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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 medicinal biology, Department for Science, Models and Systems (NSM), Roskilde University. 2011-

Publications

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 May 2024, In: *Acta Dermato-Venereologica*. 104, 7 p., 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, p. 203-221 19 p.

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, In: *European Journal of Human Genetics*. 31, 12, p. 1440–1446 7 p.

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., Dahlggaard, K. & Troelsen, J. T., Sept 2022, In: *PLOS ONE*. 17, 9, p. 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, In: *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, In: *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, In: *Annals of Surgical Oncology*. 28, 13, p. 8519-8531 13 p.

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, In: *FEBS Open Bio*. 11, 6, p. 1638-1644 7 p.

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, In: *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 May 2020, In: *B M C Cancer*. 20, 1, 10 p., 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, In: *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, In: *Annals of Surgery*. 271, 1, p. 75-85 11 p.

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, In: *Scientific Reports*. 10, 1, 9637.

HNF4 α and CDX2 Regulate Intestinal YAP1 Promoter Activity

Larsen, S., Davidsen, J., Dahlgaard, K., Pedersen, O. B. & Troelsen, J. T., 18 Jun 2019, In: *International Journal of Molecular Sciences (Online)*. 20, 12, 17 p., 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, In: *HemaSphere*. 3, S1, p. 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, In: *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, In: *P L o S One*. 13, 7, 13 p., 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 others Jensen, K. B., Gögenur, I., Thielsen, P., Seidelin, J. B., Nielsen, O. H., Bjerrum, J. T. & Sandelin, A. G., 25 Apr 2018, In: *Nature Communications*. 9, 1, 1661.

Identification and Functional Analysis of Gene Regulatory Sequences Interacting with Colorectal Tumor Suppressors
Dahlggaard, K. & Troelsen, J., 27 Mar 2018, *Colorectal Cancer: Methods and Protocols*. Beaulieu, J-F. (ed.). New York: Springer, p. 57-77 21 p. (Methods in Molecular Biology, Vol. 1765).

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

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

Precise integration of inducible transcriptional elements (PrITE) 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 May 2017, In: *Nucleic Acids Research*. 45, 13, p. e123 15 p., 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, In: *Journal of Medical Genetics*. 54, 3, p. 166-175 12 p.

Regulation of Laminin γ 2 Expression by CDX2 in Colonic Epithelial Cells Is Impaired During Active Inflammation

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

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, KB., Kyjovska, ZO., Berthing, T., Skaug, V., Levin, M., Koponen, IK., Shivayogimath, A., Booth, TJ., Alonso, B., Pesquera, A., Zurutuza, A., Thomsen, BL., Troelsen, J., Jacobsen, NR. & Vogel, U., 2017, In: *P L o S One*. 12, 6, p. e017835 e0178355.

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., 2017, In: *P L o S One*. 12, 8, e0183620.

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, In: *Journal of the American College of Surgeons*. 223, 4, suppl 1, p. S138

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

Swallow, D. M. & Troelsen, J., 2016, In: *Nature Structural and Molecular Biology*. 23, 6, p. 505-507 3 p.

HOXB4 Gene Expression Is Regulated by CDX2 in Intestinal Epithelial Cells

Jørgensen, S., Coshun, M., Mikkelsen Homburg, K., Pedersen, O. B. V. & Troelsen, J., 2016, In: *P L o S One*. 12 p., 0164555.

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, In: *Annals of Human Genetics*. 80, 6, p. 307–318 12 p.

Microrna 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, In: *Journal of the European Academy of Dermatology and Venereology*. 30, Suppl 6, p. 5

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., 2016, In: *Human Pathology*. 52, p. 38–46 9 p.

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, In: *A P M I S. Acta Pathologica, Microbiologica et Immunologica Scandinavica*. 124, 7, p. 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, In: *Biopreservation and Biobanking*. 13, 4, p. 255-262

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

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

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

Seidelin, J. B., Larsen, S., Linnemann, D., Vainer, B., Coskun, M., Troelsen, J. T. & Hagen Nielsen, O., 2015, In: *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, In: *Clinical Colorectal Cancer*. 14, 2, p. 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, In: *Anticancer Research*. 35, 4, p. 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., Dahlgaard, K., Olsen, J., Vitezic, M., Bjerrum, J. T. B., Seidelin, J. B., Nielsen, O. H., Troelsen, J. T. & Sandelin, A., 2014, In: *D N A Research*. 21, 6, p. 569-583

Involvement of CDX2 in the cross talk between TNF- α 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, In: *Carcinogenesis*. 35, 5, p. 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. T. & Troelsen, J. T., 2014, In: *Surgical Oncology*. 23, 3, p. 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, In: *P L o S Genetics*. 19, 10, p. 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, In: *World Journal of Gastroenterology*. 19, 27, p. 4289-4299 10 p.

