

Cecilia Holm Wallenberg  
Molecular Endocrinology  
EXODIAB: Excellence of Diabetes Research in Sweden  
**Type of address: Visiting address.**  
Sölvegatan 19, BMC C11  
Rm BMC C1105c  
221 84  
Lund  
Sweden



**Type of address: Postal address.**  
Clinical Research Centre, CRC, Box 50332  
202 13  
Malmö  
Sweden

**Type of address: Visiting address.**  
Clinical Research Centre, Jan Waldenströms gata 35  
214 28  
Malmö  
Sweden  
**Email:** cecilia.holm@med.lu.se  
**Mobile:** +46706370485  
**Phone:** +46462228581

## Employment

### Research team manager, Professor

Molecular Endocrinology  
Lund University  
Lund, Sweden  
1990 Jan 1 → present

### Member of Strategic Research Area

EXODIAB: Excellence of Diabetes Research in Sweden  
Lund University  
Malmö, Sweden  
2010 Jan 1 → present

## Research outputs

### Analysis of vitamin D and its metabolites in biological samples – Part I: Optimization and comparison of UHPSFC-MS/MS and UHPLC-MS/MS methods

Pilařová, V., Socas-Rodríguez, B., Nováková, L., Essén, S., Holm, C., Turner, C. & Sandahl, M., 2024 Apr 15, In: Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences. 1237, 124087.

### Analysis of vitamin D and its metabolites in biological samples – Part II: Optimization of a sample preparation method for liver tissue

Pilařová, V., Socas-Rodríguez, B., Nováková, L., Holm, C., Sandahl, M. & Turner, C., 2024 Apr 15, In: Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences. 1237, 124088.

### Butyrate-producing bacteria as probiotic supplement: beneficial effects on metabolism and modulation of behaviour in an obesity mouse model

García-Serrano, A. M., Skoug, C., Axling, U., Korhonen, E. R., Teixeira, C., Ahrén, I. L., Mukhopadhyaya, I., Boteva, N., Martin, J., Scott, K., Gratz, S., Stenkula, K. G., Holm, C. & Duarte, J. M. N., 2024, In: Beneficial microbes. 16, 1, p. 109-124

### Genetic deletion of hormone-sensitive lipase in mice reduces cerebral blood flow but does not aggravate the impact of diet-induced obesity on memory

Skoug, C., Rogova, O., Spégel, P., Holm, C. & Duarte, J. M. N., 2024, In: Journal of Neurochemistry. 168, 5, p. 781-800

**Hormone-sensitive lipase is localized at synapses and is necessary for normal memory functioning in mice**  
Skoug, C., Holm Wallenberg, C. & Duarte, J. M., 2022 May 1, In: Journal of Lipid Research. 63, 5, 100195.

**Musik - en underutnyttjad kraft för bättre hälsa**

Johansson, K., Deppert, K. & Holm Wallenberg, C., 2022 Feb 18, Lund University.

**Simultaneous Determination of Vitamin D and Its Hydroxylated and Esterified Metabolites by Ultrahigh-Performance Supercritical Fluid Chromatography-Tandem Mass Spectrometry**

Socas-Rodríguez, B., Pilařová, V., Sandahl, M., Holm, C. & Turner, C., 2022 Feb, In: Analytical Chemistry. 94, 7, p. 3065-3073 9 p.

**Inner ear is a target for insulin signaling and insulin resistance: evidence from mice and auditory HEI-OC1 cells**

Pålbrink, A.-K., Kopietz, F., Morén, B., In 't Zandt, R., Kalinec, F., Stenkula, K., Göransson, O., Holm, C., Magnusson, M. & Degerman, E., 2020 Mar 31, In: BMJ open diabetes research & care. 8, e000820.

**Increased whole body energy expenditure and protection against diet-induced obesity in Cyp8b1-deficient mice is accompanied by altered adipose tissue features**

Axling, U., Cavallera, M., Degerman, E., Gäfvels, M., Eggertsen, G. & Holm, C., 2020, In: Adipocyte. 9, 1, p. 587-599 13 p.

**Recent advances in the analysis of vitamin D and its metabolites in food matrices**

Socas-Rodríguez, B., Sandahl, M., Holm, C. & Turner, C., 2020, In: separations. 7, 2, 27 p., 36.

**PNPLA3 variant M148 causes resistance to starvation-mediated lipid droplet autophagy in human hepatocytes**

Negoita, F., Blomdahl, J., Wasserstrom, S., Winberg, M. E., Osmark, P., Larsson, S., Stenkula, K. G., Ekstedt, M., Kechagias, S., Holm, C. & Jones, H. A., 2019, In: Journal of Cellular Biochemistry. 120, 1, p. 343-356

**AMPK activation by A-769662 and 991 does not affect catecholamine-induced lipolysis in human adipocytes**

Kopietz, F., Berggreen, C., Larsson, S., Säll, J., Ekelund, M., Sakamoto, K., Degerman, E., Holm, C. & Göransson, O., 2018, In: American Journal of Physiology - Endocrinology and Metabolism. 315, 5, p. E1075-E1085

**Dietary rose hip exerts antiatherosclerotic effects and increases nitric oxide-mediated dilation in ApoE-null mice**

Cavallera, M., Axling, U., Rippe, C., Swärd, K. & Holm, C., 2017, In: Journal of Nutritional Biochemistry. 44, p. 52-59

**Rose hip supplementation increases energy expenditure and induces browning of white adipose tissue**

Cavallera, M., Axling, U., Berger, K. & Holm, C., 2016 Dec 6, In: Nutrition & Metabolism. 13, 1, 9 p.

