H. Notch pathway/ $\gamma$ -secretase inhibition turns proliferative cells in intestinal crypts and neoplasia into Goblet cells.  
**Nature** 435:959-963 (2005)
  - 20) Battle E., Bacani J., Begthel H., Jonkheer S., Gregorieff A., Van de Born M., Malats N., Sancho E., Boon E., Pawson T., Gallinger S., Pals S., Clevers H., EphB activity suppresses colorectal cancer progression  
**Nature** 435:1126-1130 (2005)

### Peer-reviewed publications J.C. Clevers

- 1) Clevers, H.C., Bloem, A.C., Gmelig-Meyling, F., and Ballieux, R.E. Ligands of surface Ig raise cytoplasmic free Ca<sup>++</sup> in human B cells.  
**Scand.J.Immunol.** 22: 557-562 (1985)
- 2) Clevers, H.C., Hoeksema, M., Gmelig-Meyling, F.H.J., and Ballieux, R.E. Calcium ionophore A23187 induces IL2 reactivity in human T cells.  
**Scand.J.Immunol.** 22: 633-638 (1985)
- 3) Clevers, H.C., Versteegen, J.M.T., Logtenberg, T., Gmelig-Meyling, F.H.J., and Ballieux, R.E. Synergistic action of A23187 and phorbol ester on human B cell activation.  
**J.Immunol.** 135: 3827-3830 (1985)
- 4) Clevers, H.C., de Bresser, A., Kleinveld, H., Gmelig-Meyling, F.H.J., and Ballieux, R.E. WGA activates human T lymphocytes by stimulation of phosphoinositide hydrolysis.  
**J.Immunol.** 136: 3180-3183 (1986)
- 5) Bloem, A.C., Clevers, H.C., Bast, E.J.E.G., and Ballieux, R.E. T cells in B cell chronic lymphocytic leukaemia.  
**Clin.Exp.Immunol.** 63: 188-193 (1986)
- 6) Clevers, H.C., Versteegen, J.M.T., Gmelig-Meyling, F.H.J., and Ballieux, R.E. Synergistic action of A23187 and PMA on B cells in CLL. In: Primary Immunodeficiency Diseases. Editors M.M. Eibl and F.S. Rosen, 109-112, Elsevier The Netherlands (1986)
- 7) Gold, D.P., Clevers, H.C., Alarcon, B., Dunlap, S., Novotny, J., Williams, A.F., and Terhorst, C. Evolutionary relationship between the T3 chains of the T cell receptor complex and the immunoglobulin supergene family.  
**Proc.Natl.Acad.Sci.USA** 84: 7649-7653 (1987)
- 8) Saito, H., Koyama, T., Georgopoulos, K., Clevers, H.C., Haser, W.G., LeBien, T., Tonegawa, S., and Terhorst, C. Close linkage of the mouse and human CD3-g and d genes suggests a control of their transcription by common regulatory elements.  
**Proc.Natl.Acad.Sci.USA** 84: 9131-9134 (1987)
- 9) Hall, C., Alarcon, B., Berkhout, B., Clevers, H.C., Georgopoulos, K., Gold, D., Pettey, C., van den Elsen, P., Wileman, T., and Terhorst, C. CD3: Structural and genetic aspects of a cell surface glycoprotein complex. In: Leukocyte typing III. Editors McMichael et al. 889-895, Oxford University Press, Oxford U.K. (1987)
- 10) Clevers, H.C., Alarcon, B., Wileman, T., and Terhorst, C. The T cell Receptor/CD3 complex: A dynamic protein ensemble.  
**Annu.Rev.Immunol.** 6: 629-662 (1988)
- 11) Clevers, H.C., Dunlap, S., Saito, H., Georgopoulos, K., Wileman, T., and Terhorst, C. Characterization and expression of the murine CD3-epsilon gene.  
**Proc.Natl.Acad.Sci.USA** 85: 8623-8627 (1988)
- 12) Clevers, H.C., Dunlap, S., and Terhorst, C. The transmembrane orientation of the epsilon chain of the TCR/CD3 complex.  
