

## 9 Literaturverzeichnis

- Amasheh, S., N. Meiri, A. H. Gitter, T. Schoneberg, J. Mankertz, J. D. Schulzke und M. Fromm (2002). "Claudin-2 expression induces cation-selective channels in tight junctions of epithelial cells." J Cell Sci **115**(Pt 24): 4969-76.
- Andreeva, A. Y., E. Krause, E. C. Muller, I. E. Blasig und D. I. Utepbergenov (2001). "Protein kinase C regulates the phosphorylation and cellular localization of occludin." J Biol Chem **276**(42): 38480-6.
- Arnold, S. J., J. Stappert, A. Bauer, A. Kispert, B. G. Herrmann und R. Kemler (2000). "Brachyury is a target gene of the Wnt/beta-catenin signaling pathway." Mech Dev **91**(1-2): 249-58.
- Balda, M. S., M. D. Garrett und K. Matter (2003). "The ZO-1-associated Y-box factor ZONAB regulates epithelial cell proliferation and cell density." J Cell Biol **160**(3): 423-32.
- Balda, M. S., L. Gonzalez-Mariscal, R. G. Contreras, M. Macias-Silva, M. E. Torres-Marquez, J. A. Garcia-Sainz und M. Cereijido (1991). "Assembly and sealing of tight junctions: possible participation of G-proteins, phospholipase C, protein kinase C and calmodulin." J Membr Biol **122**(3): 193-202.
- Balda, M. S. und K. Matter (2000). "The tight junction protein ZO-1 and an interacting transcription factor regulate ErbB-2 expression." Embo J **19**(9): 2024-33.
- Balda, M. S., J. A. Whitney, C. Flores, S. Gonzalez, M. Cereijido und K. Matter (1996). "Functional dissociation of paracellular permeability and transepithelial electrical resistance and disruption of the apical-basolateral intramembrane diffusion barrier by expression of a mutant tight junction membrane protein." J Cell Biol **134**(4): 1031-49.
- Bamforth, S. D., U. Kniesel, H. Wolburg, B. Engelhardt und W. Risau (1999). "A dominant mutant of occludin disrupts tight junction structure and function." J Cell Sci **112**(Pt 12): 1879-88.
- Bazzoni, G. (2003). "The JAM family of junctional adhesion molecules." Curr Opin Cell Biol **15**(5): 525-30.
- Bazzoni, G., P. Tonetti, L. Manzi, M. R. Cera, G. Balconi und E. Dejana (2005). "Expression of junctional adhesion molecule-A prevents spontaneous and random motility." J Cell Sci **118**(Pt 3): 623-32.
- Beck, F. (2004). "The role of Cdx genes in the mammalian gut." Gut **53**(10): 1394-6.
- Behrens, J., J. P. von Kries, M. Kuhl, L. Bruhn, D. Wedlich, R. Grosschedl und W. Birchmeier (1996). "Functional interaction of beta-catenin with the transcription factor LEF-1." Nature **382**(6592): 638-42.
- Beland, M., N. Pilon, M. Houle, K. Oh, J. R. Sylvestre, P. Prinos und D. Lohnes (2004). "Cdx1 autoregulation is governed by a novel Cdx1-LEF1 transcription complex." Mol Cell Biol **24**(11): 5028-38.
- Ben-Ze'ev, A. und B. Geiger (1998). "Differential molecular interactions of beta-catenin and plakoglobin in adhesion, signaling and cancer." Curr Opin Cell Biol **10**(5): 629-39.

- Bienz, M. (2001). "Spindles cotton on to junctions, APC and EB1." *Nat Cell Biol* **3**(3): E67-8.
- Bienz, M. und H. Clevers (2000). "Linking colorectal cancer to Wnt signaling." *Cell* **103**(2): 311-20.
- Blanchard, A., X. Jeunemaitre, P. Coudol, M. Dechaux, M. Froissart, A. May, R. Demontis, A. Fournier, M. Paillard und P. Houillier (2001). "Paracellin-1 is critical for magnesium and calcium reabsorption in the human thick ascending limb of Henle." *Kidney Int* **59**(6): 2206-15.
