

Jesper Thorvald Troelsen  
Professor  
Institut for Naturvidenskab og Miljø  
Molecular and Medical Biology  
Centre for Mathematical Modeling - Human Health and Disease  
**Adresstype: Postadresse.**  
Universitetsvej 1  
28A.1  
DK-4000  
Roskilde  
Danmark  
**E-mail:** troelsen@ruc.dk  
**Telefon:** +45 4674 2728  
**Hjemmeside:** <https://forskning.ruc.dk/da/persons/troelsen>,  
<https://forskning.ruc.dk/da/persons/troelsen>,  
<https://forskning.ruc.dk/da/persons/troelsen>



## Degrees

Master degree (Cand. scient.) in biology (Molecular Biology) from The Department for Microbiology, Faculty of Science, University of Copenhagen

PhD, Department for Medical Biochemistry and Genetics (IMBG), The Faculty of Health Science, University of Copenhagen.

Doctor in Medical Sciences (dr.med.), Department for Cellular Molecular Medicine (ICMM), The Faculty of Health Science, University of Copenhagen.

## Positions

Research assistant. University of Copenhagen. 1991-1992

PhD-student (Kandidatstipendiat). University of Copenhagen. 1992-1995

Assistant professor at the Department for Medical Biochemistry and Genetics. University of Copenhagen. 1995-1999

Weimann-sponsored research associated professor at the Department for Medical Biochemistry and Genetics 1999-2000

Associate professor at the Department for Medical Biochemistry and Genetics. University of Copenhagen. 2000-2006

Associate professor, Department of Cellular & Molecular Medicine, University of Copenhagen. 2007-2011

Professor mso in medicinalbiology, Department for Science, Models and Systems (NSM), Roskilde University. 2011-

## Publikationer

### **Surgery-related change in cancer cell adhesion associates with recurrence in patients undergoing colorectal cancer surgery**

Jessen, S. B., Vogelsang, R. P., Dolin, T. G., Jørgensen, J., Olsson, J. B., Kirkegaard, T., Gögenur, I. & Troelsen, J. T., aug. 2025, I: *European Journal of Surgical Oncology*. 51, 8, 7 s., 110055.

### **An Explorative Study on Calcium Electroporation for Low-risk Basal Cell Carcinoma**

Wiegell, S. R., Hendel, K., Fuchs, C. S. K., Gehl, J., Vissing, M., Bro, S. W., Troelsen, J. T., Jemec, G. B. E. & Haedersdal, M., 7 maj 2024, I: *Acta Dermato-Venereologica*. 104, 7 s., adv19678.

### **The gut feeling during the COVID-19 pandemic**

Mirsepasi-Lauridsen, H. C., Sørensen, C. A., Troelsen, J. T. & Kroghfelt, K. A., 2024, *Sustainable Health and the COVID-19 Crisis: Interdisciplinary Perspectives*. Routledge, s. 203-221 19 s.

### **A family with ulcerative colitis maps to 7p21.1 and comprises a region with regulatory activity for the aryl hydrocarbon receptor gene**

Eiberg, H., Olsson, J. B., Bak, M., Bang-Berthelsen, C. H., Troelsen, J. T. & Hansen, L., 2023, I: *European Journal of Human Genetics*. 31, 12, s. 1440-1446 7 s.

### **Colorectal cancer-associated SNP rs17042479 is involved in the regulation of NAF1 promoter activity**

Olsson, J. B., Gugerel, M. B., Jessen, S. B., Jørgensen, J., Gögenur, I., Hansen, C., Kirkeby, L. T., Olsen, J., Pedersen, O. B. V., Vestlev, P. M., Dahlgard, K. & Troelsen, J. T., sep. 2022, I: *PLOS ONE*. 17, 9, s. e0274033 e0274033.

#### **Establishment of a luciferase-based method for measuring cancer cell adhesion and proliferation**

Jessen, S. B., Özkul, D. C., Özen, Y., Gögenur, I. & Troelsen, J. T., 1 aug. 2022, I: *Analytical Biochemistry*. 650, 114723.

#### **Use of Patient-Derived Organoids as a Treatment Selection Model for Colorectal Cancer: A Narrative Review**

Furbo, S., Urbano, P. C. M., Raskov, H. H., Troelsen, J. T., Fiehn, A. M. K. & Gögenur, I., 1 feb. 2022, I: *Cancers*. 14, 4, 1069.

#### **Colonic Stent as Bridge to Surgery for Malignant Obstruction Induces Gene Expressional Changes Associated with a More Aggressive Tumor Phenotype**

Andersen, M. B., Degett, T. H., Furbo, S., Fiehn, A. M. K., Bulut, M., Litman, T., Eriksen, J. O., Troelsen, J. T., Gjerdrum, L. M. R. & Gögenur, I., dec. 2021, I: *Annals of Surgical Oncology*. 28, 13, s. 8519-8531 13 s.

#### **CDX2 regulates interleukin-33 gene expression in intestinal epithelial cells (LS174T)**

Larsen, S., Seidelin, J. B., Davidsen, J., Dahlgaard, K., Nielsen, C. H., Bennett, E. P., Pedersen, O. B., Coskun, M. & Troelsen, J. T., jun. 2021, I: *FEBS Open Bio*. 11, 6, s. 1638-1644 7 s.

#### **A novel approach for microRNA in situ hybridization using locked nucleic acid probes**

Paulsen, I. W., Bzorek, M., Olsen, J., Grum-Schwensen, B., Troelsen, J. T. & Pedersen, O. B., 24 feb. 2021, I: *Scientific Reports*. 11, 1, 4504.