**Perilipin 1 binds to aquaporin 7 in human adipocytes and controls its mobility via protein kinase A mediated phosphorylation**

Söndergaard Hansen, J., Krintel, C., Hernebring, M., Haataja, T. J. K., de Marè, S., Wasserstrom, S., Kosinska-Eriksson, U., Palmgren, M., Holm, C., Stenkula, K. G., Jones, H. A. & Lindkvist-Petersson, K., 2016 Dec 1, In: Metabolism, Clinical and Experimental. 65, 12, p. 1731-1742 12 p.

**Partial disruption of lipolysis increases postexercise insulin sensitivity in skeletal muscle despite accumulation of DAG**

Serup, A. K., Alsted, T. J., Jordy, A. B., Schjerling, P., Holm, C. & Kiens, B., 2016 Oct 1, In: Diabetes. 65, 10, p. 2932-2942 11 p.

**White adipose tissue browning in the R6/2 mouse model of Huntington's disease**

McCourt, A. C., Jakobsson, L., Larsson, S., Holm, C., Piel, S., Elmér, E. & Björkqvist, M., 2016 Aug 1, In: PLoS ONE. 11, 8, e0159870.

**Lingonberries alter the gut microbiota and prevent low-grade inflammation in high-fat diet fed mice**

Heyman Lindén, L., Kotowska, D., Sand, E., Mikael, B., Plaza, M., Turner, C., Holm, C., Fåk, F. & Berger, K., 2016 Apr 27, In: Food & Nutrition Research. 60, 29993.

**A rapid method for the separation of vitamin D and its metabolites by ultra-high performance supercritical fluid chromatography-mass spectrometry.**

Jumaah, F., Larsson, S., Essén, S., Cunico, L., Holm, C., Turner, C. & Sandahl, M., 2016, In: Journal of chromatography. A. 1440, p. 191-200 10 p.

**Berry intake changes hepatic gene expression and DNA methylation patterns associated with high-fat diet.**

Heyman, L., Seki, Y., Storm, P., Jones, H., Charron, M. J., Berger, K. & Holm, C., 2016, In: Journal of Nutritional Biochemistry. 27, p. 79-95

**Parathyroid hormone induces adipocyte lipolysis via PKA-mediated phosphorylation of hormone-sensitive lipase.**

Larsson, S., Jones, H., Göransson, O., Degerman, E. & Holm, C., 2016, In: Cellular Signalling. 28, 3, p. 204-213

**Cereal Byproducts Have Prebiotic Potential in Mice Fed a High-Fat Diet**

Berger, K., Falck, P., Linninge, C., Nilsson, U., Axling, U., Grey, C., Stålbrand, H., Nordberg Karlsson, E., Nyman, M., Holm, C. & Adlercreutz, P., 2014 Aug, In: Journal of Agricultural and Food Chemistry. 62, 32, p. 8169-8178

**Adiponutrin: A multimeric plasma protein.**

Tinnerfelt Winberg, M., Khalaj Motlagh, M., Stenkula, K., Holm, C. & Jones, H., 2014, In: Biochemical and Biophysical Research Communications. 446, 4, p. 1114-1119

**Evaluation of Beneficial Metabolic Effects of Berries in High-Fat Fed C57BL/6J Mice.**

Heyman, L., Axling, U., Blanco, N., Sterner, O., Holm, C. & Berger, K., 2014, In: Journal of Nutrition and Metabolism. 2014, Jan 14, 403041.

**Contraction-induced lipolysis is not impaired by inhibition of hormone-sensitive lipase in skeletal muscle**

Alsted, T. J., Ploug, T., Prats, C., Serup, A. K., Hoeg, L., Schjerling, P., Holm, C., Zimmermann, R., Fledelius, C., Galbo, H. & Kiens, B., 2013, In: Journal of Physiology. 591, 20, p. 5141-5155

**Diverse effects of oats on cholesterol metabolism in C57BL/6 mice correlate with expression of hepatic bile acid-producing enzymes.**

Andersson, K. E., Axling, U., Xu, J., Swärd, K., Ahrné, S., Molin, G., Holm, C. & Hellstrand, P., 2013, In: European Journal of Nutrition. 52, 7, p. 1755-1769

**Partial Inhibition of Adipose Tissue Lipolysis Improves Glucose Metabolism and Insulin Sensitivity Without Alteration of Fat Mass**

Girousse, A., Tavernier, G., Valle, C., Moro, C., Mejhert, N., Dinel, A.-L., Houssier, M., Roussel, B., Besse-Patin, A., Combes, M., Mir, L., Monbrun, L., Bezaire, V., Prunet-Marcassus, B., Waget, A., Vila, I., Caspar-Bauguil, S., Louche, K., Marques, M.-A. & Mairal, A. & 10 others, Renoud, M.-L., Galitzky, J., Holm, C., Mouisel, E., Thalamas, C., Viguerie, N., Sulpice, T., Burcelin, R., Arner, P. & Langin, D., 2013, In: PLoS Biology. 11, 2, e1001485.