- Blasband, A., B. Schryver und J. Papkoff (1992). "The biochemical properties and transforming potential of human Wnt-2 are similar to Wnt-1." *Oncogene* **7**(1): 153-61.
- Brannon, M., M. Gomperts, L. Sumoy, R. T. Moon und D. Kimelman (1997). "A beta-catenin/XTcf-3 complex binds to the siamois promoter to regulate dorsal axis specification in Xenopus." *Genes Dev* **11**(18): 2359-70.
- Cavallo, R. A., R. T. Cox, M. M. Moline, J. Roose, G. A. Polevoy, H. Clevers, M. Peifer und A. Bejsovec (1998). "Drosophila Tcf and Groucho interact to repress Wingless signalling activity." *Nature* **395**(6702): 604-8.
- Cereghini, S. (1996). "Liver-enriched transcription factors and hepatocyte differentiation." *Faseb J* **10**(2): 267-82.
- Charite, J., W. de Graaff, D. Consten, M. J. Reijnen, J. Korving und J. Deschamps (1998). "Transducing positional information to the Hox genes: critical interaction of cdx gene products with position-sensitive regulatory elements." *Development* **125**(22): 4349-58.
- Conacci-Sorrell, M. E., T. Ben-Yedidya, M. Shtutman, E. Feinstein, P. Einat und A. Ben-Ze'ev (2002). "Nr-CAM is a target gene of the beta-catenin/LEF-1 pathway in melanoma and colon cancer and its expression enhances motility and confers tumorigenesis." *Genes Dev* **16**(16): 2058-72.
- DeMaio, L., Y. S. Chang, T. W. Gardner, J. M. Tarbell und D. A. Antonetti (2001). "Shear stress regulates occludin content and phosphorylation." *Am J Physiol Heart Circ Physiol* **281**(1): H105-13.
- Dhawan, P., A. B. Singh, N. G. Deane, Y. No, S. R. Shiou, C. Schmidt, J. Neff, M. K. Washington und R. D. Beauchamp (2005). "Claudin-1 regulates cellular transformation and metastatic behavior in colon cancer." *J Clin Invest* **115**(7): 1765-76.
- Diamond, J. M. (1977). "Twenty-first Bowditch lecture. The epithelial junction: bridge, gate, and fence." *Physiologist* **20**(1): 10-8.
- Djiane, A., J. Riou, M. Umbhauer, J. Boucaut und D. Shi (2000). "Role of frizzled 7 in the regulation of convergent extension movements during gastrulation in Xenopus laevis." *Development* **127**(14): 3091-100.
- Eastman, Q. und R. Grosschedl (1999). "Regulation of LEF-1/TCF transcription factors by Wnt and other signals." *Curr Opin Cell Biol* **11**(2): 233-40.
- Ebnet, K., C. U. Schulz, M. K. Meyer Zu Brickwedde, G. G. Pendl und D. Vestweber (2000). "Junctional adhesion molecule interacts with the PDZ domain-containing proteins AF-6 and ZO-1." *J Biol Chem* **275**(36): 27979-88.

- Fang, R., N. A. Santiago, L. C. Olds und E. Sibley (2000). "The homeodomain protein Cdx2 regulates lactase gene promoter activity during enterocyte differentiation." *Gastroenterology* **118**(1): 115-27.
- Fanning, A. S., B. J. Jameson, L. A. Jesaitis und J. M. Anderson (1998). "The tight junction protein ZO-1 establishes a link between the transmembrane protein occludin and the actin cytoskeleton." *J Biol Chem* **273**(45): 29745-53.
- Fromm, M., U. Hegel und M. Wiederholt (1994). Epithelien. *Pathophysiologie des Menschen*. K. Hierholzer und R. F. Schmidt. Weinheim, Verlag Chemie: 5.1 - 5.19.
- Fujimoto, K. (1995). "Freeze-fracture replica electron microscopy combined with SDS digestion for cytochemical labeling of integral membrane proteins. Application to the immunogold labeling of intercellular junctional complexes." *J Cell Sci* **108**(Pt 11): 3443-9.