#### **CDX2 expression and perioperative patient serum affects the adhesion properties of cultured colon cancer cells**

Davidsen, J., Jessen, S. B., Watt, S. K., Larsen, S., Dahlgaard, K., Kierkegaard, T., Gögenür, I. & Troelsen, J. T., 14 maj 2020, I: *BMC Cancer*. 20, 1, 10 s., 426.

#### **A transcriptomic overview of lung and liver changes one day after pulmonary exposure to graphene and graphene oxide**

Poulsen, S. S., Bengtson, S., Williams, A., Jacobsen, N. R., Troelsen, J. T., Halappanavar, S. & Vogel, U., 2020, I: *Toxicology and Applied Pharmacology*. 410, 410, 115343.

#### **Driver Gene Mutations and Epigenetics in Colorectal Cancer**

Raskov, H., Søby, J. H., Troelsen, J. T., Bojesen, R. D. & Gögenur, I., 2020, I: *Annals of Surgery*. 271, 1, s. 75-85 11 s.

#### **The value of circulating microRNAs for early diagnosis of B-cell lymphoma: A case-control study on historical samples**

Jørgensen, S., Paulsen, I. W., Hansen, J. W., Tholstrup, D., Hother, C., Sørensen, E., Petersen, M. S., nielsen, K. R., Rostgaard, K., Larsen, M. A. H., Brown, P. D. N., Ralfkiær, E., Mikkelsen Homburg, K., Hjalgrim, H., Erikstrup, C., Ullum, H., Troelsen, J. T., Grønbaek, K. & Pedersen, O. B., 2020, I: *Scientific Reports*. 10, 1, 9637.

#### **HNF4α and CDX2 Regulate Intestinal YAP1 Promoter Activity**

Larsen, S., Davidsen, J., Dahlgaard, K., Pedersen, O. B. & Troelsen, J. T., 18 jun. 2019, I: *International Journal of Molecular Sciences (Online)*. 20, 12, 17 s., E2981.

#### **MicroRNA expression profile in chronic myeloproliferative neoplasms: The impact of 3 months immune therapy using pegylated interferon-alpha2**

Larsen, M. K., Larsen, S., Hasselbalch, H., Skov, V., Kjær, L., Thomassen, M., Kruse, T. A., Troelsen, J. T. & Dalgaard, L. T., 2019, I: *HemaSphere*. 3, S1, s. 284-284

#### **Intestinal regulation of suppression of tumorigenicity 14 (ST14) and serine peptidase inhibitor, Kunitz type -1 (SPINT1) by transcription factor CDX2.**

Danielsen, E. T., Olsen, A. K., Coskun, M., Nonboe, A. W., Larsen, S., Dahlgaard, K., Bennett, E. P., Mitchelmore, C., Vogel, L. K. & Troelsen, J., 7 aug. 2018, I: *Scientific Reports*. 8, 1, 11813.

#### **The VTI1A-TCF4 colon cancer fusion protein is a dominant negative regulator of Wnt signaling and is transcriptionally regulated by intestinal homeodomain factor CDX2**

Davidsen, J., Larsen, S., Coskun, M., Gögenür, I., Dahlgaard, K., Bennett, E. P. & Troelsen, J., 5 jul. 2018, I: *P L o S One*. 13, 7, 13 s., e0200215.

**Characterization of the enhancer and promoter landscape of inflammatory bowel disease from human colon biopsies**

Boyd, M., Thodberg, M., Vitezic, M., Bornholdt, J., Vitting-Seerup, K., Chen, Y., Coshun, M., Li, Y., Sheng Lo, B. Z., Klausen, P., Schweiger, P. J., Pedersen, A. G., Rapin, N., Skovgaard, K., Dahlgaard, K., Andersson, R., Terkelsen, T. B., Lilje, B., Troelsen, J. & Petersen, A. M. & 7 flere, Jensen, K. B., Gögenur, I., Thielsen, P., Seidelin, J. B., Nielsen, O. H., Bjerrum, J. T. & Sandelin, A. G., 25 apr. 2018, I: *Nature Communications*. 9, 1, 1661.

**Identification and Functional Analysis of Gene Regulatory Sequences Interacting with Colorectal Tumor Suppressors**

Dahlgaard, K. & Troelsen, J., 27 mar. 2018, *Colorectal Cancer: Methods and Protocols*. Beaulieu, J.-F. (red.). New York: Springer, s. 57-77 21 s. (Methods in Molecular Biology, Bind 1765).

**Rectal insulin instillation inhibits inflammation and tumor development in chemically-induced colitis**

Yassin, M., Sadowska, Z., Tritsarlis, K., Kissow, H., Hansen, C., Forman, J., Rogler, G., Troelsen, J., Pedersen, A. & Olsen, J., 2018, I: *Journal of Crohn's and Colitis*. 12, 12, s. 1459–1474 16 s.

**Mathematical Modelling as a Proof of Concept for MPNs as a Human Inflammation Model for Cancer Development**

Andersen, M., Sajid, Z., Pedersen, R. K., Gudmand-Høyer, J., Ellervik, C., Skov, V., Kjær, L., Pallisgaard, N., Kruse, T., Thomassen, M., Troelsen, J. T., Hasselbalch, H. & Ottesen, J. T., aug. 2017, I: *P L o S One*. 12, 8, e0183620.

