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## Qualifications

Master of Science, University of Copenhagen

Award Date: 30 Nov 2004

PhD, University of Copenhagen

Award Date: 27 Nov 2009

## Employment

**Associate Professor**

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1 May 2006 → nu

## Research outputs

**Effect of resveratrol on insulin action in primary myotubes from lean individuals and individuals with severe obesity**

Park, S., Jevtovic, F., Krassovskaia, P. M., Chaves, A. B., Zheng, D., Treebak, Jonas Thue & Houmard, J. A., 2024, In: *American Journal of Physiology - Endocrinology and Metabolism*. 326, 3, p. E398-E406 9 p.

**Impaired skeletal muscle regeneration in diabetes: From cellular and molecular mechanisms to novel treatments**

Espino Gonzalez, Ever, Dalbram, E., Mounier, R., Gondin, J., Farup, J., Jessen, N. & Treebak, Jonas Thue, 2024, In: *Cell Metabolism*. 36, 6, p. 1204-1236

**Metabolic plasticity and obesity-associated changes in diurnal postexercise metabolism in mice**

Pendergrast, L. A., Ashcroft, Stephen Paul, Ehrlich, Amy M, Treebak, Jonas Thue, Krook, A., Dollet, L. & Zierath, Juleen R, 2024, In: *Metabolism: Clinical and Experimental*. 155, 12 p., 155834.

**Trigonelline is an NAD<sup>+</sup> precursor that improves muscle function during ageing and is reduced in human sarcopenia**

Membrez, M., Migliavacca, E., Christen, S., Yaku, K., Trieu, J., Lee, A. K., Morandini, F., Giner, M. P., Stiner, J., Makarov, M. V., Garratt, E. S., Vasiloglou, M. F., Chanvillard, L., Dalbram, E., Ehrlich, A. M., Sanchez-Garcia, J. L., Canto, C., Karagounis, L. G., Treebak, J. T., Migaud, M. E. & 15 others, Heshmat, R., Razi, F., Karnani, N., Ostovar, A., Farzadfar, F., Tay, S. K. H., Sanders, M. J., Lillycrop, K. A., Godfrey, K. M., Nakagawa, T., Moco, S., Koopman, R., Lynch, G. S., Sorrentino, V. & Feige, J. N., 2024, In: *Nature Metabolism*. 6, 3, p. 433-447

**NAMPT-dependent NAD<sup>+</sup> biosynthesis controls circadian metabolism in a tissue-specific manner**

Basse, A. L., Nielsen, K. N., Karavaeva, Iuliia, Ingerslev, L. R., Ma, Tao, Havelund, J. F., Nielsen, Thomas Svava, Frost, M., Peics, J., Kellezi, Emilie Dalbram, Dall, M., Zierath, Juleen R, Barrès, Romain, Færgeman, N. J., Treebak, Jonas Thue & Gerhart-Hines, Zach, 2023, In: *Proceedings of the National Academy of Sciences of the United States of America*. 120, 14, e2220102120.

**Oral supplementation of nicotinamide riboside alters intestinal microbial composition in rats and mice, but not humans**

Peluso, A. A., Lundgaard, A. T., Babaei, P., Mousovich-Neto, F., Rocha, A. L., Damgaard, M. V., Bak, E. G., Gnanasekaran, T., Døllerup, O. L., Trammell, S. A. J., Nielsen, T. S., Kern, T., Abild, C. B., Sulek, K., Ma, T., Gerhart-Hines, Z., Gillum, M. P., Arumugam, M., Ørskov, C., McCloskey, D. & 4 others, Jessen, N., Herrgård, M. J., Mori, M. A. S. & Treebak, Jonas Thue, 2023, In: *npj Aging*. 9, 21 p., 7.

### **PICK1-Deficient Mice Maintain Their Glucose Tolerance During Diet-Induced Obesity**

Backe, M. B., Andersen, Rita Chan, Jensen, M., Jin, C., Hundahl, C., Dmytriyeva, O., Treebak, Jonas Thue, Hansen, J. B., Gerhart-Hines, Zach, Madsen, Kenneth Lindegaard & Holst, Birgitte, 2023, In: Journal of the endocrine society. 7, 6, p. 1-13 bvad057.

### **Protocol to assess arteriovenous differences across the liver and hindlimb muscles in mice following treadmill exercise**

Ashcroft, Stephen Paul, Jepsen, Sara Lind, Ehrlich, Amy M, Treebak, Jonas Thue, Holst, Jens Juul & Zierath, Juleen R, 2023, In: STAR Protocols. 4, 1, 11 p., 101985.

### **ROS-induced ribosome impairment underlies ZAK $\alpha$ -mediated metabolic decline in obesity and aging**

Snieckute, G., Ryder, L., Vind, A. C., Wu, Z., Arendrup, F. S., Stoneley, M., Chamois, S., Martinez-Val, A., Leleu, M., Dreos, R., Russell, A., Gay, D. M., Genzor, A. V., Choi, B. S-Y., Basse, A. L., Sass, F., Dall, M., Dollet, L. C. M., Blasius, M., Willis, A. E. & 10 others, Lund, Anders H., Treebak, Jonas Thue, Olsen, Jesper Velgaard, Poulsen, Steen Seier, Pownall, M. E., Jensen, Benjamin Anderschou Holbech, Clemmensen, Christoffer, Gerhart-Hines, Zach, Gatfield, D. & Bekker-Jensen, Simon Holst, 2023, In: Science (New York, N.Y.). 382, 6675, 14 p., eadf3208.

### **Regular exercise effectively protects against the aging-associated decline in skeletal muscle NAD content**

Chubanava, Sabina & Treebak, Jonas Thue, 2023, In: Experimental Gerontology. 173, 112109.

### **Seasonal light hours modulate peripheral clocks and energy metabolism in mice**

Small, Lewin Barkla, Lundell, L. S., Iversen, Jo Frøkjær, Ehrlich, Amy M, Dall, M., Basse, A. L., Kellezi, Emilie Dalbram, Hansen, Ann Normann, Treebak, Jonas Thue, Barrès, Romain & Zierath, Juleen R, 2023, In: Cell Metabolism. 35, 10, p. 1722-1735.e5 20 p.

### **Sleep-Time eating boosts exercise endurance**

Trebak, Jonas Thue, 2023, In: Life Metabolism. 2, 5, 2 p., load029.

### **TBC1D4-S711 controls skeletal muscle insulin sensitization after exercise and contraction**

Kjøbsted, Rasmus, Kristensen, Jonas Møller, Eskesen, N. O., Kido, K., Fjorder, Klara, Damgaard, D. F., Larsen, Jeppe Kjærgaard, Andersen, Nicoline Resen, Birk, Jesper Bratz, Gudiksen, Anders, Treebak, Jonas Thue, Schjerling, Peter, Pilegaard, Henriette & Wojtaszewski, Jørgen F P, 2023, In: Diabetes. 72, 7, p. 857-871 15 p.

### **Time of day determines postexercise metabolism in mouse adipose tissue**

Pendergrast, L. A., Lundell, L. S., Ehrlich, Amy M, Ashcroft, Stephen Paul, Schönke, M., Basse, A. L., Krook, A., Treebak, Jonas Thue, Dollet, L. & Zierath, Juleen R, 2023, In: Proceedings of the National Academy of Sciences of the United States of America. 120, 8, e2218510120.

### **What is really known about the effects of nicotinamide riboside supplementation in humans**

Damgaard, Mads Vargas & Treebak, Jonas Thue, 2023, In: Science Advances. 9, 29, 12 p., eadi4862.

### **A randomized placebo-controlled trial of nicotinamide riboside and pterostilbene supplementation in experimental muscle injury in elderly individuals**

Jensen, J. B., Døllerup, O. L., Møller, A. B., Billeskov, T. B., Kellezi, Emilie Dalbram, Chubanava, Sabina, Damgaard, Mads Vargas, Dellinger, R. W., Trošt, K., Moritz, Thomas, Ringgaard, S., Møller, N., Treebak, Jonas Thue, Farup, J. & Jessen, N., 2022, In: JCI insight. 7, 19, 15 p., e158314.