- Furuse, M., K. Furuse, H. Sasaki und S. Tsukita (2001). "Conversion of zonulae occludentes from tight to leaky strand type by introducing claudin-2 into Madin-Darby canine kidney I cells." *J Cell Biol* **153**(2): 263-72.
- Furuse, M., M. Hata, K. Furuse, Y. Yoshida, A. Haratake, Y. Sugitani, T. Noda, A. Kubo und S. Tsukita (2002). "Claudin-based tight junctions are crucial for the mammalian epidermal barrier: a lesson from claudin-1-deficient mice." *J Cell Biol* **156**(6): 1099-111.
- Furuse, M., T. Hirase, M. Itoh, A. Nagafuchi, S. Yonemura und S. Tsukita (1993). "Occludin: a novel integral membrane protein localizing at tight junctions." *J Cell Biol* **123**(6 Pt 2): 1777-88.
- Furuse, M., H. Sasaki, K. Fujimoto und S. Tsukita (1998). "A single gene product, claudin-1 or -2, reconstitutes tight junction strands and recruits occludin in fibroblasts." *J Cell Biol* **143**(2): 391-401.
- Furuse, M., H. Sasaki und S. Tsukita (1999). "Manner of interaction of heterogeneous claudin species within and between tight junction strands." *J Cell Biol* **147**(4): 891-903.
- Ghassemifar, M. R., B. Sheth, T. Papenbrock, H. J. Leese, F. D. Houghton und T. P. Fleming (2002). "Occludin TM4(-): an isoform of the tight junction protein present in primates lacking the fourth transmembrane domain." *J Cell Sci* **115**(Pt 15): 3171-80.
- Giles, R. H., J. H. van Es und H. Clevers (2003). "Caught up in a Wnt storm: Wnt signaling in cancer." *Biochim Biophys Acta* **1653**(1): 1-24.
- Gottardi, C. J., M. Arpin, A. S. Fanning und D. Louvard (1996). "The junction-associated protein, zonula occludens-1, localizes to the nucleus before the maturation and during the remodeling of cell-cell contacts." *Proc Natl Acad Sci U S A* **93**(20): 10779-84.
- Gow, A., C. M. Southwood, J. S. Li, M. Pariali, G. P. Riordan, S. E. Brodie, J. Danias, J. M. Bronstein, B. Kachar und R. A. Lazzarini (1999). "CNS myelin and sertoli cell tight junction strands are absent in Osp/claudin-11 null mice." *Cell* **99**(6): 649-59.
- He, T. C., A. B. Sparks, C. Rago, H. Hermeking, L. Zawel, L. T. da Costa, P. J. Morin, B. Vogelstein und K. W. Kinzler (1998). "Identification of c-MYC as a target of the APC pathway." *Science* **281**(5382): 1509-12.

- Heisenberg, C. P., M. Tada, G. J. Rauch, L. Saude, M. L. Concha, R. Geisler, D. L. Stemple, J. C. Smith und S. W. Wilson (2000). "Silberblick/Wnt11 mediates convergent extension movements during zebrafish gastrulation." *Nature* **405**(6782): 76-81.
- Hoevel, T., R. Macek, O. Mundigl, K. Swisschelm und M. Kubbies (2002). "Expression and targeting of the tight junction protein CLDN1 in CLDN1-negative human breast tumor cells." *J Cell Physiol* **191**(1): 60-8.
- Huber, O., R. Korn, J. McLaughlin, M. Ohsugi, B. G. Herrmann und R. Kemler (1996). "Nuclear localization of beta-catenin by interaction with transcription factor LEF-1." *Mech Dev* **59**(1): 3-10.
- Huelsken, J. und W. Birchmeier (2001). "New aspects of Wnt signaling pathways in higher vertebrates." *Curr Opin Genet Dev* **11**(5): 547-53.
- Ichiyasu, H., J. M. McCormack, K. M. McCarthy, D. Dombkowski, F. I. Preffer und E. E. Schneeberger (2004). "Matrix metalloproteinase-9-deficient dendritic cells have impaired migration through tracheal epithelial tight junctions." *Am J Respir Cell Mol Biol* **30**(6): 761-70.