**Eur.J.Immunol.** 18: 705-710 (1988)
- 13) Clevers, H.C., Dunlap, S., Wileman, T., and Terhorst, C. Human CD3-epsilon gene contains 3 minixons and is transcribed from a non-TATA promoter.  
**Proc.Natl.Acad.Sci.USA** 85: 8156-8160 (1988)
- 14) Peters, P., Geuze, H.J., van der Donk, H.A., Slot, J.W., Griffith, J.M., Stam N.J., Clevers, H.C., and Borst, J. Molecules relevant for T cell-target cell interaction are present in

- cytolytic granules of human T lymphocytes.  
**Eur.J.Immunol.** 19: 1469-1475 (1989)
- 15) Clevers, H.C., Lonberg, N., Dunlap, S., Lacy, E., and Terhorst, C. An enhancer located in a CpG-island 3' of the TCR/CD3-e gene confers T lymphocyte-specificity to its promoter.  
**EMBO J.** 8: 2527-2535 (1989)
  - 16) Clevers, H.C., MacHugh, N.D., Bensaid, A., Dunlap, S., Baldwin, C.L., Kaushal, A., Iams, K., Howard, C.J., and Morrisson, W.I. Identification of a bovine surface antigen uniquely expressed on CD4/CD8 negative TCR-gamma/delta positive T lymphocytes.  
**Eur.J.Immunol.** 20: 809-817 (1990)
  - 17) Dobbelaere, D.A., Prospero, T.D., Roditi, I.J., Kelke, C., Baumann, I., Eichhorn, M., Williams, R.O., Ahmed, J.S., Baldwin, C.L., Clevers, H.C. et al. Expression of Tac antigen component of bovine interleukin-2 receptor in different leukocyte populations infected with *Theileria parva* or *Theileria annulata*.  
**Infect-Immun.** 58: 3847-3855 (1990)
  - 18) Clevers, H.C., and Owen, M. Towards a molecular understanding of T cell differentiation.  
**Immunology Today** 12: 86-92 (1991)
  - 19) van de Wetering, M., Oosterwegel, M., Dooijes, D., and Clevers, H.C. Identification and cloning of TCF-1, a T cell-specific transcription factor containing a sequence-specific HMG box.  
**EMBO J.** 10: 123-132 (1991)
  - 20) Oosterwegel, M., van de Wetering, M., Dooijes, D., Klomp, L., Winoto, A., Georgopoulos, K., Meijlink, F., and Clevers, H.C. Cloning of the murine TCF-1, a T cell-specific transcription factor interacting with functional motifs in the CD3-epsilon and TCR-alpha enhancers.  
**J.Exp.Med.** 173: 1133-1142 (1991)
  - 21) Metzelaar, M., Wijngaard, P., Peters, P., Nieuwenhuis, K., Sixma, J., and Clevers, H.C. CD63 antigen. A novel lysosomal membrane glycoprotein, cloned by a screening procedure for intracellular antigens in eukaryotic cells.  
**J.Biol.Chem.** 266: 3239-3245 (1991)
  - 22) Bensaid, A., Kaushal, A., Baldwin, C.L., Clevers, H.C., Young, J.R., Kemp, S.J., MacHugh, N.D., Toye, P.G., and Teale, A.J. Identification of expressed bovine class I MHC genes at two loci and demonstration of physical linkage.  
**Immunogenetics** 33: 247-254 (1991)
  - 23) Horst, E., Wijngaard, P.L.J., Metzelaar, M., Bast, E.J.E.G., and Clevers, H.C.C. A method for cDNA cloning in COS cells irrespective of subcellular site of expression.  
**Nucleic Acids Res.** 19: 4556 (1991)
  - 24) Oosterwegel, M.A., van de Wetering, M.L., Holstege, F.C.P., Prosser, H.M., Owen, M.J., and Clevers, H.C. TCF-1, a T cell-specific transcription factor of the HMG box family, interacts with sequence motifs in the TCR beta and TCR delta enhancers.  
**Int.Immunol.** 3: 1189-1192 (1991)
  - 25) Castrop, J., van Norren, K., and Clevers, H.C. A gene family of HMG box factors with homology to TCF-1.  