**Characterization of the Lipid Droplet Proteome of a Clonal Insulin-producing  $\beta$ -Cell Line (INS-1 832/13).**

Larsson, S., Resjö, S., Gomez, M., James, P. & Holm, C., 2012, In: Journal of Proteome Research. 11, 2, p. 1264-1273

**Effects of rose hip intake on risk markers of type 2 diabetes and cardiovascular disease: a randomized, double-blind, cross-over investigation in obese persons.**

Axling, U., Berger, K., Högberg, A., Landin-Olsson, M. & Holm, C., 2012, In: European Journal of Clinical Nutrition. 66, 5, p. 585-590

**Green tea powder and Lactobacillus plantarum affect gut microbiota, lipid metabolism and inflammation in high-fat fed C57BL/6J mice**

Axling, U., Olsson, C., Xu, J., Fernandez, C., Larsson, S., Ström, K., Ahrné, S., Holm, C., Molin, G. & Berger, K., 2012, In: Nutrition & Metabolism. 9, 105

**Altered Desaturation and Elongation of Fatty Acids in Hormone-Sensitive Lipase Null Mice**

Fernandez, C., Schuhmann, K., Herzog, R., Fielding, B., Frayn, K., Shevchenko, A., James, P., Holm, C. & Ström, K., 2011, In: PLoS ONE. 6, 6

**Rose hip exerts antidiabetic effects via a mechanism involving downregulation of the hepatic lipogenic program**

Axling, U., Henriksson, E., Ström, K., Alenfall, J., Göransson, O. & Holm, C., 2011, In: American Journal of Physiology: Endocrinology and Metabolism. 300, 1, p. E111-E121

**Rye bran alkylresorcinols suppress adipocyte lipolysis and hormone-sensitive lipase activity**

Axling, U., Dey, E., Holm, C. & Degerman, E., 2011, In: Molecular Nutrition and Food Research. 55, p. S290-S293

**EuroDia: a beta-cell gene expression resource.**

Liechti, R., Csárdi, G., Bergmann, S., Schütz, F., Sengstag, T., Boj, S. F., Servitja, J. M., Ferrer, J., Van Lommel, L., Schuit, F., Klinger, S., Thorens, B., Naamane, N., Eizirik, D. L., Marselli, L., Bugliani, M., Marchetti, P., Lucas, S., Holm, C. & Jongeneel, C. V. & 1 others, Xenarios, I., 2010 Jan 1, In: Database: the journal of biological databases and curation. 2010

**A low glycaemic diet improves oral glucose tolerance but has no effect on  $\beta$ -cell function in C57BL/6J mice.**

Axling, U., Rosén, L., Wierup, N., Östman, E., Björck, I. & Holm, C., 2010, In: Diabetes, Obesity and Metabolism. 12, 11, p. 976-982

**Dose-dependent anti-obesity and anti-diabetic effects of synbiotics in high-fat fed C57BL/6J mice**

Berger, K., Axling, U. & Holm, C., 2010, In: Diabetologia. 53, Suppl. 1, p. 948

**Expression of nonalcoholic fatty liver disease associated adiponutrin variant I148M causes triglyceride accumulation**

Jones, H., Fernandez, C., Larsson, S. & Holm, C., 2010, In: Diabetologia. 53, Suppl. 1, p. 765

**Metabolic effects of whole grain wheat and whole grain rye in the C57BL/6J mouse.**

Axling, U., Rosén, L., Östman, E., Ström, K., Wierup, N., Björck, I. & Holm, C., 2010, In: Nutrition. 26, p. 230-239

**Probiotics lower plasma glucose in the high-fat fed C57BL/6J mouse.**

Axling, U., Bränning, C., Ahrné, S., Molin, G., Alenfall, J., Önning, G., Nyman, M. & Holm, C., 2010, In: Beneficial microbes. 1, 2, p. 189-196

**Quaternary structure and enzymological properties of the different hormone-sensitive lipase (HSL) isoforms.**

Krintel, C., Klint, C., Lindvall, H., Mörgelin, M. & Holm, C., 2010, In: PLoS ONE. 5, 6, e11193.

**Rose hip exerts anti diabetic effects via a mechanism involving downregulation of the hepatic lipogenic program**

Axling, U., Henriksson, E., Ström, K., Alenfall, J., Göransson, O. & Holm, C., 2010, In: Diabetologia. 53, Suppl. 1, p. 951

**A beta cell-specific knockout of hormone-sensitive lipase in mice results in hyperglycaemia and disruption of exocytosis.**

Fex, M., Haemmerle, G., Wierup, N., Dekker Nitert, M., Rehn, M., Ristow, M., Zechner, R., Sundler, F., Holm, C., Eliasson, L. & Mulder, H., 2009, In: Diabetologia. 52, p. 271-280

**Activation of Hormone-sensitive Lipase Requires Two Steps, Protein Phosphorylation and Binding to the PAT-1 Domain of Lipid Droplet Coat Proteins**

Wang, H., Hu, L., Dalen, K., Dorward, H., Marcinkiewicz, A., Russell, D., Gong, D., Londos, C., Yamaguchi, T., Holm, C., Rizzo, M. A., Brasaemle, D. & Sztalryd, C., 2009, In: Journal of Biological Chemistry. 284, 46, p. 32116-32125

**Endosperm and whole grain rye breads are characterized by low post-prandial insulin response and a beneficial blood glucose profile**

Rosén, L., Silva, L. O. B., Axling, U., Holm, C., Östman, E. & Björck, I., 2009, In: Nutrition Journal. 8:42

**Hormone-sensitive lipase (HSL) is also a retinyl ester hydrolase: evidence from mice lacking HSL.**

Ström, K., Gundersen, T. E., Hansson, O., Lucas, S., Fernandez, C., Blomhoff, R. & Holm, C., 2009, In: The FASEB journal : official publication of the Federation of American Societies for Experimental Biology. 23, 7, p. 2307-2316