- Itoh, M., M. Furuse, K. Morita, K. Kubota, M. Saitou und S. Tsukita (1999). "Direct binding of three tight junction-associated MAGUKs, ZO-1, ZO-2, and ZO-3, with the COOH termini of claudins." *J Cell Biol* **147**(6): 1351-63.
- Itoh, M., A. Nagafuchi, S. Moroi und S. Tsukita (1997). "Involvement of ZO-1 in cadherin-based cell adhesion through its direct binding to alpha catenin and actin filaments." *J Cell Biol* **138**(1): 181-92.
- Itoh, M., H. Sasaki, M. Furuse, H. Ozaki, T. Kita und S. Tsukita (2001). "Junctional adhesion molecule (JAM) binds to PAR-3: a possible mechanism for the recruitment of PAR-3 to tight junctions." *J Cell Biol* **154**(3): 491-7.
- Kim, E., S. Naisbitt, Y. P. Hsueh, A. Rao, A. Rothschild, A. M. Craig und M. Sheng (1997). "GKAP, a novel synaptic protein that interacts with the guanylate kinase-like domain of the PSD-95/SAP90 family of channel clustering molecules." *J Cell Biol* **136**(3): 669-78.
- Kominsky, S. L., P. Argani, D. Korz, E. Evron, V. Raman, E. Garrett, A. Rein, G. Sauter, O. P. Kallioniemi und S. Sukumar (2003). "Loss of the tight junction protein claudin-7 correlates with histological grade in both ductal carcinoma *in situ* and invasive ductal carcinoma of the breast." *Oncogene* **22**(13): 2021-33.
- Kramer, F., K. White, M. Kubbies, K. Swisschelm und B. H. Weber (2000). "Genomic organization of claudin-1 and its assessment in hereditary and sporadic breast cancer." *Hum Genet* **107**(3): 249-56.
- Kuhl, M., L. C. Sheldahl, M. Park, J. R. Miller und R. T. Moon (2000). "The Wnt/Ca<sup>2+</sup> pathway: a new vertebrate Wnt signaling pathway takes shape." *Trends Genet* **16**(7): 279-83.
- Lacaz-Vieira, F., M. M. Jaeger, P. Farshori und B. Kachar (1999). "Small synthetic peptides homologous to segments of the first external loop of occludin impair tight junction resealing." *J Membr Biol* **168**(3): 289-97.
- Lambert, M., S. Colnot, E. Suh, F. L'Horset, C. Blin, M. E. Calliot, M. Raymondjean, M. Thomasset, P. G. Traber und C. Perret (1996). "cis-Acting elements and transcription factors involved in the intestinal specific expression of the rat cal-

- bindin-D9K gene: binding of the intestine-specific transcription factor Cdx-2 to the TATA box." *Eur J Biochem* **236**(3): 778-88.
- Lickert, H., C. Domon, G. Huls, C. Wehrle, I. Duluc, H. Clevers, B. I. Meyer, J. N. Freund und R. Kemler (2000). "Wnt/(beta)-catenin signaling regulates the expression of the homeobox gene Cdx1 in embryonic intestine." *Development* **127**(17): 3805-13.
- Liu, C., Y. Kato, Z. Zhang, V. M. Do, B. A. Yankner und X. He (1999). "beta-Trcp couples beta-catenin phosphorylation-degradation and regulates Xenopus axis formation." *Proc Natl Acad Sci U S A* **96**(11): 6273-8.
- Liu, Y., A. Nusrat, F. J. Schnell, T. A. Reaves, S. Walsh, M. Pochet und C. A. Parkos (2000). "Human junction adhesion molecule regulates tight junction resealing in epithelia." *J Cell Sci* **113**(Pt 13): 2363-74.
- Lodish, H., A. Berk, S. L. Zipursky, P. Matsudaira, D. Baltimore und J. Darnell (2004). Molecular Cell Biology.