**Nucleic Acids Res.** 20: 611 (1992)
  - 26) Castrop, J., Hoevenagel, R., and Clevers, H.C. A common ancestor of the mammalian transcription factors TCF-1 and TCF-1 alpha/LEF1 expressed in chicken T cells.  
**Eur.J.Immunol.** 22: 1327-1330 (1992)

- 27) van de Wetering, M., and Clevers, H.C. Sequence-specific interaction of the HMG-box factor TCF-1 occurs within the minor groove of a Watson-Crick double helix.  
**EMBO J.** 11: 3039-3044 (1992)
- 28) Metzelaar, M.J., and Clevers, H.C. Lysosomal membrane glycoproteins in platelets.  
**Thrombosis and Haemostasis** 68: 378-382 (1992)
- 29) Wijngaard, P.L.J., Metzelaar, M., MacHugh, N.D., Morrison, W.I., and Clevers, H.C. Molecular characterisation of the WC1 antigen expressed specifically on bovine CD4-CD8-gamma delta T-lymphocytes.  
**J.Immunol.** 149: 3273-3277 (1992)
- 30) van de Wetering, M., Oosterwegel, M., Holstege, F., Suykerbuyk, R., Geurts van Kessel, A., and Clevers, H.C. Structure and mapping of the human TCF-1 gene; Characterization of its promoter.  
**J.Biol.Chem.** 267: 8530-8536 (1992)
- 31) Oosterwegel, M.A., Timmerman, J., Leiden, J., and Clevers, H.C. Expression of GATA-3 during lymphocyte differentiation and mouse embryogenesis.  
**Developmental Immunology** 3:1-11 (1992)
- 32) Demetrick, D., Herlyn, D., Tretiak, M., Creasey D., Clevers, H.C., Vennegoor, C.J.G.M., Dixon, W.T., and Jerry, L.M. The ME491 melanoma-associated glycoprotein family. Antigenic identity of the ME491, NKI/C-3, NGA and CD61 proteins.  
**J.Nat.Cancer Inst.** 84: 422-429 (1992)
- 33) de Lau, W.B.M., Boom, S.E., Heije K., Griffioen, A.W., Braakman, E., Bolhuis, R.L.H., Tax, W.J.M., Clevers, H., and Bast E.J.E.G. Heterodimeric complex formation with CD8 and TCR by bispecific antibody sustains paracrine IL-2-dependent growth of CD3<sup>+</sup> CD8<sup>+</sup> T cells.  
**J. Immunol.** 149:1840-1846 (1992)
- 34) Schuurman, H-J., Hu, H., de Weger, R.A., and Clevers, H.C. Thoughts on thymus and T-lymphocyte repertoire. Relevance to the tolerance of the immune response.  
**Neth.J.Med.** 43: 38-54 (1993)
- 35) Oosterwegel, M., van de Wetering, M., Timmerman, J., Kruisbeek, A., Destree, O., Meijlink, F., and Clevers, H.C. Differential expression of the HMG box factors TCF-1 and LEF-1 during murine embryogenesis.  
**Development** 118: 439-448 (1993)
- 36) Clevers, H.C. De rol van transcriptiefactoren in de differentiatie van beenmergstamcellen naar immuuncompetente T lymfocyten.  
**Mediator**, juni/juli (1993)
- 37) Laudet, V., Stehelin, D., and Clevers, H.C. Ancestry and diversity of the HMG box superfamily.  
**Nucleic Acids Res.** 21: 2493-2501 (1993)
- 38) Schilham, M.W., van Eijk, M., van de Wetering, M., and Clevers, H.C. The murine Sox-4 protein is encoded on a single exon.  
**Nucleic Acids Res.** 21: 2009-2009 (1993)
- 39) van de Wetering, M., and Clevers, H.C. Sox 15, a novel member of the murine Sox family of HMG box transcription factors.  
**Nucleic Acids Res.** 21: 1669-1669 (1993)
- 40) de Lau, W.B.M., Kuipers, J., Voshol, H., Clevers, H.C., and Bast, E.J.E.G. The HB4 monoclonal antibody recognizes a carbohydrate structure on lymphocyte surface proteins,

- related to HB6, CDw75 and CD76.  