**Omics Analyses Reveal a Potential Link between Hormone-Sensitive Lipase and Polyamine Metabolism.**

Fernandez, C., Krogh, M., Wårell, K., Alm, K., Oredsson, S., Persson, L., James, P. & Holm, C., 2009, In: Journal of Proteome Research. 8, p. 5008-5019

**Perilipin is present in islets of Langerhans and protects against lipotoxicity when overexpressed in the beta-cell line INS-1.**

Borg, J., Klint, C., Wierup, N., Ström, K., Larsson, S., Sundler, F., Lupi, R., Marchetti, P., Xu, G., Kimmel, A., Londos, C. & Holm, C., 2009, In: Endocrinology. 150, 7, p. 3049-3057

**Phosphorylation of hormone-sensitive lipase by protein kinase A in vitro promotes an increase in its hydrophobic surface area.**

Krintel, C., Mörgelin, M., Logan, D. & Holm, C., 2009, In: The FEBS Journal. 276, 17, p. 4752-4762

**Attainment of brown adipocyte features in white adipocytes of hormone-sensitive lipase null mice.**

Ström, K., Hansson, O., Lucas, S., Nevsten, P., Fernandez, C., Klint, C., Movérare-Skrtic, S., Sundler, F., Ohlsson, C. & Holm, C., 2008, In: PLoS ONE. 3, 3, e1793.

**Disturbed cholesterol homeostasis in hormone-sensitive lipase null mice.**

Fernandez, C., Lindholm, M., Krogh, M., Lucas, S., Larsson, S., Osmark, P., Berger, K., Boren, J., Fielding, B. A., Frayn, K. N. & Holm, C., 2008, In: American Journal of Physiology: Endocrinology and Metabolism. 295, July 29, p. E820-E831

**Hormone-sensitive lipase is necessary for normal mobilization of lipids during sub-maximal exercise.**

Fernandez, C., Hansson, O., Nevsten, P., Holm, C. & Klint, C., 2008, In: American Journal of Physiology: Endocrinology and Metabolism. 295, p. E179-E186

**Lack of cholesterol mobilization in islets of hormone-sensitive lipase deficient mice impairs insulin secretion.**

Larsson, S., Wierup, N., Sundler, F., Eliasson, L. & Holm, C., 2008, In: Biochemical and Biophysical Research Communications. 376, p. 558-562

**Metabolomic and proteomic analysis of a clonal insulin-producing beta-cell line (INS-1 832/13).**

Fernandez, C., Krus, U., Hallgard, E., Spégel, P., Holm, C., Krogh, M., Wårell, K., James, P. & Mulder, H., 2008, In: Journal of Proteome Research. 7, 1, p. 400-411

**Ser649 and Ser650 are the major determinants of protein kinase A-mediated activation of human hormone-sensitive lipase against lipid substrates.**

Krintel, C., Osmark, P., Larsen, M. R., Resjö, S., Logan, D. & Holm, C., 2008, In: PLoS ONE. 3, 11, e3756.

**Adipose TriGlyceride Lipase (ATGL) and Hormone-Sensitive Lipase (HSL) protein expression is decreased in the obese insulin resistant state.**

Jocken, J. W. E., Langin, D., Smit, E., Saris, W. H., Valle, C., Hul, G. B., Holm, C., Arner, P. & Blaak, E. E., 2007, In: Journal of Clinical Endocrinology and Metabolism. 92, 6, p. 2292-2299

**Long-term exposure to glucose and lipids inhibits glucose-induced insulin secretion downstream of granule fusion with plasma membrane.**

Olofsson, C., Collins, S., Bengtsson, M., Eliasson, L., Salehi, S. A., Shimomura, K., Tarasov, A., Holm, C., Ashcroft, F. & Rorsman, P., 2007, In: Diabetes. 56, 7, p. 1888-1897

**Metabolic Effects of Dietary Glycaemic Index in the C57BL/6J Mouse**

Axling, U., Rosén, L., Östman, E., Björck, I. & Holm, C., 2007, (Unpublished).

**Metabolic properties of rye**

Rosén, L., Blanco Silva, L., Axling, U., Holm, C., Östman, E. & Björck, I., 2007.

**{beta}-Cell Lipases and Insulin Secretion.**

Fex, M., Lucas, S., Sörhede Winzell, M., Ahrén, B., Holm, C. & Mulder, H., 2006, In: *Diabetes*. 55, Suppl 2, p. S24-S31

**Comparison of MS/MS methods for protein identification from 2D-PAGE**

Arrigoni, G., Fernandez, C., Holm, C., Scigelova, M. & James, P., 2006, In: *Journal of Proteome Research*. 5, 9, p. 2294-2300

**Decrease in intramuscular lipid droplets and translocation of HSL in response to muscle contraction and epinephrine**

Prats, C., Donsmark, M., Qvortrup, K., Londos, C., Sztalryd, C., Holm, C., Galbo, H. & Ploug, T., 2006, In: *Journal of Lipid Research*. 47, 11, p. 2392-2399

**Glucose-stimulated insulin secretion correlates with beta-cell lipolysis.**

Sörhede Winzell, M., Ström, K., Holm, C. & Ahrén, B., 2006, In: *Nutrition Metabolism and Cardiovascular Diseases*. 16, p. S11-S16

**Inflammatory response in white adipose tissue in the non-obese hormone-sensitive lipase null mouse model.**

Hansson, O., Ström, K., Güner, N., Wierup, N., Sundler, F., Höglund, P. & Holm, C., 2006, In: *Journal of Proteome Research*. 5, 7, p. 1701-1710

**The hormone-sensitive lipase C-60G promoter polymorphism is associated with increased waist circumference in normal-weight subjects.**

Nilsson, E. A., Johansson, L., Ström, K., Hoffstedt, J., Groop, L., Holm, C. & Ridderstråle, M., 2006, In: *International Journal of Obesity*. 30, 9, p. 1442-1448

**The metabolic effects of whole grain wheat and rye in C57BL/6J mice**

Axling, U., Rosén, L., Östman, E. & Holm, C., 2006.