### **Atlas of exercise metabolism reveals time-dependent signatures of metabolic homeostasis**

Sato, S., Dyar, K. A., Treebak, J. T., Jepsen, S. L., Ehrlich, A. M., Ashcroft, S. P., Trost, K., Kunzke, T., Prade, V. M., Small, L., Basse, A. L., Schönke, M., Chen, S., Samad, M., Baldi, P., Barrès, R., Walch, A., Moritz, T., Holst, J. J., Lutter, D. & 2 others, Zierath, Juleen R & Sassone-Corsi, P., 2022, In: Cell Metabolism. 34, 2, p. 329-345.e8 26 p.

### **Beta-Hydroxybutyrate Suppresses Hepatic Production of the Ghrelin Receptor Antagonist LEAP2**

Holm, Stephanie Kjærulff, Husted, Anna Sofie, Skov, Louise Julie, Morville, T. H., Hagemann, C. A., Jorsal, T., Dall, M., Jakobsen, A., Klein, A. B., Treebak, Jonas Thue, Knop, Filip Krag, Schwartz, Thue W., Clemmensen, Christoffer & Holst, Birgitte, 2022, In: Endocrinology. 163, 6, 13 p., bqac038.

### **Comparative analysis of oral and intraperitoneal glucose tolerance tests in mice**

Small, Lewin Barkla, Ehrlich, Amy M, Iversen, Jo Frøkjær, Ashcroft, Stephen Paul, Trošt, K., Moritz, Thomas, Hartmann, Bolette, Holst, Jens Juul, Treebak, Jonas Thue, Zierath, Juleen R & Barrès, Romain, 2022, In: *Molecular Metabolism*. 57, 8 p., 101440.

### **Dietary Protein Restriction Improves Metabolic Dysfunction in Patients with Metabolic Syndrome in a Randomized, Controlled Trial**

Ferraz-Bannitz, R., Beraldo, R. A., Peluso, A., Dall, M., Babaei, P., Foglietti, R. C., Martins, L. M., Gomes, P. M., Marchini, J. S., Miguel Suen, V. M., Conti de Freitas, L. C., Navegantes, L. C., Pretti, M. A. M., Boroni, M., Treebak, Jonas Thue, Mori, M. A., Foss, M. C. & Foss-Freitas, M. C., 2022, In: *Nutrients*. 14, 13, 18 p., 2670.

### **Dynamic interplay between Afadin S1795 phosphorylation and diet regulates glucose homeostasis in obese mice**

Tozzi, M., Brown, E. L., Petersen, P. S., Lundh, M., Isidor, Marie Sophie, Plucinska, Kaja, Nielsen, Thomas Svava, Agueda Oyarzabal, Marina, Small, Lewin Barkla, Treebak, Jonas Thue & Emanuelli, Brice, 2022, In: *The Journal of Physiology*. 600, 4, p. 885-902

### **Ellagic acid prevents myocardial infarction-induced left ventricular diastolic dysfunction in ovariectomized rats**

Costa, B. M., Mengal, V., Brasil, G. A., Peluso, A. A., Treebak, Jonas Thue, Endlich, P. W., de Almeida, S. A. & de Abreu, G. R., 2022, In: *Journal of Nutritional Biochemistry*. 105, 9 p., 108990.

### **Exercise effects on $\gamma$ 3-AMPK activity, Akt substrate of 160 kDa phosphorylation, and glucose uptake in muscle of normal and insulin-resistant female rats**

Wang, H., Arias, E. B., Treebak, Jonas Thue & Cartee, G. D., 2022, In: *Journal of Applied Physiology*. 132, 1, p. 140-153  
14 p.

### **Fasting potentiates insulin-mediated glucose uptake in rested and prior-contracted rat skeletal muscle**

Kido, K., Egawa, T., Watanabe, S., Kawanaka, K., Treebak, Jonas Thue & Hayashi, T., 2022, In: *American Journal of Physiology - Endocrinology and Metabolism*. 322, 5, p. E425-E435

### **From trainee to trainer: lessons Learned through implementation of a dual-catheter model in mice**

Nielsen, Thomas Svava & Treebak, Jonas Thue, 2022, In: *Laboratory Animals*. 56, S1, p. 105 1 p., S5C1.2.

### **Glutamine Regulates Skeletal Muscle Immunometabolism in Type 2 Diabetes**

Dollet, L., Kuefner, M., Caria, E., Rizo-Roca, D., Pendergrast, L., Abdelmoez, A. M., Karlsson, H. K., Kellezi, Emilie Dalbram, Treebak, Jonas Thue, Harada, J., Näslund, E., Rydén, M., Zierath, Juleen R, Pillon, N. J. & Krook, A., 2022, In: *Diabetes*. 71, 4, p. 624-636

### **Intravenous nicotinamide riboside elevates mouse skeletal muscle NAD<sup>+</sup> without impacting respiratory capacity or insulin sensitivity**

Damgaard, Mads Vargas, Nielsen, Thomas Svava, Basse, A. L., Chubanava, Sabina, Trost, K., Moritz, Thomas, Dellinger, R. W., Larsen, Steen & Treebak, Jonas Thue, 2022, In: *iScience*. 25, 2, 21 p., 103863.

### **MicroRNAs in non-alcoholic fatty liver disease: Progress and perspectives**

Hochreuter, Mette Yde, Dall, M., Treebak, Jonas Thue & Barrès, Romain, 2022, In: *Molecular Metabolism*. 65, 17 p., 101581.

### **NAD<sup>+</sup> and NAFLD - Caution, Causality, and Careful Optimism**

Dall, M., Hassing, Anna Skab & Treebak, Jonas Thue, 2022, In: *The Journal of Physiology*. 600, 5, p. 1135-1154

### **Protocol for qPCR analysis that corrects for cDNA amplification efficiency**

Damgaard, Mads Vargas & Treebak, Jonas Thue, 2022, In: *STAR Protocols*. 3, 3, 11 p., 101515.

### **Pterostilbene Fails to Rescue Insulin Secretion and Sensitivity in Multiple Murine Models of Diabetes**

Damgaard, Mads Vargas, Jepsen, Sara Lind, Ashcroft, Stephen Paul, Holst, Jens Juul & Treebak, Jonas Thue, 2022, In: *Nutrients*. 14, 18, 11 p., 3741.

### **Nampt controls skeletal muscle development by maintaining Ca<sup>2+</sup> homeostasis and mitochondrial integrity**

Basse, A. L., Agerholm, M., Farup, J., Dalbram, E., Nielsen, J., Ørtenblad, N., Altıntaş, A., Ehrlich, A. M., Krag, T., Bruzzone, S., Dall, M., de Guia, R. M., Jensen, J. B., Møller, A. B., Karlsen, A., Kjær, M., Barrès, R., Vissing, J., Larsen, S., Jessen, N. & 1 others, Treebak, Jonas Thue, 2021, In: *Molecular Metabolism*. 53, 101271.

### **Ablation of Nampt in AgRP neurons leads to neurodegeneration and impairs fasting- and ghrelin-mediated food intake**

de Guia, R. M., Hassing, Anna Skab, Ma, Tao, Plucinska, Kaja, Holst, Birgitte, Gerhart-Hines, Zach, Emanuelli, Brice & Treebak, Jonas Thue, 2021, In: *F A S E B Journal*. 35, 5, e21450.

### **Age-dependent transition from islet insulin hypersecretion to hyposecretion in mice with the long QT-syndrome loss-of-function mutation Kcnq1-A340V**

Lubberding, Anniek Frederike, Zhang, J., Lundh, M., Nielsen, Thomas Svava, Søndergaard, M. S., Villadsen, M., Skovhøj, E. Z., Boer, G. A., Hansen, J. B., Thomsen, Morten Bækgaard, Treebak, Jonas Thue, Holst, Jens Juul, Kanters, Jørgen K., Mandrup-Poulsen, Thomas, Jespersen, Thomas, Emanuelli, Brice & Torekov, Signe Sørensen, 2021, In: *Scientific Reports*. 11, 1, 14 p., 12253.