**Differences in inflammation and acute phase response but similar genotoxicity in mice following pulmonary exposure to graphene oxide and reduced graphene oxide**

Bengtson, S., Knudsen, K., Kyjovska, Z., Berthing, T., Skaug, V., Levin, M., Koponen, I., Shivayogimath, A., Booth, T., Alonso, B., Pesquera, A., Zurutuza, A., Thomsen, B., Troelsen, J., Jacobsen, N. & Vogel, U., jun. 2017, I: *P L o S One*. 12, 6, s. e017835 e0178355.

**Precise integration of inducible transcriptional elements (PrlITE) enables absolute control of gene expression**

Pinto, R., Hansen, L., Hintze, J., Almeida, R., Larsen, S., Coskun, M., Davidsen, J., Mitchelmore, C., David, L., Troelsen, J. & Bennett, E. P., 4 maj 2017, I: *Nucleic Acids Research*. 45, 13, s. e123 15 s., e123.

**Carriers of a VEGFA enhancer polymorphism selectively binding chop/ddit3 are predisposed to increased circulating levels of thyroid stimulating hormone**

Ahluwalia, T. S., Troelsen, J., Balslev-Harder, M., Bork-Jensen, J., Thuesen, B. H., Cerqueira, C., Linneberg, A., Grarup, N., Pedersen, O., Hansen, T. & Dalgaard, L. T., 1 mar. 2017, I: *Journal of Medical Genetics*. 54, 3, s. 166-175 12 s.

**Regulation of Laminin  $\gamma$ 2 Expression by CDX2 in Colonic Epithelial Cells Is Impaired During Active Inflammation**

Coskun, M., Soendergaard, C., Jørgensen, S., Dahlgaard, K., Riis, L. B., Nielsen, O. H., Sandelin, A. G. & Troelsen, J., feb. 2017, I: *Journal of Cellular Biochemistry*. 118, 2, s. 298-307 10 s.

**HOXB4 Gene Expression Is Regulated by CDX2 in Intestinal Epithelial Cells**

Jørgensen, S., Coshun, M., Mikkelsen Homburg, K., Pedersen, O. B. V. & Troelsen, J., okt. 2016, I: *P L o S One*. 11, 10, 12 s., 0164555.

**Escape from epigenetic silencing of lactase expression is triggered by a single-nucleotide change**

Swallow, D. M. & Troelsen, J., 7 jun. 2016, I: *Nature Structural and Molecular Biology*. 23, 6, s. 505-507 3 s.

**SOX9 Expression Predicts Relapse of Stage II Colon Cancer Patients**

Espersen, M. L. M., Linnemann, D., Christensen, I. J., Alamili, M., T. Troelsen, J. & Høgdall, E., 1 jun. 2016, I: *Human Pathology*. 52, s. 38–46 9 s.

Association Between Systemic Inflammation and Intratumoral Cytokines and PTGS2 Messenger RNA Levels, Stage, Differentiation Grade, and Mismatch Repair Status in Patients with Colonic Adenocarcinoma

Rosen, A., Degett, T. H., Kirkeby, L. T., Olsen, J., Eiholm, S., Jess, P., Troelsen, J., Olsen, J. & Gögenur, I., 2016, I: *Journal of the American College of Surgeons*. 223, 4, suppl 1, s. S138

**In Vitro Functional Analyses of Infrequent Nucleotide Variants in the Lactase Enhancer Reveal Different Molecular Routes to Increased Lactase Promoter Activity and Lactase Persistence**

Liebert, A., Jones, B. L., Danielsen, E. T., Olsen, A. K., Swallow, D. W. & Troelsen, J., 2016, I: *Annals of Human Genetics*. 80, 6, s. 307-318 12 s.

**Microna biomarkers for psoriasis arthritis - early results**

Paulsen, I. W., Munk, H., Grum-Schwensen, B., Jemec, G. B. E., Svendsen, A. J., Troelsen, J., Junker, P. & Pedersen, O. B., 2016, I: *Journal of the European Academy of Dermatology and Venereology*. 30, Suppl 6, s. 5

**The Prognostic Value of Polycomb Group Protein BMI1 in Stage II Colon Cancer Patients**

Espersen, M. L. M., Linnemann, D., Christensen, I. J., Alamili, M., Troelsen, J. & Høgdall, E., 2016, I: *A P M I S. Acta Pathologica, Microbiologica et Immunologica Scandinavica*. 124, 7, s. 541-546

**Impact of in Vivo Ischemic Time on RNA Quality: Experiences from a Colon Cancer Biobank**

Olsen, J., Kierkeby, L. T., Eiholm, S., Jess, P., Troelsen, J., Gögenur, I. & Olsen, J., aug. 2015, I: *Biopreservation and Biobanking*. 13, 4, s. 255-262

**CDX2 downregulation is associated with poor differentiation and MMR deficiency in colon cancer.**

Olsen, J., Eiholm, S., Kirkeby, L., Espersen, M. L. M., Jess, P., Gögenür, I., Olsen, J. & Troelsen, J., 2015, I: *Experimental and Molecular Pathology*. 100, 1, s. 59-66

**Cellular inhibitor of apoptosis protein 2 (cIAP2) controls human colonic epithelial restitution, migration and Rac1 activation.**

Seidelin, J., Larsen, S., Linnemann, D., Vainer, B., Coskun, M., Troelsen, J. T. & Hagen Nielsen, O., 2015, I: *American Journal of Physiology: Gastrointestinal and Liver Physiology*. 308, 2