- Lynch, J., E. R. Suh, D. G. Silberg, S. Rulyak, N. Blanchard und P. G. Traber (2000). "The caudal-related homeodomain protein Cdx1 inhibits proliferation of intestinal epithelial cells by down-regulation of D-type cyclins." *J Biol Chem* **275**(6): 4499-506.
- Ma, T. Y., G. K. Iwamoto, N. T. Hoa, V. Akotia, A. Pedram, M. A. Boivin und H. M. Said (2004). "TNF-alpha-induced increase in intestinal epithelial tight junction permeability requires NF-kappa B activation." *Am J Physiol Gastrointest Liver Physiol* **286**(3): G367-76.
- Macdonald, P. M. und G. Struhl (1986). "A molecular gradient in early Drosophila embryos and its role in specifying the body pattern." *Nature* **324**(6097): 537-45.
- Mankertz, J., B. Hillenbrand, S. Tavalali, O. Huber, M. Fromm und J. D. Schulzke (2004). "Functional crosstalk between Wnt signaling and Cdx-related transcriptional activation in the regulation of the claudin-2 promoter activity." *Biochem Biophys Res Commun* **314**(4): 1001-7.
- Mankertz, J., J. S. Waller, B. Hillenbrand, S. Tavalali, P. Florian, T. Schoneberg, M. Fromm und J. D. Schulzke (2002). "Gene expression of the tight junction protein occludin includes differential splicing and alternative promoter usage." *Biochem Biophys Res Commun* **298**(5): 657-66.
- Mann, B., M. Gelos, A. Siedow, M. L. Hanski, A. Gratchev, M. Illyas, W. F. Bodmer, M. P. Moyer, E. O. Riecken, H. J. Buhr und C. Hanski (1999). "Target genes of beta-catenin-T cell-factor/lymphoid-enhancer-factor signaling in human colorectal carcinomas." *Proc Natl Acad Sci U S A* **96**(4): 1603-8.
- McCarthy, K. M., I. B. Skare, M. C. Stankewich, M. Furuse, S. Tsukita, R. A. Rogers, R. D. Lynch und E. E. Schneeberger (1996). "Occludin is a functional component of the tight junction." *J Cell Sci* **109**(Pt 9): 2287-98.
- Medina, R., C. Rahner, L. L. Mitic, J. M. Anderson und C. M. Van Itallie (2000). "Occludin localization at the tight junction requires the second extracellular loop." *J Membr Biol* **178**(3): 235-47.
- Michl, P., C. Barth, M. Buchholz, M. M. Lerch, M. Rolke, K. H. Holzmann, A. Menke, H. Fensterer, K. Giehl, M. Lohr, G. Leder, T. Iwamura, G. Adler und T. M.

- Gress (2003). "Claudin-4 expression decreases invasiveness and metastatic potential of pancreatic cancer." Cancer Res **63**(19): 6265-71.
- Michl, P., M. Buchholz, M. Rolke, S. Kunsch, M. Lohr, B. McClane, S. Tsukita, G. Leder, G. Adler und T. M. Gress (2001). "Claudin-4: a new target for pancreatic cancer treatment using Clostridium perfringens enterotoxin." Gastroenterology **121**(3): 678-84.
- Mitchelmore, C., J. T. Troelsen, N. Spodsberg, H. Sjostrom und O. Noren (2000). "Interaction between the homeodomain proteins Cdx2 and HNF1alpha mediates expression of the lactase-phlorizin hydrolase gene." Biochem J **346**(Pt 2): 529-35.
- Miwa, N., M. Furuse, S. Tsukita, N. Niikawa, Y. Nakamura und Y. Furukawa (2000). "Involvement of claudin-1 in the beta-catenin/Tcf signaling pathway and its frequent upregulation in human colorectal cancers." Oncol Res **12**(11-12): 469-76.
- Miyamori, H., T. Takino, Y. Kobayashi, H. Tokai, Y. Itoh, M. Seiki und H. Sato (2001). "Claudin promotes activation of pro-matrix metalloproteinase-2 mediated by membrane-type matrix metalloproteinases." J Biol Chem **276**(30): 28204-11.
- Mlodzik, M. (2000). "Spiny legs and prickled bodies: new insights and complexities in planar polarity establishment." Bioessays **22**(4): 311-5.