### **Age-dependent decline of NAD<sup>+</sup> - universal truth or confounded consensus?**

Peluso, A. A., Damgaard, Mads Vargas, Mori, M. A. S. & Treebak, Jonas Thue, 2021, In: *Nutrients*. 14, 1, 101.

### **Compound- and fiber type-selective requirement of AMPK $\gamma$ 3 for insulin-independent glucose uptake in skeletal muscle**

Rhein, P., Desjardins, E. M., Rong, P., Ahwazi, D., Bonhoure, N., Stolte, J., Santos, M. D., Ovens, A. J., Ehrlich, A. M., Sanchez Garcia, J. L., Ouyang, Q., Yabut, J. M., Kjolby, M., Membrez, M., Jessen, N., Oakhill, J. S., Treebak, J. T., Maire, P., Scott, J. W., Sanders, M. J. & 4 others, Descombes, P., Chen, S., Steinberg, G. R. & Sakamoto, Kei, 2021, In: *Molecular Metabolism*. 51, 18 p., 101228.

### **Discovery of thymosin $\beta$ 4 as a human $\alpha$ -keratin and growth factor**

Gonzalez-Franquesa, A., Stocks, Ben Nicholas, Borg, M. L., Kuefner, M., Kellezi, Emilie Dalbram, Nielsen, Thomas Svava, Agrawal, A., Pankratova, Stanislava, Chibalin, A. V., Karlsson, H. K. R., Gheibi, S., Bjørnholm, M., Jørgensen, Niklas Rye, Clemmensen, Christoffer, Treebak, Jonas Thue, Hostrup, Morten, Krook, A., Zierath, Juleen R & Deshmukh, Atul Shahaji, 2021, In: *American Journal of Physiology: Cell Physiology*. 321, 5, p. C770-C778 9 p.

### **Disrupted circadian oscillations in type 2 diabetes are linked to altered rhythmic mitochondrial metabolism in skeletal muscle**

Gabriel, B. M., Altıntaş, Ali, Smith, J. A. B., Sardon-Puig, L., Zhang, X., Basse, A. L., Laker, R. C., Gao, H., Liu, Z., Dollet, L., Treebak, Jonas Thue, Zorzano, A., Huo, Z., Rydén, M., Lanner, J. T., Esser, K. A., Barrès, Romain, Pillon, N. J., Krook, A. & Zierath, Juleen R, 2021, In: *Science Advances*. 7, 43, 20 p., eabi9654.

### **Hepatocyte-specific perturbation of NAD<sup>+</sup> biosynthetic pathways in mice induces reversible nonalcoholic steatohepatitis-like phenotypes**

Dall, M., Hassing, Anna Skab, Niu, Lili, Nielsen, Thomas Svava, Ingerslev, L. R., Sulek, K., Trammell, Sam, Gillum, M. P., Barrès, Romain, Larsen, Steen, Poulsen, Steen Seier, Mann, Matthias, Ørskov, Cathrine & Treebak, Jonas Thue, 2021, In: *Journal of Biological Chemistry*. 297, 6, 26 p., 101388.

### **Investigation of the specificity and mechanism of action of the ULK1/AMPK inhibitor SBI-0206965**

Ahwazi, Danial, Neopane, K., Markby, G. R., Kopietz, F., Ovens, A. J., Dall, M., Hassing, Anna Skab, Gräsle, P., Alshuweishi, Y., Treebak, Jonas Thue, Salt, I. P., Göransson, O., Zeqiraj, E., Scott, J. W. & Sakamoto, Kei, 2021, In: *Biochemical Journal*. 478, 15, p. 2977-2997 21 p.

### **Lipolysis drives expression of the constitutively active receptor GPR3 to induce adipose thermogenesis**

Sveidahl Johansen, O., Ma, T., Hansen, J. B., Markussen, L. K., Schreiber, R., Reverte-Salisa, L., Dong, H., Christensen, D. P., Sun, W., Gnad, T., Karavaeva, I., Nielsen, T. S., Kooijman, S., Cero, C., Dmytriyeva, O., Shen, Y., Razzoli, M., O'Brien, S. L., Kuipers, E. N., Nielsen, C. H. & 31 others, Orchard, W., Willemsen, N., Jespersen, N. Z., Lundh, M., Sustarsic, E. G., Hallgren, C. M., Frost, M., McGonigle, S., Isidor, Marie Sophie, Broholm, C., Pedersen, Oluf Borbye, Hansen, Jacob B., Grarup, Niels, Hansen, Torben, Kjær, Andreas, Granneman, J. G., Babu, M. M., Calebiro, D., Nielsen, S., Rydén, M., Soccio, R., Rensen, P. C. N., Treebak, Jonas Thue, Schwartz, Thue W., Emanuelli, Brice, Bartolomucci, A., Pfeifer, A., Zechner, R., Schéele, Camilla Charlotte Nielsen, Mandrup, S. & Gerhart-Hines, Z., 2021, In: *Cell*. 184, 13, p. 3502-3518 + 50 p.

**Lysates of *Methylococcus capsulatus* Bath induce a lean-like microbiota, intestinal FoxP3<sup>+</sup>RORγt<sup>+</sup>IL-17<sup>+</sup> Tregs and improve metabolism**

Jensen, B. A. H., Holm, J. B., Larsen, I. S., von Burg, N., Derer, S., Sonne, S. B., Pærregaard, S. I., Damgaard, M. V., Indrelid, S. A., Rivollier, A., Agrinier, A. L., Sulek, K., Arnoldussen, Y. J., Fjære, E., Marette, A., Angell, I. L., Rudi, K., Treebak, J. T., Madsen, L., Åkesson, C. P. & 5 others, Agace, W., Sina, C., Kleiveland, C. R., Kristiansen, Karsten & Lea, T. E., 2021, In: Nature Communications. 12, 19 p., 1093.

**Mass-spectrometry-based proteomics reveals mitochondrial supercomplexome plasticity**

Gonzalez-Franquesa, A., Stocks, Ben Nicholas, Chubanava, Sabina, Hattel, H. B., Moreno Justicia, Roger, Peijs, Lone, Treebak, Jonas Thue, Zierath, Juleen R & Deshmukh, Atul Shahaji, 2021, In: Cell Reports. 35, 8, 20 p., 109180.

**ARDD 2020: from aging mechanisms to interventions**

Mkrtchyan, G. V., Abdelmohsen, K., Andreux, P., Bagdonaite, I., Barzilai, N., Brunak, S., Cabreiro, F., Cabo, R. D., Campisi, J., Cuervo, A. M., Demaria, M., Ewald, C. Y., Fang, E. F., Faragher, R., Ferrucci, L., Freund, A., Silva-García, C. G., Georgievskaya, A., Gladyshev, V. N., Glass, D. J. & 46 others, Gorbunova, V., Grey, A. D., He, W. W., Hoeijmakers, J., Hoffmann, Eva, Horvath, S., Houtkooper, R. H., Jensen, Majken Karoline, Jensen, M. B., Kane, A., Kassem, Moustapha Saad El-Deen, Keizer, P. D., Kennedy, B., Karsenty, G., Lamming, D. W., Lee, K. F., MacAulay, Nanna, Mamoshina, P., Mellon, J., Molenaars, M., Moskalev, A., Mund, Andreas, Niedernhofer, L., Osborne, Brenna, Pak, H. H., Parkhitko, A., Raimundo, N., Rando, T. A., Rasmussen, Lene Juel, Reis, C., Riedel, C. G., Franco-Romero, A., Schumacher, B., Sinclair, D. A., Suh, Y., Taub, P. R., Toiber, D., Treebak, Jonas Thue, Valenzano, D. R., Verdin, E., Vijg, J., Young, S., Zhang, L., Bakula, Daniela Janina, Zhavoronkov, A. & Scheibye-Knudsen, Morten, 2020, In: Aging. 12, 24, p. 24486-24503 18 p.