**Clinical Implications of Intestinal Stem Cell Markers in Colorectal Cancer**

Espersen, M. L. M., Olsen, J., Linnemann, D., Høgdall, E. & Troelsen, J., 2015, I: *Clinical Colorectal Cancer*. 14, 2, s. 63-71

**High interleukin-6 mRNA expression is a predictor of relapse in colon cancer**

Olsen, J., Kirkeby, L. T., Olsen, J., Eiholm, S., Jess, P., Gögenur, I. & Troelsen, J., 2015, I: *Anticancer Research*. 35, 4, s. 2235-40

**Identification of TNF-alpha-Responsive Promoters and Enhancers in the Intestinal Epithelial Cell Model Caco-2**

Boyd, M., Coskun, M., Lilje, B., Andersson, R., Hoof, I., Bornholdt, J., Dahlggaard, K., Olsen, J., Vitezic, M., Bjerrum, J. T. B., Sedelin, J. B., Nielsen, O. H., Troelsen, J. T. & Sandelin, A., 2014, I: *D N A Research*. 21, 6, s. 569-583

**Involvement of CDX2 in the cross talk between TNF- $\alpha$  and Wnt signaling pathway in the colon cancer cell line Caco-2.**

Coshun, M., Olsen Krüger, A., Bzorek, M., Holck, S., Engel, U. H., Nielsen, O. H. & Troelsen, J., 2014, I: *Carcinogenesis*. 35, 5, s. 1185-92

**The clinical perspectives of CDX2 expression in colorectal cancer: A qualitative systematic review**

Olsen, J., Espersen, M. L. M., Jess, P., Kirkeby, L. & Troelsen, J. T., 2014, I: *Surgical Oncology*. 23, 3, s. 167-176

**Transcriptional Control of Steroid Biosynthesis Genes in the Drosophila Prothoracic Gland by Ventral Veins Lacking and Knirps.**

Danielsen, E. T., Møller, M. E., Dorry, E., Kumora-Kawa, T., Fujimoto, Y., Troelsen, T., Herder, R., O'Connor, M. B., Niwa, R. & Rewitz, K., 2014, I: *P L o S Genetics*. 19, 10, s. e1004343

**miR-20b, miR-98, miR-125b-1\*, and let-7e\* as new potential diagnostic biomarkers in ulcerative colitis**

Coskun, M., Bjerrum, J. T., Seidelin, J., Troelsen, J., Olsen, J. & Nielsen, O. H., 21 jul. 2013, I: *World Journal of Gastroenterology*. 19, 27, s. 4289-4299 10 s.

**Diversity of Lactase Persistence Alleles in Ethiopia: Signature of a Soft Selective Sweep**

Jones, B., Raga, T., Liebert, A., Olsen, A. K., Danielsen, E. T., Bekele, E., Troelsen, J., Bradman, N. & Swallow, D. M., 2013, I: *American Journal of Human Genetics*. 93, 3, s. 538-544 7 s.

**Regulation of APC and AXIN2 expression by intestinal tumor suppressor CDX2 in colon cancer cells**

Olsen, A. K., Coskun, M., Bzorek, M., Kristensen, M., Danielsen, E. T., Jørgensen, S., Olsen, J., Engel, U., Holck, S. & Troelsen, J., 2013, I: *Carcinogenesis*. 34, 6, s. 1361-1369

**Current and emerging approaches to define intestinal epithelium-specific transcriptional networks**

Olsen, A. K., Boyd, M., Danielsen, E. T. & Troelsen, J., 2012, I: *American Journal of Physiology: Gastrointestinal and Liver Physiology*. 302, 3, s. G277-86

**pcaGoPromoter - An R Package for Biological and Regulatory Interpretation of Principal Components in Genome-Wide Gene Expression Data**

Hansen, M., Gerds, T. A., Sedelin, J. B., Troelsen, J. & Olsen, J., 2012, I: *P L o S One*. 7, 2, s. e32394

**TNF- $\alpha$ -induced down-regulation of CDX2 suppresses MEP1A expression in colitis**

Coskun, M., Olsen, A. K., Holm, T. L., Kvist, P. H., Nielsen, O. H., Riis, L. B., Olsen, J. & Troelsen, J., 2012, I: *B B A - Molecular Basis of Disease*. 1822, 6, s. 843-851 9 s.

**The -14010\*C variant associated with lactase persistence is located between an Oct-1 and HNF1 $\alpha$  binding site and increases lactase promoter activity**

Jensen, T. G. K., Liebert, A., Lewinsky, R., Swallow, D. M., Olsen, J. & Troelsen, J., 31 dec. 2011, I: *Human Genetics*. 130, 4, s. 483-493

**The role of CDX2 in intestinal homeostasis and inflammation**

Coskun, M., Troelsen, J. T. & Nielsen, O. H., mar. 2011, I: *Biochimica et Biophysica Acta - Molecular Basis of Disease*. 1812, 3, s. 283-289 7 s.

**Identification of a functional hepatocyte nuclear factor 4 binding site in the neutral ceramidase promoter**

Maltesen, H. R., Troelsen, J. T. & Olsen, J., 1 dec. 2010, I: *Journal of Cellular Biochemistry*. 111, 5, s. 1330-1336 7 s.

**Genome-wide analysis of CDX2 binding in intestinal epithelial cells (Caco-2)**

Boyd, M., Hansen, M., Jensen, T. G. K., Pearnau, A., Olsen, A. K., Bram, L. L., Bak, M., Tommerup, N., Olsen, J. & Troelsen, J. T., 13 aug. 2010, I: *Journal of Biological Chemistry*. 285, 33, s. 25115-25125 11 s.