- Molenaar, M., M. van de Wetering, M. Oosterwegel, J. Peterson-Maduro, S. Godsave, V. Korinek, J. Roose, O. Destree und H. Clevers (1996). "XTcf-3 transcription factor mediates beta-catenin-induced axis formation in Xenopus embryos." Cell **86**(3): 391-9.
- Morin, P. J. (1999). "beta-catenin signaling and cancer." Bioessays **21**(12): 1021-30.
- Muller, W. A. (2003). "Leukocyte-endothelial-cell interactions in leukocyte transmigration and the inflammatory response." Trends Immunol **24**(6): 327-34.
- Nagafuchi, A. (2001). "Molecular architecture of adherens junctions." Curr Opin Cell Biol **13**(5): 600-3.
- Parry, G. C. und N. Mackman (1994). "A set of inducible genes expressed by activated human monocytic and endothelial cells contain kappa B-like sites that specifically bind c-Rel-p65 heterodimers." J Biol Chem **269**(33): 20823-5.
- Pinson, K. I., J. Brennan, S. Monkley, B. J. Avery und W. C. Skarnes (2000). "An LDL-receptor-related protein mediates Wnt signalling in mice." Nature **407**(6803): 535-8.
- Polakis, P. (2000). "Wnt signaling and cancer." Genes Dev **14**(15): 1837-51.
- Rahner, C., L. L. Mitic und J. M. Anderson (2001). "Heterogeneity in expression and subcellular localization of claudins 2, 3, 4, and 5 in the rat liver, pancreas, and gut." Gastroenterology **120**(2): 411-22.
- Rangel, L. B., R. Agarwal, T. D'Souza, E. S. Pizer, P. L. Alo, W. D. Lancaster, L. Gregoire, D. R. Schwartz, K. R. Cho und P. J. Morin (2003). "Tight junction proteins claudin-3 and claudin-4 are frequently overexpressed in ovarian cancer but not in ovarian cystadenomas." Clin Cancer Res **9**(7): 2567-75.
- Riggleman, B., P. Schedl und E. Wieschaus (1990). "Spatial expression of the Drosophila segment polarity gene armadillo is posttranscriptionally regulated by wingless." Cell **63**(3): 549-60.

- Rijsewijk, F., M. Schuermann, E. Wagenaar, P. Parren, D. Weigel und R. Nusse (1987). "The *Drosophila* homolog of the mouse mammary oncogene int-1 is identical to the segment polarity gene wingless." *Cell* **50**(4): 649-57.
- Saha, C., S. K. Nigam und B. M. Denker (2001). "Expanding role of G proteins in tight junction regulation: Galphas stimulates TJ assembly." *Biochem Biophys Res Commun* **285**(2): 250-6.
- Saitou, M., K. Fujimoto, Y. Doi, M. Itoh, T. Fujimoto, M. Furuse, H. Takano, T. Noda und S. Tsukita (1998). "Occludin-deficient embryonic stem cells can differentiate into polarized epithelial cells bearing tight junctions." *J Cell Biol* **141**(2): 397-408.
- Saitou, M., M. Furuse, H. Sasaki, J. D. Schulzke, M. Fromm, H. Takano, T. Noda und S. Tsukita (2000). "Complex phenotype of mice lacking occludin, a component of tight junction strands." *Mol Biol Cell* **11**(12): 4131-42.
- Sakaguchi, T., X. Gu, H. M. Golden, E. Suh, D. B. Rhoads und H. C. Reinecker (2002). "Cloning of the human claudin-2 5'-flanking region revealed a TATA-less promoter with conserved binding sites in mouse and human for caudal-related homeodomain proteins and hepatocyte nuclear factor-1alpha." *J Biol Chem* **277**(24): 21361-70.
- Sakakibara, A., M. Furuse, M. Saitou, Y. Ando-Akatsuka und S. Tsukita (1997). "Possible involvement of phosphorylation of occludin in tight junction formation." *J Cell Biol* **137**(6): 1393-401.