**Dynamic changes in DICER levels in adipose tissue control metabolic adaptations to exercise**

Brandão, B. B., Madsen, S., Rabiee, A., Oliverio, M., Ruiz, G. P., Ferrucci, D. L., Branquinho, J. L., Razolli, D., Pinto, S., Nielsen, T. S., Festuccia, W. T., Martins, A. S., Guerra, B. A., Knittel, T. L., Søgaard, D., Larsen, S., Helge, J. W., Brandauer, J., Velloso, L. A., Emanuelli, B. & 6 others, Kornfeld, J., Kahn, C. R., Vienberg, S. G., Zierath, Juleen R, Treebak, Jonas Thue & Mori, M. A., 2020, In: Proceedings of the National Academy of Sciences of the United States of America. 117, 38, p. 23932-23941

**Fasting- and ghrelin-induced food intake is regulated by NAMPT in the hypothalamus**

de Guia, R. M., Hassing, Anna Skab, Skov, Louise Julie, Ratner, C., Plucinska, Kaja, Madsen, S., Diep, T. A., dela Cruz, Gelo, Trammell, Sam, Sustarsic, E. G., Emanuelli, Brice, Gillum, M. P., Gerhart-Hines, Zach, Holst, Birgitte & Treebak, Jonas Thue, 2020, In: Acta Physiologica. 228, 4

**Glucagon acutely regulates hepatic amino acid catabolism and the effect may be disturbed by steatosis**

Winther-Sørensen, M., Galsgaard, K. D., Santos, A., Trammell, S. A. J., Sulek, K., Kuhre, R. E., Pedersen, J., Andersen, D. B., Hassing, A. S., Dall, M., Treebak, J. T., Gillum, M. P., Torekov, S. S., Windeløv, J. A., Hunt, J. E., Kjeldsen, S. A. S., Jepsen, S. L., Vasilopoulou, C. G., Knop, F. K., Ørskov, C. & 7 others, Werge, M. P., Bisgaard, Hanne Cathrine, Eriksen, P. L., Vilstrup, H., Gluud, Lise Lotte, Holst, Jens Juul & Albrechtsen, Nicolai Jacob Wewer, 2020, In: Molecular Metabolism. 42, 18 p., 101080.

**Hepatic steatosis and glucagon resistance develop in parallel resulting in hyperglucagonaemia and hyperaminoacidaemia**

Winther-Sørensen, Marie, Galsgaard, Katrine Douglas, Santos, A., Pedersen, J., Hassing, Anna Skab, Dall, M., Treebak, Jonas Thue, Kjeldsen, Sasha Alexandra Sampson, Knop, Filip Krag, Werge, M. P., Eriksen, P. L., Vilstrup, H., Gluud, Lise Lotte, Holst, Jens Juul & Albrechtsen, Nicolai Jacob Wewer, 2020, In: Diabetologia. 63, SUPPL 1, p. S71-S72 142.

**Nicotinamide riboside does not alter mitochondrial respiration, content or morphology in skeletal muscle from obese and insulin resistant men**

Dollerup, O. L., Chubanava, Sabina, Agerholm, M., Søndergård, S. D., Altıntaş, Ali, Møller, A. B., Høyer, K. F., Ringgaard, S., Stødkilde-Jørgensen, H., Lavery, G. G., Barrès, Romain, Larsen, Steen, Prats Gavaldà, Clara, Jessen, N. & Treebak, Jonas Thue, 2020, In: Journal of Physiology. 598, 4, p. 731-754

**Effects of Nicotinamide Riboside on Endocrine Pancreatic Function and Incretin Hormones in Nondiabetic Men With Obesity**

Dollerup, O. L., Trammell, Sam, Hartmann, Bolette, Holst, Jens Juul, Christensen, B., Møller, N., Gillum, M. P., Treebak, Jonas Thue & Jessen, N., 1 Nov 2019, In: The Journal of clinical endocrinology and metabolism. 104, 11, p. 5703-5714

**ADAMTS9 regulates skeletal muscle insulin sensitivity through extracellular matrix alterations**

Graae, A-S., Grarup, N., Ribel-Madsen, R., Lystbæk, S. H., Boesgaard, T., Staiger, H., Fritsche, A., Wellner, N., Sulek, K., Kjølby, M. F., Backe, M. B., Chubanova, S., Prats, C., Serup, A. K. L., Birk, J. B., Dubail, J., Gillberg, L., Vienberg, S. G., Nykjær, A., Kiens, B. & 10 others, Wojtaszewski, Jørgen F P, Larsen, Steen, Apte, S. S., Häring, H., Vaag, A., Zethelius, B., Pedersen, Oluf Borbye, Treebak, Jonas Thue, Hansen, Torben & Holst, Birgitte, 2019, In: *Diabetes*. 68, 3, p. 502-514

**Aerobic and resistance exercise training reverses age-dependent decline in NAD(+) salvage capacity in human skeletal muscle**

de Guia, R. M., Agerholm, M., Nielsen, Thomas Svava, Consitt, L. A., Sogaard, D., Helge, Jørn Wulff, Larsen, Steen, Brandauer, J., Houmard, J. A. & Treebak, Jonas Thue, 2019, In: *Physiological Reports*. 7, 12, 15 p., e14139.

**Assessment of mouse liver [1-<sup>13</sup>C]pyruvate metabolism by dynamic hyperpolarized MRS**

Faarkrog Høyer, K., Laustsen, C., Ringgaard, S., Qi, H., Mariager, C. Ø., Nielsen, Thomas Svava, Sundekilde, U. K., Treebak, Jonas Thue, Jessen, N. & Stødkilde-Jørgensen, H., 2019, In: *Journal of Endocrinology*. 242, 3, p. 251-260 9 p.

**Cytosolic ROS production by NADPH oxidase 2 regulates muscle glucose uptake during exercise**

Henriquez-Olguín, Carlos, Knudsen, Jonas Roland, Raun, Steffen Henning, Li, Z., Kellezi, Emilie Dalbram, Treebak, Jonas Thue, Sylow, Lykke, Holmdahl, R., Richter, Erik A., Jaimovich, E. & Jensen, Thomas Elbenhardt, 2019, In: *Nature Communications*. 10, 11 p., 4623.

**Electrical pulse stimulation induces differential responses in insulin action in myotubes from severely obese individuals**

Park, S., Turner, K. D., Zheng, D., Brault, J. J., Zou, K., Chaves, A. B., Nielsen, Thomas Svava, Tanner, C. J., Treebak, Jonas Thue & Houmard, J. A., 2019, In: *The Journal of Physiology*. 597, 2, p. 449-466

**Fiber type-specific effects of acute exercise on insulin-stimulated AS160 phosphorylation in insulin-resistant rat skeletal muscle**

Pataky, M. W., Van Acker, S. L., Dhingra, R., Freeburg, M. M., Arias, E. B., Oki, K., Wang, H., Treebak, Jonas Thue & Cartee, G. D., 2019, In: *American Journal of Physiology: Endocrinology and Metabolism*. 317, 6, p. E984-E998

**Genes controlling the activation of natural killer lymphocytes are epigenetically remodeled in intestinal cells from germ-free mice**

Poupeau, A., Garde, C., Sulek, K., Citirikaya, K., Treebak, Jonas Thue, Arumugam, Mani, Simar, D., Olofsson, L. E., Bäckhed, F. & Barrès, Romain, 2019, In: *F A S E B Journal*. 33, 2, p. 2719-2731 13 p.

**Mitochondrial function in liver cells is resistant to perturbations in NAD<sup>+</sup> salvage capacity**

Dall, M., Trammell, Sam, Asping, M., Hassing, Anna Skab, Agerholm, M., Vienberg, S. G., Gillum, M. P., Larsen, Steen & Treebak, Jonas Thue, 2019, In: *The Journal of Biological Chemistry*. 294, 36, p. 13304-13326 23 p.