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

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

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, In: *Carcinogenesis*. 34, 6, p. 1361-1369

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

Olsen, A. K., Boyd, M., Danielsen, E. T. & Troelsen, J., 2012, In: American Journal of Physiology: Gastrointestinal and Liver Physiology. 302, 3, p. 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, In: P L o S One. 7, 2, p. e32394

TNF- α -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, In: B B A - Molecular Basis of Disease. 1822, 6, p. 843-851 9 p.

The -14010°C variant associated with lactase persistence is located between an Oct-1 and HNF1 α 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, In: Human Genetics. 130, 4, p. 483-493

The role of CDX2 in intestinal homeostasis and inflammation

Coskun, M., Troelsen, J. T. & Nielsen, O. H., Mar 2011, In: Biochimica et Biophysica Acta - Molecular Basis of Disease. 1812, 3, p. 283-289 7 p.

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, In: Journal of Cellular Biochemistry. 111, 5, p. 1330-1336 7 p.

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

Boyd, M., Hansen, M., Jensen, T. G. K., Perrearnau, A., Olsen, A. K., Bram, L. L., Bak, M., Tommerup, N., Olsen, J. & Troelsen, J. T., 13 Aug 2010, In: Journal of Biological Chemistry. 285, 33, p. 25115-25125 11 p.

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, In: Journal of Cellular Biochemistry. 109, 6, p. 1118-1128 11 p.

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

Broom, O. J., Widjaya, B., Troelsen, J., Olsen, J. & Nielsen, O. H., Dec 2009, In: Clinical and Experimental Immunology. 158, 3, p. 272-280 9 p.

Mapping of HNF4 α target genes in intestinal epithelial cells

Boyd, M., Bressendorff, S., Møller, J., Olsen, J. & Troelsen, J. T., 17 Sept 2009, In: BMC Gastroenterology. 9, p. 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, In: Inflammatory Bowel Diseases. 15, 7, p. 1032-1038 7 p.

Laktoseintolerans: Gentest forenkler og forbedrer diagnostikken

Vestergaard, E. M., Troelsen, J. & Lange, A., 13 Oct 2008, In: Ugeskrift for Laeger. 170, 42, p. 3312-3314 3 p.

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, In: American Journal of Physiology - Gastrointestinal and Liver Physiology. 294, 6, p. 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, In: Human Genetics. 123, 2, p. 177-187 11 p.

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 others Troelsen, J. & Peltonen, L., 10 Jan 2008, In: *American Journal of Human Genetics*. 82, 1, p. 57-72 16 p.

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 Oct 2006, In: *Physiological Genomics*. 27, 2, p. 141-155 15 p.

T₋₁₃₉₁₀ 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, In: *Human Molecular Genetics*. 14, 24, p. 3945-3953 9 p.

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, In: *American Journal of Physiology - Gastrointestinal and Liver Physiology*. 289, 2, p. G220-G226

Adult-type hypolactasia and regulation of lactase expression

Troelsen, J. T., 25 May 2005, In: *Biochimica et Biophysica Acta - General Subjects*. 1723, 1-3, p. 19-32 14 p.

CVD: The intestinal crypt/villus in situ hybridization database

Olsen, L., Hansen, M., Ekstrøm, C. T., Troelsen, J. T. & Olsen, J., 22 May 2004, In: *Bioinformatics*. 20, 8, p. 1327-1328 2 p.

Converging signals synergistically activate the LAMC2 promoter and lead to accumulation of the laminin γ 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, In: *Biochemical Journal*. 371, 1, p. 211-221 11 p.

An enhancer activates the pig lactase phlorizin hydrolase promoter in intestinal cells

Troelsen, J. T., Mitchelmore, C. & Olsen, J., 13 Feb 2003, In: *Gene*. 305, 1, p. 101-111 11 p.

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, In: *Oncology Research*. 13, 6-10, p. 393-398 6 p.