**Adipocyte lipases and defect of lipolysis in human obesity**

Langin, D., Dicker, A., Tavernier, G., Hoffstedt, J., Mairal, A., Ryden, M., Arner, E., Sicard, A., Jenkins, C. M., Viguerie, N., van Harmelen, V., Gross, R. W., Holm, C. & Arner, P., 2005, In: *Diabetes*. 54, 11, p. 3190-3197

**Continuous separation of lipid particles from erythrocytes by means of laminar flow and acoustic standing wave forces**

Petersson, F., Lenshof, A., Holm, C., Bjursten, H. & Laurell, T., 2005, In: *Lab on a Chip*. 5, 1, p. 20-22

**Design of cereal foods with advantageous effects in relation to IRS; Exploiting a combination of functional food concepts**

Holm, C., Östman, E., Björck, I. & Ridderstråle, M., 2005.

**Effect of murine strain on metabolic pathways of glucose production after brief or prolonged fasting**

Burgess, S., Jeffrey, F., Storey, C., Milde, A., Hausler, N., Merritt, M., Mulder, H., Holm, C., Sherry, A. & Malloy, C., 2005, In: *American Journal of Physiology: Endocrinology and Metabolism*. 289, 1, p. E53-E61

**Hormone-Sensitive Lipase as Mediator of Lipolysis in Contracting Skeletal Muscle.**

Donsmark, M., Langfort, J., Holm, C., Ploug, T. & Galbo, H., 2005, In: *Exercise and Sport Sciences Reviews*. 33, 3, p. 127-133

**Marked Re-Utilization of Free Fatty Acids During Activated Lipolysis in Human Skeletal Muscle.**

Enoksson, S., Hagström-Toft, E., Nordahl, J., Hultenby, K., Pettersson, N., Isaksson, B., Permert, J., Wibom, R., Holm, C., Bolinder, J. & Arner, P., 2005, In: *Journal of Clinical Endocrinology and Metabolism*. 90, 2, p. 1189-1195

**Transcriptome and proteome analysis of soleus muscle of hormone-sensitive lipase-null mice**

Hansson, O., Donsmark, M., Ling, C., Nevsten, P., Danfelter, M., Andersen, J. N., Galbo, H. & Holm, C., 2005, In: *Journal of Lipid Research*. 46, 12, p. 2614-2623

**Amino-terminal anchored surface display in insect cells and budded baculovirus using the amino-terminal end of neuraminidase.**

Borg, J., Nevsten, P., Wallenberg, R., Stenström, M., Cardell, S., Falkenberg, C. & Holm, C., 2004, In: Journal of Biotechnology. 114, 1-2, p. 21-30

**A novel hormone-sensitive lipase isoform expressed in pancreatic beta -cells.**

Lindvall, H., Nevsten, P., Ström, K., Wallenberg, R., Sundler, F., Langin, D., Sörhede Winzell, M. & Holm, C., 2004, In: Journal of Biological Chemistry. 279, 5, p. 3828-3836

**Contractions induce phosphorylation of the AMPK site Ser(565) in hormone-sensitive lipase in muscle**

Donsmark, M., Langfort, J., Holm, C., Ploug, T. & Galbo, H., 2004, In: Biochemical and Biophysical Research Communications. 316, 3, p. 867-871

**Effects of Growth Hormone on the Function of beta-Adrenoceptor Subtypes in Rat Adipocytes.**

Yang, S., Mulder, H., Holm, C. & Edén, S., 2004, In: Obesity Research. 12, 2, p. 330-339

**Hormone-sensitive Lipase deficiency in mouse islets abolishes neutral cholesterol ester hydrolase activity but leaves lipolysis, acylglycerides, fat oxidation, and insulin secretion intact.**

Fex, M., Olofsson, C. S., Krus, U., Bacos, K., Lindvall, H., Sörhede Winzell, M., Rorsman, P., Holm, C. & Mulder, H., 2004, In: Endocrinology. 145, 8, p. 3746-3753

**Inhibition of lipase activity and lipolysis in rat islets reduces insulin secretion.**

Mulder, H., Yang, S., Sörhede Winzell, M., Holm, C. & Ahrén, B., 2004, In: Diabetes. 53, 1, p. 122-128

**Palmitate increases L-type Ca<sup>2+</sup> currents and the size of the readily releasable granule pool in mouse pancreatic beta-cells.**

Olofsson, C., Salehi, A., Holm, C. & Rorsman, P., 2004, In: Journal of Physiology. 557, 3, p. 935-948

**Palmitate Stimulation of Glucagon Secretion in Mouse Pancreatic {alpha}-Cells Results From Activation of L-Type Calcium Channels and Elevation of Cytoplasmic Calcium.**

Olofsson, C., Salehi, A., Holm, C. & Rorsman, P., 2004, In: Diabetes. 53, 11, p. 2836-2843