**The aromatic amino acid sensor GPR142 controls metabolism through balanced regulation of pancreatic and gut hormones**

Rudenko, Olga, Shang, J., Munk, A., Ekberg, J. P., Petersen, N., Engelstoft, M. S., Egerod, Kristoffer Lihme, Hjorth, Siv Annegrethe, Wu, M., Feng, Y., Zhou, Y., Mokrosinski, J., Thams, P., Reimann, F., Gribble, F., Rehfeld, Jens Frederik, Holst, Jens Juul, Treebak, Jonas Thue, Howard, A. D. & Schwartz, Thue W., 2019, In: *Molecular Metabolism*. 19, p. 49-64 6 p.

**Time of Exercise Specifies the Impact on Muscle Metabolic Pathways and Systemic Energy Homeostasis**

Sato, S., Basse, A. L., Schönke, M., Chen, S., Samad, M., Altıntaş, Ali, Laker, R. C., Kellezi, Emilie Dalbram, Barrès, Romain, Baldi, P., Treebak, Jonas Thue, Zierath, Juleen R & Sassone-Corsi, P., 2019, In: *Cell Metabolism*. 30, 1, p. 92-110.e4 18 p.

**Underpowered or negative? A crucial distinction**

Dollerup, O. L., Treebak, Jonas Thue & Jessen, N., 2019, In: *Diabetologia*. 62, 6, p. 1094-1095 2 p.

**Voluntary wheel running in the late dark phase ameliorates diet-induced obesity in mice without altering insulin action**  
Kellezi, Emilie Dalbram, Basse, A. L., Zierath, Juleen R & Treebak, Jonas Thue, 2019, In: Journal of Applied Physiology. 126, 4, p. 993-1005 13 p.

**NAMPT-mediated NAD<sup>+</sup> biosynthesis is indispensable for adipose tissue plasticity and development of obesity**  
Nielsen, K. N., Peics, J., Ma, Tao, Karavaeva, Iuliia, Dall, M., Chubanova, Sabina, Basse, A. L., Dmytriyeva, O., Treebak, Jonas Thue & Gerhart-Hines, Zach, May 2018, In: Molecular Metabolism. 11, p. 178-188 11 p.

**A randomized placebo-controlled clinical trial of nicotinamide riboside in obese men: safety, insulin-sensitivity, and lipid-mobilizing effects**  
Dollerup, O. L., Christensen, B., Svart, M., Schmidt, M. S., Sulek, K., Ringgaard, S., Stødkilde-Jørgensen, H., Møller, N., Brenner, C., Treebak, Jonas Thue & Jessen, N., 2018, In: American Journal of Clinical Nutrition. 108, 2, p. 343-353 11 p.

**AMPK in skeletal muscle function and metabolism**  
Kjøbsted, Rasmus, Hingst, J. R., Fentz, J., Foretz, M., Sanz, M., Pehmøller, C., Shum, M., Marette, A., Mounier, R., Treebak, Jonas Thue, Wojtaszewski, Jørgen F P, Viollet, B. & Lantier, L., 2018, In: F A S E B Journal. 32, 4, p. 1741-1777 37 p.

**Age-dependent alterations of glucose clearance and homeostasis are temporally separated and modulated by dietary fat**  
Damgaard, Mads Vargas, Pærregaard, S. I., Søgaard, I., Andersen, M. A., Paulson, J. N., Treebak, Jonas Thue, Sina, C., Holm, J. B., Kristiansen, Karsten & Jensen, Benjamin Anderschou Holbech, 2018, In: Journal of Nutritional Biochemistry. 54, p. 66-76 11 p.

**Hepatic NAD<sup>+</sup> levels and NAMPT abundance are unaffected during prolonged high-fat diet consumption in C57BL/6J BomTac mice**  
Dall, M., Penke, M., Sulek, K., Matz-Soja, M., Holst, Birgitte, Garten, A., Kiess, W. & Treebak, Jonas Thue, 2018, In: Molecular and Cellular Endocrinology. 473, p. 245-256 12 p.

**Perturbations in the p53/miR-34a/SIRT1 pathway in the R6/2 Huntington's disease model**  
Reynolds, R. H., Petersen, M. H., Willert, C. W., Heinrich, M., Nymann, N., Dall, M., Treebak, Jonas Thue, Björkqvist, M., Silahatoglu, Asli, Hasholt, Lis Frydenreich & Nørremølle, Anne, 2018, In: Molecular and Cellular Neuroscience. 88, p. 118-129

**Perturbations of NAD<sup>+</sup> salvage systems impact mitochondrial function and energy homeostasis in mouse myoblasts and intact skeletal muscle**  
Andersen, M. A., Dall, M., Jensen, Benjamin Anderschou Holbech, Prats Gavaldà, Clara, Madsen, S., Basse, A. L., Graae, A., Risis, S., Goldenbaum, J., Quistorff, B., Larsen, Steen, Vienberg, S. G. & Treebak, Jonas Thue, 2018, In: American Journal of Physiology: Endocrinology and Metabolism. 314, 4, p. E377-E395 19 p.

**Sevoflurane Impairs Insulin Secretion and Tissue-Specific Glucose Uptake *In Vivo***  
Høyer, K. F., Nielsen, Thomas Svava, Risis, S., Treebak, Jonas Thue & Jessen, N., 2018, In: Basic & Clinical Pharmacology & Toxicology. 123, 6, p. 732-738

**Skeletal Muscle Insulin Sensitivity Show Circadian Rhythmicity Which Is Independent of Exercise Training Status**  
Basse, A. L., Kellezi, Emilie Dalbram, Larsson, L., Gerhart-Hines, Zach, Zierath, Juleen R & Treebak, Jonas Thue, 2018, In: Frontiers in Physiology. 9, p. 1-12 12 p., 1198.

**Skeletal muscle O-GlcNAc transferase is important for muscle energy homeostasis and whole-body insulin sensitivity**  
Shi, H., Munk, A., Nielsen, T. S., Daughtry, M. R., Larsson, L., Li, S., Høyer, K. F., Geisler, H. W., Sulek, K., Kjøbsted, R., Fisher, T., Andersen, M. M., Shen, Z., Hansen, U. K., England, E. M., Cheng, Z., Højlund, K., Wojtaszewski, J., Yang, X., Hulver, M. W. & 3 others, Helm, R. F., Treebak, Jonas Thue & Gerrard, D. E., 2018, In: Molecular Metabolism. 11, p. 160-177 18 p.

**Enhanced muscle insulin sensitivity after contraction/exercise is mediated by AMPK**  
Kjøbsted, Rasmus, Munk-Hansen, N., Birk, Jesper Bratz, Foretz, M., Viollet, B., Björnholm, M., Zierath, Juleen R, Treebak, Jonas Thue & Wojtaszewski, Jørgen F P, 2017, In: Diabetes. 66, 3, p. 598-612 15 p.

**Dietary fat drives whole-body insulin resistance and promotes intestinal inflammation independent of body weight gain**

Jensen, Benjamin Anderschou Holbech, Nielsen, Thomas Svava, Fritzen, Andreas Mæchel, Holm, J. B., Fjære, E., Serup, A. K. L., Borkowski, K., Risis, S., Pærregaard, S. I., Søgaaard, I., Poupeau, A. A. G., Poulsen, M., Ma, Tao, Sina, C., Kiens, Bente, Madsen, L., Kristiansen, Karsten & Treebak, Jonas Thue, 2016, In: *Metabolism*. 65, 12, p. 1706-1719 14 p.

**Regulation of autophagy in human skeletal muscle: effects of exercise, exercise training and insulin stimulation**

Fritzen, Andreas Mæchel, Madsen, A. L. B., Kleinert, Maximilian, Treebak, Jonas Thue, Lundsgaard, Anne-Marie, Jensen, Thomas Elbenhardt, Richter, Erik A., Wojtaszewski, Jørgen F P, Kiens, Bente & Frøsig, C., 2016, In: *Journal of Physiology*. 594, 3, p. 745-761 17 p.

**Role of AMP-activated protein kinase for regulating post-exercise insulin sensitivity**

Kjøbsted, Rasmus, Wojtaszewski, Jørgen F P & Treebak, Jonas Thue, 2016, *AMP-activated Protein Kinase*. Cordero, M. D. & Viollet, B. (eds.). Springer, p. 81-126 46 p. (E X S, Vol. 107).