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, In: *Journal of Autoimmunity*. 19, 4, p. 203-213 11 p.

Transcriptome changes during intestinal cell differentiation

Tadjali, M., Seidelin, J. B., Olsen, J. & Troelsen, J. T., 3 Apr 2002, In: *Biochimica et Biophysica Acta - Molecular Cell Research*. 1589, 2, p. 160-167 8 p.

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

Olsen, J., Lefebvre, O., Fritsch, C., Troelsen, J. T., Orian-Rousseau, V., Kedinger, M. & Simon-Assmann, P., 15 Apr 2000, In: *Biochemical Journal*. 347, 2, p. 407-417 11 p.

Interaction between the homeodomain proteins Cdx2 and HNF1 α mediates expression of the lactase-phlorizin hydrolase gene
Mitchelmore, C., Troelsen, J. T., Spodsberg, N., Sjöström, H. & Norén, O., 1 Mar 2000, In: *Biochemical Journal*. 346, 2, p. 529-535 7 p.

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, In: *Gastroenterology*. 116, 4, p. 842-854 13 p.

The HOXC11 homeodomain protein interacts with the lactase-phlorizin hydrolase promoter and stimulates HNF1 α -dependent transcription
Mitchelmore, C., Troelsen, J. T., Sjöström, H. & Norén, O., 22 May 1998, In: *Journal of Biological Chemistry*. 273, 21, p. 13297-13306 10 p.

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, In: *Biochemical Journal*. 322, 3, p. 833-838 6 p.

The lactase phlorizin hydrolase (LCT) gene maps to pig chromosome 15q13
Thomsen, P. D., Johansson, M., Troelsen, J. T. & Andersson, L., Feb 1995, In: *Animal Genetics*. 26, 1, p. 49-52 4 p.

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, In: *FEBS Letters*. 342, 3, p. 291-296 6 p.

HNF1 α activates the aminopeptidase N promoter in intestinal (Caco-2) cells
Olsen, J., Laustsen, L. & Troelsen, J., 11 Apr 1994, In: *FEBS Letters*. 342, 3, p. 325-328 4 p.

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, In: *FEBS Letters*. 342, 3, p. 297-301 5 p.

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, In: *Biochemical Journal*. 295, 1, p. 177-182 6 p.

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, In: *Journal of Biological Chemistry*. 267, 28, p. 20407-20411 5 p.

Previous publications

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, Pearnau 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 α 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, Sjostrom 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, Bressendorff 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, Moller 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, Ekstrom 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, Moller J, Sjostrom 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, Jorgensen 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 HNF1alpha 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 HNF1alpha-dependent transcription. Journal of Biological Chemistry 1998, 273(21):13297-13306. 28.Troelsen JT, Mitchelmore C, Spodsberg N, Jensen AM, Noren O, Sjostrom 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, Sjostrom 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, Sjostrom 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.

Press clippings

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 tarme

Jesper Thorvald Troelsen

23/04/2016

1 item of Media coverage

Danskere er designet til at tåle mælk

Jesper Thorvald Troelsen

26/09/2014
1 item of Media coverage

Europæere gav indere mælkegen

Jesper Thorvald Troelsen
18/09/2011
1 item of Media coverage

Insulin har effekt på tarmbetændelse

Jesper Troelsen
06/11/2018
1 item of Media coverage

Lækkert laboratorium skal lokke flere unge til RUC

Jesper Thorvald Troelsen
21/06/2014
1 item of Media coverage

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

Jesper Thorvald Troelsen
02/08/2022
1 item of Media coverage

Nyt forskningscenter skal undersøge virtual reality's pædagogiske evner

Per Meyer Jepsen & Jesper Thorvald Troelsen
22/11/2018
1 item of Media coverage

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

Jesper Thorvald Troelsen
29/07/2022
1 item of Media coverage

Skeletfund indikerer: Europæere kunne ikke tåle mælk i bronzealderen

Jesper Thorvald Troelsen
10/09/2020 → 12/09/2020
2 items of Media coverage

Tarmsystemet er blevet trendy

Jesper Troelsen
17/03/2018
1 item of Media coverage

Vigtigt skridt mod fremtidens genmedicin

Jesper Troelsen
05/05/2017
1 item of Media coverage

Vigtigt skridt mod fremtidens genmedicin

Jesper Troelsen
13/07/2017
1 item of Media coverage