**J.Immunol.** 150: 4911-1919 (1993)
- 41) van de Wetering, M., Oosterwegel, M., van Norren, K. and Clevers, H.C. SOX-4, an SRY-like HMG box protein, is a transcriptional activator in lymphocytes.  
**EMBO J.** 12: 3847-3854 (1993)
- 42) van Houte, L., van Oers, A.M., van de Wetering, M., Dooijes, D., Kaptein, R., and Clevers, H.C.C. The sequence-specific HMG box of TCF-1 adopts a predominantly alpha-helical conformation in solution.  
**J.Biol.Chem.** 268: 18083-18087 (1993)
- 43) Oosterwegel, M., van de Wetering, M. and Clevers, H.C. HMG box proteins in early T cell differentiation.  
**Thymus** 22: 67-81 (1993)
- 44) Clevers, H.C., Oosterwegel, M.A., and Georgopoulos, K. Transcription factors in early T cell development.  
**Immunology Today** 14: 591-596 (1993)
- 45) Dooijes, D., van de Wetering, M., Knippels, L. and Clevers, H.C. The Schizosaccharomyces pombe mating-type gene mat-MC encodes a sequence-specific DNA-binding HMG box protein.  
**J.Biol.Chem.** 268: 24813-24817 (1993)
- 46) MacHugh, N.D., Wijngaard, P.L.J., Clevers, H.C., and Davis, W.C. Clustering of monoclonal-antibodies recognizing different members of the WC1 gene family.  
**Vet. Immunol.** 39: 155-160 (1993)
- 47) Wijngaard, P.L.J., MacHugh, N.D., Metzelaar, M.J., Romberg, S., Bensaid, A., Pepin, L., Davis, W.C. and Clevers, H.C. Members of the novel WC1 gene family are differentially expressed on subsets of bovine CD4-CD8- gamma delta T-lymphocytes.  
**J.Immunol.** 152: 3476-3482 (1994)
- 48) Fournier, B., Saudubray, J-M., Benichou, B., Lyonnet, S., Munnich, A., Clevers, H.C. and Poll-The, B.T. Large deletion of the peroxisomal acyl-CoA oxidase gene in pseudoneonatal adrenoleukodystrophy.  
**J.Clin.Invest.** 94: 526-531 (1994)
- 49) Walker, I.D., Glew, M.D., O'Keeffe, M.A., Metcalfe, S.A., Clevers, H.C., Wijngaard, P.L., Adams, T.E. and Hein, W.R. A novel multi-gene family of sheep gamma delta T cells.  
**Immunology** 83: 517-523 (1994)
- 50) Verbeek, J.S., Ison, D., Hofhuis, F., Robanus-Maandag, E., te Riele, H., van de Wetering, M., Oosterwegel, M., Wilson, A., MacDonald, H.R. and Clevers, H.C. An HMG box containing T-cell factor required for thymocyte differentiation.  
**Nature** 374: 70-74 (1995)
- 51) Toye, P.G., Metzelaar, M.J., Wijngaard, P.L.J., Nene, V., Iams, K., Roose, J., Nyanjui, J.K., Gobright, E., Musoke, A.J. and Clevers, H.C. Characterization of the gene encoding the polymorphic immunodominant molecule, a neutralizing antigen of Theileria-parva.  
**J.Immunol.** 155:1370-1381 (1995)
- 52) Castrop., J., Verbeek, S., Hofhuis, F., and Clevers, H. Circumvention of tolerance for the nuclear T cell protein Tcf-1 by immunization of Tcf-1 knock-out mice.  
**Immunobiology** 193: 281-287 (1995)
- 53) van Houte, L.P.A., Chuprina, V.P., van de Wetering, M., Boelens, R., Kaptein, R. and Clevers, H. Solution structure of the sequence-specific HMG box of the lymphocyte



- transcriptional activator SOX-4.  
**J. Biol. Chem.** 270: 30516-30524 (1995)
- 54) Castrop, J., van Wichen, D., Koomans-Bitter, M., van de Wetering, M., de Weger, R., van Dongen, J., and Clevers, H. The human Tcf-1 gene encodes a nuclear DNA-binding protein, uniquely expressed in normal and neoplastic T lineage lymphocytes.  