**Deep proteomics of mouse skeletal muscle enables quantitation of protein isoforms, metabolic pathways and transcription factors**

Deshmukh, Atul Shahaji, Murgia, M., Nagaraja, N., Treebak, Jonas Thue, Cox, J. & Mann, Matthias, Apr 2015, In: *Molecular and Cellular Proteomics*. 14, 4, p. 841-853

**AMP-activated protein kinase controls exercise training- and AICAR-induced increases in SIRT3 and MnSOD**

Brandauer, J., Andersen, M. A., Kellezi, H., Risis, S., Frøsig, C., Vienberg, S. G. & Treebak, Jonas Thue, Mar 2015, In: *Frontiers in Physiology*. 6, 16 p., 85.

**Biotin starvation causes mitochondrial protein hyperacetylation and partial rescue by the SIRT3-like deacetylase Hst4p**

Madsen, C. T., Sylvestersen, K. B., Young, C., Buch-Larsen, Sara Charlotte, Poulsen, J. W., Andersen, M. A., Palmqvist, E. A., Hey-Mogensen, M., Jensen, P. B., Treebak, Jonas Thue, Lisby, Michael & Nielsen, Michael Lund, 2015, In: *Nature Communications*. 6, 12 p., 7726.

**Hepatic NAD salvage pathway is enhanced in mice on a high-fat diet**

Penke, M., Larsen, P. S., Schuster, S., Dall, M., Jensen, Benjamin Anderschou Holbech, Gorski, T., Meusel, A., Richter, S., Vienberg, S. G., Treebak, Jonas Thue, Kiess, W. & Garten, A., 2015, In: *Molecular and Cellular Endocrinology*. 412, p. 65-72 8 p.

**Prior AICAR stimulation increases insulin sensitivity in mouse skeletal muscle in an AMPK-dependent manner**

Kjøbsted, Rasmus, Treebak, Jonas Thue, Fentz, J., Lantier, L., Viollet, B., Birk, Jesper Bratz, Schjerling, Peter, Bjørnholm, M., Zierath, Juleen R & Wojtaszewski, Jørgen F P, 2015, In: *Diabetes*. 64, 6, p. 2042-2055 14 p.

**A common Greenlandic *TBC1D4* variant confers muscle insulin resistance and type 2 diabetes**

Moltke, I., Grarup, N., Jørgensen, M. E., Bjerregaard, P., Treebak, J. T., Fumagalli, M., Korneliussen, T. S., Andersen, M. A., Nielsen, T. S., Krarup, N. T., Gjesing, A. M. P., Zierath, J. R., Linneberg, A., Wu, X., Sun, G., Jin, X., Al-Aama, J., Wang, J., Borch-Johnsen, K., Pedersen, O. & 3 others, Nielsen, R., Albrechtsen, Anders & Hansen, Torben, 2014, In: *Nature*. 512, 7513, p. 190-193 4 p.

**AMPK controls exercise endurance, mitochondrial oxidative capacity, and skeletal muscle integrity**

Lantier, L., Fentz, J., Mounier, R., Leclerc, J., Treebak, Jonas Thue, Pehmøller, C. K., Sanz, N., Sakakibara, I., Saint-Amand, E., Rimbaud, S., Maire, P., Marette, A., Ventura-Clapier, R., Ferry, A., Wojtaszewski, Jørgen F P, Foretz, M. & Viollet, B., 2014, In: *F A S E B Journal*. 28, 7, p. 3211-3224 14 p.

**Acute exercise and physiological insulin induce distinct phosphorylation signatures on TBC1D1 and TBC1D4 in human skeletal muscle**

Trebak, Jonas Thue, Pehmøller, C., Kristensen, Jonas Møller, Kjøbsted, Rasmus, Birk, Jesper Bratz, Schjerling, Peter, Richter, Erik A., Goodyear, L. J. & Wojtaszewski, Jørgen F P, 2014, In: *Journal of Physiology*. 592, 2, p. 351-375 25 p.



**GLUT4 and glycogen synthase are key players in bed rest-induced insulin resistance.** *Diabetes* 2012;61:1090-1099  
Bjensø, R. S., Ringholm, S., Kiilerich, K., Achmann-Andersen, N., Krogh-Madsen, Rikke, Guerra, B., Plomgaard, Peter Stendahl, van Hall, Gerrit, Treebak, Jonas Thue, Saltin, B., Lundby, C., Calbet, J. A. L., Pilegaard, Henriette & Wojtaszewski, Jørgen F P, 2014, In: *Diabetes*. 63, 9, 1 p., 3159.

#### **Hepatic NAD Metabolism Is Dysregulated By an Excessive Supply of Lipids**

Penke, M., Treebak, Jonas Thue, Schuster, S., Gorski, T., Garten, A. & Kiess, W., 2014, In: *Endocrine Reviews*.

#### **Sustained AS160 and TBC1D1 phosphorylations in human skeletal muscle 30 minutes after a single bout of exercise**

Vendelbo, M. H., Møller, A. B., Treebak, Jonas Thue, Gormsen, L. C., Goodyear, L. J., Wojtaszewski, Jørgen F P, Jørgensen, J. O. L., Møller, N. & Jessen, N., 2014, In: *Journal of Applied Physiology*. 117, 3, p. 289-296 8 p.

#### **Two weeks of metformin treatment induces AMPK dependent enhancement of insulin-stimulated glucose uptake in mouse soleus muscle**

Kristensen, Jonas Møller, Treebak, Jonas Thue, Schjerling, Peter, Goodyear, L., Wojtaszewski, J. F. P. & Wojtaszewski, Jørgen F P, 2014, In: *American Journal of Physiology: Endocrinology and Metabolism*. 306, 10, p. E1099-E1109 11 p.

#### **Contraction and AICAR Stimulate IL-6 Vesicle Depletion From Skeletal Muscle Fibers In Vivo**

Lauritzen, H. P. M. M., Brandauer, J., Schjerling, Peter, Koh, H., Treebak, Jonas Thue, Hirshman, M. F., Galbo, Henrik & Goodyear, L. J., Sep 2013, In: *Diabetes*. 62, 9, p. 3081-92 12 p.

#### **Insulin stimulation regulates AS160 and TBC1D1 phosphorylation sites in human skeletal muscle**

Middelbeek, R. J. W., Chambers, M. A., Tantiwong, P., Treebak, Jonas Thue, An, D., Hirshman, M. F., Musi, N. & Goodyear, L. J., Jun 2013, In: *Nutrition and Diabetes*. 3, 74, p. e74

#### **AMP-activated protein kinase regulates nicotinamide phosphoribosyl transferase expression in skeletal muscle**

Brandauer, J., Vienberg, S. G., Andersen, M. A., Jørgensen, Stine Ringholm, Risis, S., Larsen, P., Kristensen, Jonas Møller, Frøsig, C., Leick, L., Fentz, J., Jørgensen, S. B., Kiens, Bente, Wojtaszewski, Jørgen F P, Richter, Erik A., Zierath, Juleen R, Goodyear, L. J., Pilegaard, Henriette & Treebak, Jonas Thue, 2013, In: *Journal of Physiology*. 591, p. 5207-5220 14 p.

#### **AMPK and insulin action: Responses to ageing and high fat diet**

Frøsig, C., Jensen, Thomas Elbenhardt, Jeppesen, J., Pehmøller, C., Treebak, Jonas Thue, Maarbjerg, S. J., Kristensen, Jonas Møller, Sylow, L., Alsted, T. J., Schjerling, Peter, Kiens, Bente, Wojtaszewski, Jørgen F P & Richter, Erik A., 2013, In: *PLoS One*. 8, 5, p. e62338 11 p.

#### **AMPK regulates contraction-induced glucose uptake in situ but not ex vivo**

Fentz, J., Pehmøller, C., Treebak, Jonas Thue, Kjøbsted, Rasmus, Viollet, B. & Wojtaszewski, Jørgen F P, 2013, In: *FASEB Journal*. 27, 1 p., 1202.12.