**Control of intestinal promoter activity of the cellular migratory regulator gene ELMO3 by CDX2 and SP1**

Coskun, M., Boyd, M., Olsen, J. & Troelsen, J. T., 15 apr. 2010, I: *Journal of Cellular Biochemistry*. 109, 6, s. 1118-1128 11 s.

**Mitogen activated protein kinases: A role in inflammatory bowel disease?**

Broom, O. J., Widjaya, B., Troelsen, J., Olsen, J. & Nielsen, O. H., dec. 2009, I: *Clinical and Experimental Immunology*. 158, 3, s. 272-280 9 s.

**Mapping of HNF4 $\alpha$  target genes in intestinal epithelial cells**

Boyd, M., Bressendorff, S., Møller, J., Olsen, J. & Troelsen, J. T., 17 sep. 2009, I: *BMC Gastroenterology*. 9, s. 68

**Diagnosis of ulcerative colitis before onset of inflammation by multivariate modeling of genome-wide gene expression data**

Olsen, J., Gerds, T. A., Seidelin, J. B., Csillag, C., Bjerrum, J. T., Troelsen, J. T. & Nielsen, O. H., 2009, I: *Inflammatory Bowel Diseases*. 15, 7, s. 1032-1038 7 s.

**Laktoseintolerans: Gentest forenkler og forbedrer diagnostikken**

Vestergaard, E. M., Troelsen, J. & Lange, A., 13 okt. 2008, I: *Ugeskrift for Laeger*. 170, 42, s. 3312-3314 3 s.

**Cellular cross talk in the small intestinal mucosa: Postnatal lymphocytic immigration elicits a specific epithelial transcriptional response**

Schjoldager, K. T. B. G., Maltesen, H. R., Balmer, S., Lund, L. R., Claesson, M. H., Sjöström, H., Troelsen, J. T. & Olsen, J., jun. 2008, I: *American Journal of Physiology - Gastrointestinal and Liver Physiology*. 294, 6, s. G1335-G1343

Blue eye color in humans may be caused by a perfectly associated founder mutation in a regulatory element located within the HERC2 gene inhibiting OCA2 expression  
Eiberg, H., Troelsen, J., Nielsen, M., Mikkelsen, A., Mengel-From, J., Kjaer, K. W. & Hansen, L., mar. 2008, I: Human Genetics. 123, 2, s. 177-187 11 s.

Independent Introduction of Two Lactase-Persistence Alleles into Human Populations Reflects Different History of Adaptation to Milk Culture  
Enattah, N. S., Jensen, T. G. K., Nielsen, M., Lewinski, R., Kuokkanen, M., Rasinpera, H., El-Shanti, H., Seo, J. K., Alifrangis, M., Khalil, I. F., Natah, A., Ali, A., Natah, S., Comas, D., Mehdi, S. Q., Groop, L., Vestergaard, E. M., Imtiaz, F., Rashed, M. S. & Meyer, B. & 2 flere, Troelsen, J. & Pelttonen, L., 10 jan. 2008, I: American Journal of Human Genetics. 82, 1, s. 57-72 16 s.

Metabolome, transcriptome, and bioinformatic cis-element analyses point to HNF-4 as a central regulator of gene expression during enterocyte differentiation  
Stegmann, A., Hansen, M., Wang, Y., Larsen, J. B., Lund, L. R., Ritié, L., Nicholson, J. K., Quistorff, B., Simon-Assmann, P., Troelsen, J. T. & Olsen, J., 11 okt. 2006, I: Physiological Genomics. 27, 2, s. 141-155 15 s.

T<sub>-13910</sub> DNA variant associated with lactase persistence interacts with Oct-1 and stimulates lactase promoter activity in vitro  
Lewinsky, R. H., Jensen, T. G. K., Møller, J., Stensballe, A., Olsen, J. & Troelsen, J. T., 15 dec. 2005, I: Human Molecular Genetics. 14, 24, s. 3945-3953 9 s.

Differentiation-dependent activation of the human intestinal alkaline phosphatase promoter by HNF-4 in intestinal cells  
Olsen, L., Bressendorff, S., Troelsen, J. T. & Olsen, J., aug. 2005, I: American Journal of Physiology - Gastrointestinal and Liver Physiology. 289, 2, s. G220-G226

Adult-type hypolactasia and regulation of lactase expression  
Troelsen, J. T., 25 maj 2005, I: Biochimica et Biophysica Acta - General Subjects. 1723, 1-3, s. 19-32 14 s.

CVD: The intestinal crypt/villus in situ hybridization database  
Olsen, L., Hansen, M., Ekstrøm, C. T., Troelsen, J. T. & Olsen, J., 22 maj 2004, I: Bioinformatics. 20, 8, s. 1327-1328 2 s.

Converging signals synergistically activate the LAMC2 promoter and lead to accumulation of the laminin  $\gamma$ 2 chain in human colon carcinoma cells  
Olsen, J., Kirkeby, L. T., Brorsson, M. M., Dabelsteen, S., Troelsen, J. T., Bordoy, R., Fenger, K., Larsson, L. I. & Simon-Assmann, P., 1 apr. 2003, I: Biochemical Journal. 371, 1, s. 211-221 11 s.