**Blood** 86: 3050-3059 (1995)
- 55) Scheffer, G.L., Wijngaard, P.L.J., Flens, M.J., Izquierdo, M.A., Slovak, M.L., Pinedo, H.M., Meijer, C.J.L.M., Clevers, H.C. and Scheper, R.J. The drug-resistance-related protein LRP is the human major vault protein.  
**Nature Medicine** 1: 578-582 (1995)
- 56) Mayer, K., Wolff, E., Clevers, H. and Ballhausen, W.G. The HMG box transcription factor TCF-1: novel isoforms due to alternative splicing and usage of a new exon IXA.  
**Biochim. Biophys. Acta** 1263: 169-172 (1995)
- 57) Kamoun, M., Woods, J.S., et al., and Clevers, H. Analysis of CD2 and TCR-beta gene expression in Jurkat cell mutants suggests a cis regulation of gene expression.  
**J. Immunol.** 155: 3929-3937 (1995)
- 58) Toye, P., Wijngaard, P., MacHugh, N., and Clevers, H. An assay for the identification of antigens recognized by cytotoxic T-cells, based on transient transfection of COS cells.  
**J. Immunol. Methods** 187: 95-101 (1995)
- 59) Ohteki, T., Wilson, A., Verbeek, S., MacDonald, H.R., and Clevers, H. Selectively impaired development of intestinal T cell receptor gamma delta+ cells and liver CD4+ NK1+ T cell receptor alpha beta+ cells in T cell factor-1-deficient mice.  
**Eur. J. Immunol.** 26: 351-355 (1996)
- 60) van de Wetering, M., Castrop, J., Korinek, V., and Clevers, H. Extensive alternative splicing and dual promoter usage generates TCF-1 protein isoforms with differential transcription control properties.  
**Mol. Cell. Biol.** 16: 745-752 (1996)
- 61) Schilham, M., Oosterwegel, M., Moerer, P., Jing Ya, de Boer, P., van de Wetering, M., Verbeek, S., S., Lamers, W., Kruisbeek, A., Cumano, A., and Clevers, H. *Sox-4* gene is required for cardiac outflow tract formation and pro-B lymphocyte expansion.  
**Nature** 380: 711-714 (1996)
- 62) Clevers, H., and Grosschedl, R. Transcriptional control of lymphoid development. Lessons from gene targeting.  
**Immunology Today** 17: 336-343 (1996)
- 63) Molenaar, M., Van de Wetering, M., Oosterwegel, M., Peterson-Maduro, J., Godsave, S., Korinek, V., Roose, J., Destrée, O. And Clevers, H. Xtcf-3 Transcription factor mediates beta-catenin-induced axis formation in xenopus embryos.  
**Cell** 86, 391-399 (1996)
- 64) Petersen, E.J., Rozenberg-Arska, M., Dekker, A.W., Clevers, H.C., and Verdonck, L.F. Allogeneic bone marrow transplantation can restore CD4<sup>+</sup> T-lymphocyte count and immune function in idiopathic CD4<sup>+</sup> T-lymphocytopenia.  
**Bone marrow transplantation** 18: 813-815 (1996)
- 65) Santos, M., Schilham, M.W., Rademakers, L.P.M., Marx, J.J.M., de Sousa, M., and Clevers, H. Defective iron homeostasis in beta 2-microglobulin knockout mice recapitulates hereditary hemochromatosis in man.  
**J. Exp. Med.** 184: 1975-1985 (1996)

- 66) Korinek, V., Barker, N., Morin, P.J., van Wichen, D., de Weger, R., Kinzler, K.W., Vogelstein, B., and Clevers, H. Constitutive Transcriptional Activation by a beta-catenin-Tcf complex in APC<sup>-/-</sup> Colon Carcinoma.  
**Science** 275: 1784-1787 (1997)
- 67) Morin, P.J., Sparks, A., Korinek, V., Barker, N., Clevers, H., Vogelstein, B., and Kinzler, K. Activation of beta-catenin-Tcf signaling in colon cancer by mutations in beta-catenin or APC.  
**Science** 275: 1787-1790 (1997)
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