#### **Body composition and metabolic characterization.**

Kristensen, Jonas Møller, Kiens, Bente, Sylow, Lykke, Maarbjerg, S. J., Alsted, T. J., Frøsig, C., Jeppesen, J., Jensen, T. E., Schjerling, Peter, Treebak, Jonas Thue, Wojtaszewski, Jørgen F P, Richter, Erik A. & Pehmøller, C., 2013

#### **Effekter af dyb læringstilgang på studerende med overflade og dyb tilgang til læring**

Trebak, Jonas Thue, 2013, *Improving University Science Teaching and Learning: Pedagogical Projects 2012*. Ulriksen, L., Sølberg, J. & Hansen, H. W. (eds.). 1 ed. Department of Science Education, University of Copenhagen, Vol. 5. p. 19-34 15 p.

#### **Exercise-induced up-regulation of skeletal muscle Nampt protein is independent of alpha 2 AMP-activated protein kinase**

Brandauer, J., Vienberg, S. G., Andersen, M. A., Kristensen, Jonas Møller, Wojtaszewski, Jørgen F P, Richter, Erik A. & Treebak, Jonas Thue, 2013, In: *FASEB Journal*. 27, 1 p., lb806.

#### **Impairments in site-specific AS160 phosphorylation and effects of exercise training**

Consitt, L. A., Van Meter, J., Newton, C. A., Collier, D. N., Dar, M. S., Wojtaszewski, Jørgen F P, Trebak, Jonas Thue, Tanner, C. J. & Houmard, J. A., 2013, In: *Diabetes*. 62, 10, p. 3437-3447 11 p.

**Two Weeks of Metformin Treatment Induces AMPK Dependent Enhancement of Insulin Stimulated Glucose Transport in Mouse Skeletal Muscle**

Kristensen, Jonas Møller, Treebak, Jonas Thue, Goodyear, L. J. & Wojtaszewski, Jørgen F P, 2013, In: *Diabetes*. 62, Suppl. 1, p. A462 1 p., 1780-P.

**Acute exercise remodels promoter methylation in human skeletal muscle**

Barrès, Romain, Yan, J., Egan, B., Treebak, Jonas Thue, Rasmussen, M., Fritz, T., Caidahl, K., Krook, A., O'Gorman, D. J. & Zierath, Juleen R, 7 Mar 2012, In: *Cell Metabolism*. 15, 3, p. 405-11 7 p.

**5'-AMP activated protein kinase is involved in the regulation of myocardial  $\beta$ -oxidative capacity in mice**

Stride, N., Larsen, S., Treebak, Jonas Thue, Hansen, C. N., Hey-Mogensen, M., Speersschneider, T., Jensen, Thomas Elbenhardt, Jeppesen, J., Wojtaszewski, Jørgen F P, Richter, Erik A., Køber, Lars Valeur & Dela, Flemming, 22 Feb 2012, In: *Frontiers in Physiology*. 3, 7 p., 00033.

**GLUT4 and glycogen synthase are key players in bed rest-induced insulin resistance**

Biensø, R. S., Jørgensen, Stine Ringholm, Kiilerich, K., Aachmann-Andersen, N. J., Krogh-Madsen, Rikke, Guerra, B., Plomgaard, Peter Stendahl, van Hall, Gerrit, Treebak, Jonas Thue, Saltin, B., Lundby, C., Calbet, J. A. L., Pilegaard, Henriette & Wojtaszewski, Jørgen F P, 2012, In: *Diabetes*. 61, 5, p. 1090-1099 10 p.

**Insulin resistance after a 72-h fast is associated with impaired AS160 phosphorylation and accumulation of lipid and glycogen in human skeletal muscle**

Vendelbo, M., Clasen, B. F. F., Treebak, Jonas Thue, Møller, L., Krusenstjerna-Hafstrøm, T., Madsen, M., Nielsen, Thomas Svava, Stødkilde-Jørgensen, H., Pedersen, S. B., Jørgensen, J. O. L., Goodyear, L. J., Wojtaszewski, Jørgen F P, Møller, N. & Jessen, N., 2012, In: *American Journal of Physiology: Endocrinology and Metabolism*. 302, 2, p. E190-E200 11 p.

**Chronic AICAR treatment, but not voluntary exercise training, increases nicotinamide phosphoribosyl transferase (Namp1) protein expression in an AMPK-dependent manner in mouse quadriceps muscle**

Brandauer, J. & Treebak, Jonas Thue, 2011, In: *FASEB Journal*.

**Fatty acid composition in organs.**

Sonne, Si Brask, Treebak, Jonas Thue, Pilegaard, Henriette, Fjare, E., Froyland, L., Kristiansen, Karsten, Hao, Q., Madsen, L., Petersen, R. K., Ngo, H. T., Lillefosse, H. H., Liaset, B., Ringholm, S. & Ma, Tao, 2011

**Fatty acid composition in red blood cells.**

Sonne, Si Brask, Treebak, Jonas Thue, Pilegaard, Henriette, Fjare, E., Froyland, L., Kristiansen, Karsten, Hao, Q., Madsen, L., Petersen, R. K., Ngo, H. T., Lillefosse, H. H., Liaset, B., Ringholm, S. & Ma, Tao, 2011

**Fatty acid composition in the diets.**

Sonne, Si Brask, Treebak, Jonas Thue, Pilegaard, Henriette, Fjare, E., Froyland, L., Kristiansen, Karsten, Hao, Q., Madsen, L., Petersen, R. K., Ngo, H. T., Lillefosse, H. H., Liaset, B., Ringholm, S. & Ma, Tao, 2011

**Impaired insulin-induced site-specific phosphorylation of TBC1 domain family, member 4 (TBC1D4) in skeletal muscle of type 2 diabetes patients is restored by endurance exercise-training**

Vind, B. F., Pehmøller, C., Treebak, Jonas Thue, Birk, Jesper Bratz, Hey-Mogensen, M., Beck-Nielsen, H., Zierath, J. R., Wojtaszewski, Jørgen F P & Højlund, K., 2011, In: *Diabetologia*. 54, 1, p. 157-167 11 p.

**Macronutrient composition in the diets.**

Sonne, Si Brask, Treebak, Jonas Thue, Pilegaard, Henriette, Fjare, E., Froyland, L., Kristiansen, Karsten, Hao, Q., Madsen, L., Petersen, R. K., Ngo, H. T., Lillefosse, H. H., Liaset, B., Ringholm, S. & Ma, Tao, 2011

**Molecular mechanism by which AMP-activated protein kinase activation promotes glycogen accumulation in muscle**

Hunter, R. W., Treebak, Jonas Thue, Wojtaszewski, Jørgen F P & Sakamoto, Kei, 2011, In: *Diabetes*. 60, 3, p. 766-774 9 p.

**Sucrose counteracts the anti-inflammatory effect of fish oil in adipose tissue and increases obesity development in mice**  
Ma, Tao, Liaset, B., Hao, Q., Petersen, R. K., Fjære, E., Ngo, H. T., Lillefosse, H. H., Jørgensen, Stine Ringholm, Sonne, Si Brask, Treebak, Jonas Thue, Pilegaard, Henriette, Frøylund, L., Kristiansen, Karsten & Madsen, L., 2011, In: *P L o S One*. 6, 6, 12 p.

**Bed Rest-Induced Changes in TBC1D4 Phosphorylation and Glycogen Synthase Activity. Effects of Acute Exercise**  
Bienso, R. S., Ringholm, S., Lundby, C., Achman-Andersen, N. J., Plomgaard, Peter Stendahl, Krogh-Madsen, Rikke, Kiilerich, K., Guerra, B., Treebak, Jonas Thue, Calbet, J. A., Pilegaard, Henriette & Wojtaszewski, J. J. F., 2010, In: *Diabetes*.