- Sanger, F., S. Nicklen und A. R. Coulson (1977). "DNA sequencing with chain-terminating inhibitors." *Proc Natl Acad Sci U S A* **74**(12): 5463-7.
- Sawada, N., M. Murata, K. Kikuchi, M. Osanai, H. Tobioka, T. Kojima und H. Chiba (2003). "Tight junctions and human diseases." *Med Electron Microsc* **36**(3): 147-56.
- Schmidt, A., D. I. Utepbergenov, G. Krause und I. E. Blasig (2001). "Use of surface plasmon resonance for real-time analysis of the interaction of ZO-1 and occludin." *Biochem Biophys Res Commun* **288**(5): 1194-9.
- Schulzke, J. D., A. H. Gitter, J. Mankertz, S. Spiegel, U. Seidler, S. Amasheh, M. Saitou, S. Tsukita und M. Fromm (2005). "Epithelial transport and barrier function in occludin-deficient mice." *Biochim Biophys Acta* **1669**(1): 34-42.
- Serfas, M. S. und A. L. Tyner (1993). "HNF-1 alpha and HNF-1 beta expression in mouse intestinal crypts." *Am J Physiol* **265**(3 Pt 1): G506-13.
- Sharma, R. P. und V. L. Chopra (1976). "Effect of the Wingless (wg1) mutation on wing and haltere development in *Drosophila melanogaster*." *Dev Biol* **48**(2): 461-5.
- Shtutman, M., J. Zhurinsky, I. Simcha, C. Albanese, M. D'Amico, R. Pestell und A. Ben-Ze'ev (1999). "The cyclin D1 gene is a target of the beta-catenin/LEF-1 pathway." *Proc Natl Acad Sci U S A* **96**(10): 5522-7.
- Siegfried, E., E. L. Wilder und N. Perrimon (1994). "Components of wingless signalling in *Drosophila*." *Nature* **367**(6458): 76-80.
- Silberg, D. G., G. P. Swain, E. R. Suh und P. G. Traber (2000). "Cdx1 and cdx2 expression during intestinal development." *Gastroenterology* **119**(4): 961-71.

- Sonoda, N., M. Furuse, H. Sasaki, S. Yonemura, J. Katahira, Y. Horiguchi und S. Tsukita (1999). "Clostridium perfringens enterotoxin fragment removes specific claudins from tight junction strands: Evidence for direct involvement of claudins in tight junction barrier." *J Cell Biol* **147**(1): 195-204.
- Soubeyran, P., F. Andre, J. C. Lissitzky, G. V. Mallo, V. Moucadel, M. Roccabianca, H. Rechreche, J. Marvaldi, I. Dikic, J. C. Dagorn und J. L. Iovanna (1999). "Cdx1 promotes differentiation in a rat intestinal epithelial cell line." *Gastroenterology* **117**(6): 1326-38.
- Stevenson, B. R., J. D. Siliciano, M. S. Mooseker und D. A. Goodenough (1986). "Identification of ZO-1: a high molecular weight polypeptide associated with the tight junction (zonula occludens) in a variety of epithelia." *J Cell Biol* **103**(3): 755-66.
- Subramanian, V., B. I. Meyer und P. Gruss (1995). "Disruption of the murine homeobox gene Cdx1 affects axial skeletal identities by altering the mesodermal expression domains of Hox genes." *Cell* **83**(4): 641-53.
- Suh, E., L. Chen, J. Taylor und P. G. Traber (1994). "A homeodomain protein related to caudal regulates intestine-specific gene transcription." *Mol Cell Biol* **14**(11): 7340-51.
- Suh, E. und P. G. Traber (1996). "An intestine-specific homeobox gene regulates proliferation and differentiation." *Mol Cell Biol* **16**(2): 619-25.
- Takai, Y. und H. Nakanishi (2003). "Nectin and afadin: novel organizers of intercellular junctions." *J Cell Sci* **116**(Pt 1): 17-27.
- Tamai, K., M. Semenov, Y. Kato, R. Spokony, C. Liu, Y. Katsuyama, F. Hess, J. P. Saint-Jeannet und X. He (2000). "LDL-receptor-related proteins in Wnt signal transduction." *Nature* **407**(6803): 530-5.