An enhancer activates the pig lactase phlorizin hydrolase promoter in intestinal cells  
Troelsen, J. T., Mitchelmore, C. & Olsen, J., 13 feb. 2003, I: Gene. 305, 1, s. 101-111 11 s.

Identification of Keratinocyte Proteins That Mark Subsets of Cells in the Epidermal Stratum Basale: Comparisons with the Intestinal Epithelium  
Dabelsteen, S., Troelsen, J. T. & Olsen, J., 2003, I: Oncology Research. 13, 6-10, s. 393-398 6 s.

Low expression of insulin in the thymus of non-obese diabetic mice  
Brimnes, M. K., Jensen, T., Jørgensen, T. N., Michelsen, B. K., Troelsen, J. & Werdelin, O., dec. 2002, I: Journal of Autoimmunity. 19, 4, s. 203-213 11 s.

Transcriptome changes during intestinal cell differentiation  
Tadjali, M., Seidelin, J. B., Olsen, J. & Troelsen, J. T., 3 apr. 2002, I: Biochimica et Biophysica Acta - Molecular Cell Research. 1589, 2, s. 160-167 8 s.

Involvement of activator protein 1 complexes in the epithelium-specific activation of the laminin  $\gamma$ 2-chain gene promoter by hepatocyte growth factor (scatter factor)

Olsen, J., Lefebvre, O., Fritsch, C., Troelsen, J. T., Orian-Rousseau, V., Keding, M. & Simon-Assmann, P., 15 apr. 2000, I: *Biochemical Journal*. 347, 2, s. 407-417 11 s.

Interaction between the homeodomain proteins Cdx2 and HNF1 $\alpha$  mediates expression of the lactase-phlorizin hydrolase gene

Mitchelmore, C., Troelsen, J. T., Spodsberg, N., Sjöström, H. & Norén, O., 1 mar. 2000, I: *Biochemical Journal*. 346, 2, s. 529-535 7 s.

Transcriptional regulation of pig lactase-phlorizin hydrolase: Involvement of HNF-1 and FREACs

Spodsberg, N., Troelsen, J. T., Carlsson, P., Enerbäck, S., Sjöström, H. & Norén, O., 1999, I: *Gastroenterology*. 116, 4, s. 842-854 13 s.

The HOXC11 homeodomain protein interacts with the lactase-phlorizin hydrolase promoter and stimulates HNF1 $\alpha$ -dependent transcription

Mitchelmore, C., Troelsen, J. T., Sjöström, H. & Norén, O., 22 maj 1998, I: *Journal of Biological Chemistry*. 273, 21, s. 13297-13306 10 s.

Regulation of lactase-phlorizin hydrolase gene expression by the caudal-related homeodomain protein Cdx-2

Troelsen, J. T., Mitchelmore, C., Spodsberg, N., Jensen, A. M., Noren, O. & Sjöström, H., 15 mar. 1997, I: *Biochemical Journal*. 322, 3, s. 833-838 6 s.

The lactase phlorizin hydrolase (LCT) gene maps to pig chromosome 15q13

Thomsen, P. D., Johansson, M., Troelsen, J. T. & Andersson, L., feb. 1995, I: *Animal Genetics*. 26, 1, s. 49-52 4 s.

1 kb of the lactase-phlorizin hydrolase promoter directs post-weaning decline and small intestinal-specific expression in transgenic mice

Troelsen, J. T., Mehlum, A., Olsen, J., Spodsberg, N., Hansen, G. H., Prydz, H., Norén, O. & Sjöström, H., 11 apr. 1994, I: *FEBS Letters*. 342, 3, s. 291-296 6 s.

HNF1 $\alpha$  activates the aminopeptidase N promoter in intestinal (Caco-2) cells

Olsen, J., Laustsen, L. & Troelsen, J., 11 apr. 1994, I: *FEBS Letters*. 342, 3, s. 325-328 4 s.

Two intestinal specific nuclear factors binding to the lactase-phlorizin hydrolase and sucrase-isomaltase promoters are functionally related oligomeric molecules

Troelsen, J. T., Olsen, J., Mitchelmore, C., Hansen, G. H., Sjöström, H. & Norén, O., 11 apr. 1994, I: *FEBS Letters*. 342, 3, s. 297-301 5 s.

Lactase-phlorizin hydrolase and aminopeptidase N are differentially regulated in the small intestine of the pig

Torp, N., Rossi, M., Troelsen, J. T., Olsen, J. & Danielsen, E. M., 1993, I: *Biochemical Journal*. 295, 1, s. 177-182 6 s.

A novel intestinal trans-factor (NF-LPH1) interacts with the lactase-phlorizin hydrolase promoter and co-varies with the enzymatic activity

Troelsen, J. T., Olsen, J., Noren, O. & Sjoström, H., 1992, I: *Journal of Biological Chemistry*. 267, 28, s. 20407-20411 5 s.

## Tidligere publikationer

1. Coskun M, Troelsen JT, Nielsen OH: The role of CDX2 in intestinal homeostasis and inflammation. *Biochim Biophys Acta* 2011, 1812(3):283-289.

2. Maltesen HR, Troelsen JT, Olsen J: Identification of a functional hepatocyte nuclear factor 4 binding site in the neutral ceramidase promoter. *J Cell Biochem* 2010, 111(5):1330-1336.

3. Farooq M, Troelsen JT, Boyd M, Eiberg H, Hansen L, Hussain MS, Rehman S, Azhar A, Ali A, Bakhtiar SM et al: Preaxial polydactyly/triphalangeal thumb is associated with changed transcription factor-binding affinity in a family with a novel point mutation in the long-range cis-regulatory element ZRS. *Eur J Hum Genet* 2010, 18(6):733-736.