**Particle separation using ultrasound can radically reduce embolic load to brain after cardiac surgery.**

Bjursten, H., Holm, C., Lenshof, A., Pettersson, F., Johansson, P. & Laurell, T., 2004, In: Annals of Thoracic Surgery. 78, 5, p. 1572-1578

**Regulation and role of hormone-sensitive lipase in rat skeletal muscle**

Donsmark, M., Langfort, J., Holm, C., Ploug, T. & Galbo, H., 2004, In: Proceedings of the Nutrition Society. 63, 2, p. 309-314

**Separation of lipids from blood utilizing ultrasonic standing waves in microfluidic channels.**

Petersson, F., Lenshof, A., Holm, C., Bjursten, H. & Laurell, T., 2004, In: Analyst. 129, 10, p. 938-943

**The testicular form of hormone-sensitive lipase HSLtes confers rescue of male infertility in HSL-deficient mice**

Vallet-Erdtmann, V., Tavernier, G., Contreras, J. A., Mairal, A., Rieu, C., Touzalin, A., Holm, C., Jegou, B. & Langin, D., 2004, In: Journal of Biological Chemistry. 279, 41, p. 42875-42880

**Contractions activate hormone-sensitive lipase in rat muscle by protein kinase C and mitogen-activated protein kinase**

Donsmark, M., Langfort, J., Holm, C., Ploug, T. & Galbo, H., 2003, In: Journal of Physiology. 550, 3, p. 845-854

**Downregulation of islet hormone-sensitive lipase during long-term high-fat feeding.**

Sörhede Winzell, M., Holm, C. & Ahrén, B., 2003, In: Biochemical and Biophysical Research Communications. 304, 2, p. 273-278

**Hormone-sensitive lipase in skeletal muscle: regulatory mechanisms.**

Langfort, J., Donsmark, M., Ploug, T., Holm, C. & Galbo, H., 2003, In: *Acta Physiologica Scandinavica*. 178, 4, p. 397-403

**Hormone-sensitive lipase is a cholesterol esterase of the intestinal mucosa**

Grober, J., Lucas, S., Sörhede Winzell, M., Zaghini, I., Mairal, A., Contreras, J. A., Besnard, P., Holm, C. & Langin, D., 2003, In: *Journal of Biological Chemistry*. 278, 8, p. 6510-6515

**Hormone-sensitive lipase null mice exhibit signs of impaired insulin sensitivity whereas insulin secretion is intact.**

Mulder, H., Sorhede-Winzell, M., Contreras, J. A., Fex, M., Strom, K., Ploug, T., Galbo, H., Arner, P., Lundberg, C., Sundler, F., Ahrén, B. & Holm, C., 2003, In: *Journal of Biological Chemistry*. 278, 38, p. 36380-36388

**Molecular mechanisms regulating hormone-sensitive lipase and lipolysis.**

Holm, C., 2003, In: *Biochemical Society Transactions*. 31, Pt 6, p. 1120-1124

**Mutational analysis of the hormone-sensitive lipase translocation reaction in adipocytes**

Su, C., Sztalryd, C., Contreras, J. A., Holm, C., Kimmel, A. & Londos, C., 2003, In: *Journal of Biological Chemistry*. 278, 44, p. 43615-43619

**Pancreatic beta-Cell Lipotoxicity Induced by Overexpression of Hormone-Sensitive Lipase.**

Sörhede Winzell, M., Svensson, H., Enerbäck, S., Ravnskjaer, K., Mandrup, S., Esser, V., Arner, P., Alves-Guerra, M.-C., Miroux, B., Sundler, F., Ahrén, B. & Holm, C., 2003, In: *Diabetes*. 52, 8, p. 2057-2065

**Relationship of the Hormone-Sensitive Lipase-Mediated Modulation of Cholesterol Metabolism in Individual Compartments of the Testis to Serum Pituitary Hormone and Testosterone Concentrations in a Seasonal Breeder, the Mink (*Mustela vison*).**

Kabbaj, O., Yoon, S. R., Holm, C., Rose, J., Vitale, M. L. & Pelletier, R.-M., 2003, In: *Biology of Reproduction*. 68, 3, p. 722-734

**The Presence of a Catalytically Inactive Form of Hormone-Sensitive Lipase Is Associated With Decreased Lipolysis in Abdominal Subcutaneous Adipose Tissue of Obese Subjects.**

Ray, H., Beylot, M., Arner, P., Larrouy, D., Langin, D., Holm, C. & Large, V., 2003, In: *Diabetes*. 52, 6, p. 1417-1422

**A unique defect in the regulation of visceral fat cell lipolysis in the polycystic ovary syndrome as an early link to insulin resistance**

Ek, I., Arner, P., Ryden, M., Holm, C., Thorne, A., Hoffstedt, J. & Wahrenberg, H., 2002, In: *Diabetes*. 51, 2, p. 484-492

**C(2)-ceramide influences the expression and insulin-mediated regulation of cyclic nucleotide phosphodiesterase 3B and lipolysis in 3T3-L1 adipocytes.**

Mei, J., Stenson, L., Landström, T., Holm, C., Brindley, D., Manganiello, V. & Degerman, E., 2002, In: *Diabetes*. 51, 3, p. 631-637

**Characterization of a novel testicular form of human hormone-sensitive lipase**

Mairal, A., Melaine, N., Laurell, H., Grober, J., Stenson, L., Guillaudeau, T., Holm, C., Jegou, B. & Langin, D., 2002, In: *Biochemical and Biophysical Research Communications*. 291, 2, p. 286-290