- Tetsu, O. und F. McCormick (1999). "Beta-catenin regulates expression of cyclin D1 in colon carcinoma cells." *Nature* **398**(6726): 422-6.
- Troelsen, J. T., C. Mitchelmore, N. Spodsberg, A. M. Jensen, O. Noren und H. Sjostrom (1997). "Regulation of lactase-phlorizin hydrolase gene expression by the caudal-related homeodomain protein Cdx-2." *Biochem J* **322**( Pt 3): 833-8.
- Tsukamoto, T. und S. K. Nigam (1999). "Role of tyrosine phosphorylation in the reassembly of occludin and other tight junction proteins." *Am J Physiol* **276**(5 Pt 2): F737-50.
- Turksen, K. und T. C. Troy (2001). "Claudin-6: a novel tight junction molecule is developmentally regulated in mouse embryonic epithelium." *Dev Dyn* **222**(2): 292-300.
- Turksen, K. und T. C. Troy (2002). "Permeability barrier dysfunction in transgenic mice overexpressing claudin 6." *Development* **129**(7): 1775-84.
- Van Itallie, C., C. Rahner und J. M. Anderson (2001). "Regulated expression of claudin-4 decreases paracellular conductance through a selective decrease in sodium permeability." *J Clin Invest* **107**(10): 1319-27.
- Van Itallie, C. M. und J. M. Anderson (1997). "Occludin confers adhesiveness when expressed in fibroblasts." *J Cell Sci* **110**(Pt 9): 1113-21.

- Van Itallie, C. M. und J. M. Anderson (2004). "The molecular physiology of tight junction pores." Physiology (Bethesda) **19**: 331-8.
- Viator, I., T. Bader, K. Paiha und L. A. Huber (2001). "Perturbation of the tight junction permeability barrier by occludin loop peptides activates beta-catenin/TCF/LEF-mediated transcription." EMBO Rep **2**(4): 306-12.
- Wachtel, M., M. F. Bolliger, H. Ishihara, K. Frei, H. Bluethmann und S. M. Gloor (2001). "Down-regulation of occludin expression in astrocytes by tumour necrosis factor (TNF) is mediated via TNF type-1 receptor and nuclear factor-kappaB activation." J Neurochem **78**(1): 155-62.
- Wang, Y., J. Dang, H. Wang, H. Allgayer, G. A. Murrell und D. Boyd (2000). "Identification of a novel nuclear factor-kappaB sequence involved in expression of urokinase-type plasminogen activator receptor." Eur J Biochem **267**(11): 3248-54.
- Wehrli, M., S. T. Dougan, K. Caldwell, L. O'Keefe, S. Schwartz, D. Vaizel-Ohayon, E. Schejter, A. Tomlinson und S. DiNardo (2000). "arrow encodes an LDL-receptor-related protein essential for Wingless signalling." Nature **407**(6803): 527-30.
- Willert, K., J. D. Brown, E. Danenber, A. W. Duncan, I. L. Weissman, T. Reya, J. R. Yates, 3rd und R. Nusse (2003). "Wnt proteins are lipid-modified and can act as stem cell growth factors." Nature **423**(6938): 448-52.
- Wittchen, E. S., J. Haskins und B. R. Stevenson (1999). "Protein interactions at the tight junction. Actin has multiple binding partners, and ZO-1 forms independent complexes with ZO-2 and ZO-3." J Biol Chem **274**(49): 35179-85.
- Wodarz, A. und R. Nusse (1998). "Mechanisms of Wnt signaling in development." Annu Rev Cell Dev Biol **14**: 59-88.
- Wong, V. (1997). "Phosphorylation of occludin correlates with occludin localization and function at the tight junction." Am J Physiol **273**(6 Pt 1): C1859-67.
- Wong, V. und D. A. Goodenough (1999). "Paracellular channels!" Science **285**(5424): 62.
- Wong, V. und B. M. Gumbiner (1997). "A synthetic peptide corresponding to the extracellular domain of occludin perturbs the tight junction permeability barrier." J Cell Biol **136**(2): 399-409.