4. Coskun M, Boyd M, Olsen J, Troelsen JT: Control of intestinal promoter activity of the cellular migratory regulator gene ELMO3 by CDX2 and SP1. *J Cell Biochem* 2010, 109(6):1118-1128.

5. Boyd M, Hansen M, Jensen TG, Perearnau A, Olsen AK, Bram LL, Bak M, Tommerup N, Olsen J, Troelsen JT: Genome-wide analysis of CDX2 binding in intestinal epithelial cells (Caco-2). *J Biol Chem* 2010, 285(33):25115-25125.

6. Olsen J, Gerds TA, Seidelin JB, Csillag C, Bjerrum JT, Troelsen JT, Nielsen OH: Diagnosis of ulcerative colitis before onset of inflammation by multivariate modeling of genome-wide gene expression data. *Inflamm Bowel Dis* 2009, 15(7):1032-1038.
7. Broom OJ, Widjaya B, Troelsen J, Olsen J, Nielsen OH: Mitogen activated protein kinases: a role in inflammatory bowel disease? *Clin Exp Immunol* 2009, 158(3):272-280.
8. Boyd M, Bressendorf S, Møller J, Olsen J, Troelsen JT: Mapping of HNF4 $\alpha$  target genes in intestinal epithelial cells. *BMC Gastroenterology* 2009, 9(1):68.
9. Vestergaard EM, Troelsen J, Lange A: [Lactose intolerance. Genotyping simplifies and improves diagnosis]. *Ugeskr Laeger* 2008, 170(42):3312-3314.
10. Schjoldager KT, Maltesen HR, Balmer S, Lund LR, Claesson MH, Sjoström H, Troelsen JT, Olsen J: Cellular cross talk in the small intestinal mucosa: postnatal lymphocytic immigration elicits a specific epithelial transcriptional response. *Am J Physiol Gastrointest Liver Physiol* 2008, 294(6):G1335-1343.
11. Enattah NS, Jensen TG, Nielsen M, Lewinski R, Kuokkanen M, Rasinpera H, El-Shanti H, Seo JK, Alifrangis M, Khalil IF et al: Independent Introduction of Two Lactase-Persistence Alleles into Human Populations Reflects Different History of Adaptation to Milk Culture. *Am J Hum Genet* 2008, 82(1):57-72.
12. Eiberg H, Troelsen J, Nielsen M, Mikkelsen A, Mengel-From J, Kjaer KW, Hansen L: Blue eye color in humans may be caused by a perfectly associated founder mutation in a regulatory element located within the HERC2 gene inhibiting OCA2 expression. *Hum Genet* 2008, 123(2):177-187.
13. Stegmann A, Hansen M, Wang Y, Larsen JB, Lund LR, Ritte L, Nicholson JK, Quistorff B, Simon-Assmann P, Troelsen JT et al: Metabolome, transcriptome and bioinformatic cis-element analyses point to HNF-4 as a central regulator of gene expression during enterocyte differentiation. *Physiol Genomics* 2006, 11(2):141-155.
14. Troelsen JT: Adult-type hypolactasia and regulation of lactase expression. *Biochimica et Biophysica Acta* 2005, 1723(1-3):19-32.
15. Olsen L, Bressendorf S, Troelsen JT, Olsen J: Differentiation-dependent activation of the human intestinal alkaline phosphatase promoter by HNF-4 in intestinal cells. *Am J Physiol Gastrointest Liver Physiol* 2005, 289(2):G220-G226.
16. Lewinsky RH, Jensen TG, Møller J, Stensballe A, Olsen J, Troelsen JT: T-13910 DNA variant associated with lactase persistence interacts with Oct-1 and stimulates lactase promoter activity in vitro. *Hum Mol Genet* 2005, 14(24):3945-3953.
17. Olsen L, Hansen M, Ekström CT, Troelsen JT, Olsen J: CVD: the intestinal crypt/villus in situ hybridization database. *Bioinformatics* 2004, 20(8):1327-1328.
18. Troelsen JT, Olsen J, Møller J, Sjoström H: An upstream polymorphism associated with lactase persistence has increased enhancer activity. *Gastroenterology* 2003, 125(6):1686-1694.
19. Troelsen JT, Mitchelmore C, Olsen J: An enhancer activates the pig lactase phlorizin hydrolase promoter in intestinal cells. *Gene* 2003, 305:101-111.
20. Olsen J, Kirkeby LT, Brorsson MM, Dabelsteen S, Troelsen JT, Bordoy R, Fenger K, Larsson LI, Simon-Assmann P: Converging signals synergistically activate the LAMC2 promoter and lead to accumulation of the laminin gamma 2 chain in human colon carcinoma cells. *Biochemical Journal* 2003, 371(Pt 1):211-221.
21. Dabelsteen S, Troelsen JT, Olsen J: Identification of keratinocyte proteins that mark subsets of cells in the epidermal stratum basale: comparisons with the intestinal epithelium. *OncolRes* 2003, 13(6-10):393-398.
22. Tadjali M, Seidelin JB, Olsen J, Troelsen JT: Transcriptome changes during intestinal cell differentiation. *Biochimica et Biophysica Acta* 2002, 1589(2):160-167.
23. Brimnes MK, Jensen T, Jørgensen TN, Michelsen BK, Troelsen J, Werdelin O: Low expression of insulin in the thymus of non-obese diabetic mice. *J Autoimmun* 2002, 19(4):203-213.
24. Olsen J, Lefebvre O, Fritsch C, Troelsen JT, Orian-Rousseau V, Keding M, Simon-Assmann P: Involvement of activator protein 1 complexes in the epithelium-specific activation of the laminin gamma2-chain gene promoter by hepatocyte growth factor (scatter factor). *Biochem J* 2000, 347(Pt 2):407-417.
25. Mitchelmore C, Troelsen JT, Spodsberg N, Sjöström H, Norén O: Interaction between the homeodomain proteins Cdx2 and HNF1 $\alpha$  mediates expression of the lactase-phlorizin hydrolase gene. *Biochem J* 2000, 346 Pt 2:529-535.
26. Spodsberg N, Troelsen JT, Carlsson P, Enerback S, Sjöström H, Norén O: Transcriptional regulation of pig lactase-phlorizin hydrolase: involvement of HNF-1 and FREACs. *Gastroenterology* 1999, 116(4):842-854.
27. Mitchelmore C, Troelsen JT, Sjöström H, Norén O: The HOXC11 homeodomain protein interacts with the lactase-phlorizin hydrolase promoter and stimulates HNF1 $\alpha$ -dependent transcription. *Journal of Biological Chemistry* 1998, 273(21):13297-13306.
28. Troelsen JT, Mitchelmore C, Spodsberg N, Jensen AM, Noren O, Sjoström H: Regulation of lactase-phlorizin hydrolase gene expression by the caudal-related homeodomain protein Cdx-2. *Biochem J* 1997, 322 ( Pt 3):833-838.
29. Olsen J, Kokholm K, Troelsen JT, Laustsen L: An enhancer with cell-type dependent activity is located between the myeloid and epithelial aminopeptidase N (CD 13) promoters. *Biochemical Journal* 1997, 322:899-908.
30. Thomsen PD, Johansson M, Troelsen JT, Andersson L: The lactase phlorizin hydrolase (LCT) gene maps to pig chromosome 15q13. *Anim Genet* 1995, 26(1):49-52.
31. Troelsen JT, Olsen J, Mitchelmore C, Hansen GH, Sjoström H, Noren O: Two intestinal specific nuclear factors binding to the lactase-phlorizin hydrolase and sucrase-isomaltase promoters are functionally related oligomeric molecules. *FEBS Lett* 1994, 342(3):297-301.
32. Troelsen JT, Mehlum A, Olsen J, Spodsberg N, Hansen GH, Prydz H, Noren O, Sjoström H: 1 kb of the lactase-phlorizin hydrolase promoter directs post-weaning decline and small intestinal-specific expression in transgenic mice. *FEBS Lett* 1994, 342(3):291-296.
33. Olsen J, Laustsen L, Troelsen J: HNF1  $\alpha$  activates the aminopeptidase N promoter in intestinal (Caco-2) cells. *FEBS Lett* 1994, 342(3):325-328.