**Major gentler differences in the lipolytic capacity of abdominal subcutaneous fat cells in obesity observed before and after long-term weight reduction**

Lofgren, P., Hoffstedt, J., Ryden, M., Thorne, A., Holm, C., Wahrenberg, H. & Arner, P., 2002, In: *Journal of Clinical Endocrinology and Metabolism*. 87, 2, p. 764-771

**A role for hormone-sensitive lipase in the selective mobilization of adipose tissue fatty acids**

Raclot, T., Holm, C. & Langin, D., 2001, In: *Biochimica et Biophysica Acta - Molecular and Cell Biology of Lipids*. 1532, 1-2, p. 88-96

**Expression, activity, and subcellular localization of testicular hormone-sensitive lipase during postnatal development in the guinea pig**

Kabbaj, O., Holm, C., Vitale, M. L. & Pelletier, R.-M., 2001, In: *Biology of Reproduction*. 65, 2, p. 601-612

**Fatty acid specificity of hormone-sensitive lipase: implication in the selective hydrolysis of triacylglycerols**

Raclot, T., Holm, C. & Langin, D., 2001, In: *Journal of Lipid Research*. 42, 12, p. 2049-2057

**Long-term leptin treatment of ob/ob mice improves glucose-induced insulin secretion**

Khan, A., Narangoda, S., Ahrén, B., Holm, C., Sundler, F. & Efendic, S., 2001, In: *International Journal of Obesity*. 25, 6, p. 816-821

**Overexpression of hormone-sensitive lipase in beta-cells results in blunted glucose stimulated insulin secretion after feeding mice a high-fat diet**

Sörhede Winzell, M., Svensson, H., Enerback, S., Ahrén, B. & Holm, C., 2001, In: *Diabetologia*. 44, Suppl. 1, p. A6-A6

**Testis hormone-sensitive lipase expression in spermatids is governed by a short promoter in transgenic mice**

Blaise, R., Guillaudoux, T., Tavernier, G., Daegelen, D., Evrard, B., Mairal, A., Holm, C., Jegou, B. & Langin, D., 2001, In: *Journal of Biological Chemistry*. 276, 7, p. 5109-5115

**The effect of exercise training on hormone-sensitive lipase in rat intra-abdominal adipose tissue and muscle**

Enevoldsen, L. H., Stallknecht, B., Langfort, J., Petersen, L. N., Holm, C., Ploug, T. & Galbo, H., 2001, In: *Journal of Physiology*. 536, 3, p. 871-877

**The expression of hormone-sensitive lipase in clonal beta-cells and rat islets is induced by long-term exposure to high glucose**

Winzell, M. S., Svensson, H., Arner, P., Ahren, B. & Holm, C., 2001, In: *Diabetes*. 50, 10, p. 2225-2230

**Hormone-sensitive lipase, the rate-limiting enzyme in triglyceride hydrolysis, is expressed and active in beta-cells**

Mulder, H., Stensson Holst, L., Svensson, H., Degerman, E., Sundler, F., Ahrén, B., Rorsman, P. & Holm, C., 1999, In: *Diabetes*. 48, 1, p. 228-232

**Identification of novel phosphorylation sites in hormone-sensitive lipase that are phosphorylated in response to isoproterenol and govern activation properties in vitro**

Anthonsen, M. W., Rönstrand, L., Wernstedt, C., Degerman, E. & Holm, C., 1998, In: *Journal of Biological Chemistry*. 273, 1, p. 215-221

**Protein kinase B is expressed in pancreatic beta cells and activated upon stimulation with insulin-like growth factor I**

Stenson, L., Mulder, H., Manganiello, V., Sundler, F., Ahrén, B., Holm, C. & Degerman, E., 1998, In: *Biochemical and Biophysical Research Communications*. 250, 1, p. 181-186

**[2] Regulation of hormone-sensitive lipase activity in adipose tissue**

Holm, C., Langin, D., Manganiello, V., Belfrage, P. & Degerman, E., 1997, In: *Methods in Enzymology*. 286, p. 45-67

**Partial purification and identification of hormone-sensitive lipase from chicken adipose tissue**

Anthonsen, M. W., Degerman, E. & Holm, C., 1997, In: *Biochemical and Biophysical Research Communications*. 236, 1, p. 94-99

**Domain-structure analysis of recombinant rat hormone-sensitive lipase**

Österlund, T., Danielsson, B., Degerman, E., Contreras, J. A., Edgren, G., Davis, R. C., Schotz, M. C. & Holm, C., 1996, In: *Biochemical Journal*. 319, Pt 2, p. 411-420

**Localization of hormone-sensitive lipase to rat Sertoli cells and its expression in developing and degenerating testes**

Stenson, L., Hoffmann, A. M., Mulder, H., Sundler, F., Holm, C., Bergh, A. & Fredrikson, G., 1994, In: *FEBS Letters*. 355, 2, p. 125-130

**Gene organization and primary structure of human hormone-sensitive lipase: possible significance of a sequence homology with a lipase of Moraxella TA144, an antarctic bacterium**

Langin, D., Laurell, H., Stenson, L., Belfrage, P. & Holm, C., 1993, In: Proceedings of the National Academy of Sciences. 90, 11, p. 4897-4901

## Awards

**Regulation of neuronal hormone-sensitive lipase**

Holm Wallenberg, C. (PI)