34. Torp N, Rossi M, Troelsen JT, Olsen J, Danielsen EM: Lactase-phlorizin hydrolase and aminopeptidase N are differentially regulated in the small intestine of the pig. *Biochemical Journal* 1993, 295:177-182.
35. Troelsen JT, Olsen J, Noren O, Sjostrom H: A novel intestinal trans-factor (NF-LPH1) interacts with the lactase-phlorizin hydrolase promoter and co-varies with the enzymatic activity. *J Biol Chem* 1992, 267(28):20407-20411.

## Presseklip

CBS news on the discovery of the mutation given blue eyes.  
<http://www.cbsnews.com/stories/2008/02/07/eveningnews/main3805316.shtml>

### **Bananfluers tis gør forskere klogere på menneskets tarms**

Troelsen, J. T.  
23/04/2016  
1 element af Mediedækning

### **Danskere er designet til at tåle mælk**

Troelsen, J. T.  
26/09/2014  
1 element af Mediedækning

### **Europæere gav indere mælkegen**

Troelsen, J. T.  
18/09/2011  
1 element af Mediedækning

### **Insulin har effekt på tarmbetændelse**

Troelsen, J.  
06/11/2018  
1 element af Mediedækning

### **Lækkert laboratorium skal lokke flere unge til RUC**

Troelsen, J. T.  
21/06/2014  
1 element af Mediedækning

### **Nye studier: Mælkeforbrug og laktose tolerans hænger - måske - ikke sammen**

Troelsen, J. T.  
02/08/2022  
1 element af Mediedækning

### **Nyt forskningscenter skal undersøge virtual reality's pædagogiske evner**

Jepsen, P. M. & Troelsen, J. T.  
22/11/2018  
1 element af Mediedækning

### **Oldtidsmennesker drak mælk, flere tusinde år før de kunne fordøje det**

Troelsen, J. T.  
29/07/2022  
1 element af Mediedækning

### **Skeletfund indikerer: Europæere kunne ikke tåle mælk i bronzealderen**

Troelsen, J. T.  
10/09/2020 → 12/09/2020  
2 elementer af Mediedækning

### **Tarmsystemet er blevet trendy**

Troelsen, J.  
17/03/2018

1 element af Mediedækning

**Vigtigt skridt mod fremtidens genmedicin**

Troelsen, J.

05/05/2017

1 element af Mediedækning

**Vigtigt skridt mod fremtidens genmedicin**

Troelsen, J.

13/07/2017

1 element af Mediedækning