Dir Albert Pahlssons stiftelse för forskning och välgörenhet: SEK400,000.00

2024/12/04 → 2028/12/31

## Projects

**AFC: ANTIDIABETIC FOOD CENTRE**

Adlercreutz, P. (PI), Ahrén, I. L. (PI), Ahrné, S. (Researcher), Alhamimi, S. (Research student), Andersson, K. E. (Researcher), Andersson, K. E. (Research student), Månberger, A. (Researcher), Axling, U. (Researcher), Axling, U. (Research student), Bergenståhl, B. (Researcher), Berger, K. (PI), Björck, I. (PI), Bränning, C. (Research student), Bäckhed, F. (PI), Zanzer, Y. C. (Research student), Danielsson, A. (PI), Danielsson, B. (Research assistant), Degerman, E. (PI), Dejrnæk, P. (Researcher), Dey, E. (PI), Dougkas, A. (Researcher), Ekström, L. (Research student), Eliasson, A.-C. (PI), Fahlgren, C. (Research engineer), Falck, P. (PI), Falck, P. (Research student), Ghaffarzagdegan, T. (Research student), Granfeldt, Y. (Researcher), Grey, C. (Researcher), Gunnerud, U. (Research student), Håkansson, Å. (Researcher), Håkansson, Å. (Research student), Hällenius, F. (Researcher), Hällenius, F. (PI), Haskå, L. (PI), Haskå, L. (Research student), Heimann, E. (Research student), Hellstrand, P. (Researcher), Heyman, L. (Research student), Holm Wallenberg, C. (PI), Holmén-Pålbrink, A.-K. (Research assistant), Holst, O. (Researcher), Immerstrand, T. (Research student), Immerzeel, P. (Researcher), Jakobsdottir, G. (Research student), Jeppsson, B. (Researcher), Johansson, E. (Research student), Johansson, M. (Project coordinator), Johansson, M. (Researcher), Johansson, M. (Research assistant), Johansson, U. (Researcher), Jones, H. (Researcher), Nordberg Karlsson, E. (Researcher), Kovatcheva-Datchary, P. (Researcher), Kulcinskaja, E. (Research student), Landin-Olsson, M. (Researcher), Linninge, C. (Researcher), Marefati, A. (Research student), Marungruang, N. (Research student), Molin, G. (PI), Nilsson, A. (PI), Nilsson, E. (Research engineer), Nilsson, U. (PI), Nyman, M. (PI), Ohlson, E. (Research assistant), Olsson, C. (Researcher), Öste, R. (PI), Östman, E. (PI), Persson, L. (Research engineer), Persson, S. (Researcher), Plaza, M. (Researcher), Prykhodko, O. (Researcher), Radeborg, K. (Researcher), Rayner, M. (PI), Rosén, L. (Research student), Sandahl, M. (Researcher), Sandberg, J. (Research student), Sjö, M. (PI), Skog, K. (Researcher), Spégel, P. (PI), Ståhlbrand, H. (Researcher), Sterner, O. (PI), Svensson, J. (Research student), Tareke, E. (PI), Tovar, J. (PI), Turner, C. (PI), Weström, B. (Researcher), Xu, J. (Research student) & Zhong, Y. (Research student)  
2007/07/01 → 2018/01/31

**Bile acids as regulators of energy expenditure**

Holm Wallenberg, C. (Researcher) & Axling, U. (Researcher)

**Bioinspired Energy Conversion - Theme, Pufendorf Institute**

Andersson, Ö. (Project coordinator), Börjesson, P. (Researcher), Isaksson, H. (Researcher), Johansson, J. (Researcher), Linke, H. (Researcher), Revstedt, J. (Researcher), Hedenström, A. (Researcher), Johansson, C. (Researcher), Nilsson, J.-Å. (Researcher), Troein, C. (Researcher), Göransson, O. (Researcher), Holm Wallenberg, C. (Researcher), Mulder, H. (Researcher), Siversson, C. (Researcher) & Parrondo, J. (Researcher)  
2012/08/12 → 2013/08/13

**Food components for prevention and treatment of obesity and type 2 diabetes - Physiological effects and molecular mechanisms**

Berger, K. (PI), Axling, U. (Researcher), Hällenius, F. (PI), Turner, C. (PI), Spégel, P. (PI), Alhamimi, S. (Research student), Adlercreutz, P. (PI), Heyman, L. (Researcher) & Holm Wallenberg, C. (PI)  
2010/01/01 → 2017/12/31

**LU Futura**

Åkesson, L. (Project coordinator), Cronqvist, M. (Project coordinator), Oredsson, U. (Project communication officer), Julén Votinius, J. (Researcher), Rummukainen, M. (Researcher), Johansson, K. (Researcher), Stanfors, M. (Researcher), Stripple, J. (Researcher), Holm Wallenberg, C. (Researcher), Deppert, K. (Researcher), Granfelt, J. (Researcher), Hansen, M. (Col), Lunga, I. (Col) & Karlsson, L. (Col)  
2018/01/01 → 2020/12/12

**Next-generation probiotics**

Holm Wallenberg, C. (Researcher)

Dir Albert Pålssons stiftelse för forskning och välgörenhet

2021/01/01 → 2022/12/31

**Regulation of neuronal hormone-sensitive lipase**

Holm Wallenberg, C. (PI)

Dir Albert Pålssons stiftelse för forskning och välgörenhet

2024/12/04 → 2028/12/31

**Salt-inducibile kinases in adipose tissue**

Säll Sernevi, J. (Researcher), Göransson, O. (Supervisor) & Holm Wallenberg, C. (Assistant supervisor)

The Royal Physiographic Society in Lund

2012/09/15 → 2017/09/05