**Effects of Exercise on Lipid-Induced Insulin Resistance in Human Skeletal Muscle-Signaling at the Level of TBC1D4**  
Pehmoller, C., Brandt, N., Birk, Jesper Bratz, Treebak, Jonas Thue, Hoeg, L. D., Sjoberg, K. A., Kiens, Bente, Richter, Erik A. & Wojtaszewski, Jørgen F P, 2010, In: *Diabetes*.

**Identification of a novel phosphorylation site on TBC1D4 regulated by AMP-activated protein kinase in skeletal muscle**  
Trebak, Jonas Thue, Taylor, E. B., Witczak, C. A., An, D., Toyoda, T., Koh, H., Xie, J., Feener, E. P., Wojtaszewski, Jørgen F P, Hirshman, M. F. & Goodyear, L. J., 2010, In: *American Journal of Physiology: Cell Physiology*. 298, 2, p. C377-C385 9 p.

**Sucrose nonfermenting AMPK-related kinase (SNARK) mediates contraction-stimulated glucose transport in mouse skeletal muscle**  
Koh, H., Toyoda, T., Fujii, N., Jung, M. M., Rathod, A., Middelbeek, R. J., Lessard, S. J., Treebak, Jonas Thue, Tsuchihara, K., Esumi, H., Richter, Erik A., Wojtaszewski, Jørgen F P, Hirshman, M. F. & Goodyear, L. J., 2010, In: *Proceedings of the National Academy of Science of the United States of America*. 107, 35, p. 15541-15546 6 p.

**A-769662 activates AMPK {beta}1-containing complexes but induces glucose uptake through a PI3 kinase-dependent pathway in mouse skeletal muscle**  
Trebak, Jonas Thue, Birk, Jesper Bratz, Hansen, B. F., Olsen, G. S. & Wojtaszewski, Jørgen F P, 2009, In: *American Journal of Physiology: Cell Physiology*. 297, 4, p. C1041-C1052 12 p.

**Genetic disruption of AMPK signaling abolishes both contraction- and insulin-stimulated TBC1D1 phosphorylation and 14-3-3 binding in mouse skeletal muscle**  
Pehmøller, C., Treebak, Jonas Thue, Birk, Jesper Bratz, Chen, S., Mackintosh, C., Hardie, D. G., Richter, Erik A. & Wojtaszewski, Jørgen F P, 2009, In: *American Journal of Physiology: Endocrinology and Metabolism*. 297, 3, p. E665-E675 11 p.

**Genetic impairment of AMPK{alpha}2 signaling does not reduce muscle glucose uptake during treadmill exercise in mice**  
Maarbjerg, S. J., Jørgensen, S. B., Rose, A. J., Jeppesen, J., Jensen, Thomas Elbenhardt, Trebak, Jonas Thue, Birk, Jesper Bratz, Schjerling, Peter, Wojtaszewski, Jørgen F P & Richter, Erik A., 2009, In: *American Journal of Physiology: Endocrinology and Metabolism*. 297, 4, p. E924-E934 11 p.

**Impaired Insulin-Mediated Phosphorylation of Skeletal Muscle TBC1D4 at Multiple Sites in Type 2 Diabetes. Effect of Endurance Training on TBC1D4 Protein and Phosphorylation**  
Vind, B. F., Pehmoller, C., Treebak, Jonas Thue, Birk, Jesper Bratz, Hey-Mogensen, M., Beck-Nielsen, H., Wojtaszewski, Jørgen F P & Hojlund, K., 2009, In: *Diabetes*.

**Potential role of TBC1D4 in enhanced post-exercise insulin action in human skeletal muscle**  
Trebak, Jonas Thue, Frøsig, C., Pehmøller, C., Chen, S., Maarbjerg, S. J., Brandt, N., Mackintosh, C., Zierath, J. R., Hardie, D. G., Kiens, Bente, Richter, Erik A., Pilegaard, Henriette & Wojtaszewski, Jørgen F P, 2009, In: *Diabetologia*. 52, 5, p. 891-900 10 p.

**Regulation of Rab-GTPase activating proteins, TBC1D1 and TBC1D4**  
Trebak, Jonas Thue, 2009, Copenhagen: Department of Exercise and Sport Sciences, University of Copenhagen. 149 p.

**Role of adenosine 5'-monophosphate-activated protein kinase in interleukin-6 release from isolated mouse skeletal muscle**

Glund, S., Treebak, Jonas Thue, Long, Y. C., Barres, R., Viollet, B., Wojtaszewski, Jørgen F P & Zierath, J. R., 2009, In: *Endocrinology*. 150, 2, p. 600-606 7 p.

**Impaired insulin-stimulated phosphorylation of Akt and AS160 in skeletal muscle of women with polycystic ovary syndrome is reversed by pioglitazone treatment**

Højlund, K., Glinborg, D., Andersen, Nicoline Resen, Birk, Jesper Bratz, Treebak, Jonas Thue, Frøsig, C., Beck-Nielsen, H. & Wojtaszewski, Jørgen F P, 2008, In: *Diabetes*. 57, 2, p. 357-366 10 p.

**Possible role of AS160 in post-exercise increased insulin sensitivity in human skeletal muscle**

Trebak, Jonas Thue, Kristensen, Jonas Møller, Frøsig, C., Pehmoller, C., Hardie, D. G., Kiens, Bente, Richter, Erik A. & Wojtaszewski, Jørgen F P, 2008, In: *Diabetes*.

**Role of 5'AMP-activated protein kinase in skeletal muscle**

Trebak, Jonas Thue & Wojtaszewski, Jørgen F P, 2008, In: *International Journal of Obesity*. 32 Suppl. 4, p. S13-S17 5 p.

**Role of AMPK in IL-6 release from isolated mouse skeletal muscle**

Glund, S., Treebak, Jonas Thue, Long, Y. C., Barrès, Romain, Viollet, B., Wojtaszewski, Jørgen F P & Zierath, Juleen R, 2008, In: *Diabetologia*.

**Role of adenosine 5'-monophosphate-activated protein kinase subunits in skeletal muscle mammalian target of rapamycin signaling**

Deshmukh, Atul Shahaji, Treebak, Jonas Thue, Long, Y. C., Viollet, B., Wojtaszewski, Jørgen F P & Zierath, J. R., 2008, In: *Molecular Endocrinology*. 22, 5, p. 1105-12 8 p.

**AS160 phosphorylation is associated with activation of alpha(2)beta(2)gamma(1)- but not alpha(2)beta(2)gamma(3)-AMPK trimeric complex in skeletal muscle during exercise in humans**

Trebak, Jonas Thue, Birk, Jesper Bratz, Rose, A. J., Kiens, Bente, Richter, Erik A. & Wojtaszewski, Jørgen F P, 2007, In: *American Journal of Physiology-Endocrinology and Metabolism*.

**AS160 phosphorylation is associated with activation of alpha<sub>2</sub>beta<sub>2</sub>gamma<sub>1</sub> - but not alpha<sub>2</sub>beta<sub>2</sub>gamma<sub>3</sub> -AMPK trimeric complex in skeletal muscle during exercise in humans**

Trebak, Jonas Thue, Birk, Jesper Bratz, Rose, A. J., Kiens, Bente, Richter, Erik A. & Wojtaszewski, Jørgen F P, 2007, In: *American Journal of Physiology: Endocrinology and Metabolism*. 292, 3, p. E715-E722 8 p.

**Effects of endurance exercise training on insulin signaling in human skeletal muscle: Interactions at the level of phosphatidylinositol 3-kinase, Akt, and AS160**

Frøsig, C., Rose, A. J., Treebak, Jonas Thue, Kiens, Bente, Richter, Erik A. & Wojtaszewski, Jørgen F P, 2007, In: *Diabetes*. 56, 8, p. 2093-2102 10 p.

**Hyperphosphorylation and low protein content of muscle glycogen synthase contribute to insulin resistance in polycystic ovary syndrome: effects of pioglitazone treatment**

Højlund, K., Glinborg, D., Andersen, N. R., Birk, Jesper Bratz, Treebak, Jonas Thue, Beck-Nielsen, H. & Wojtaszewski, Jørgen F P, 2007, In: *Diabetologia*.

**Lack of AMPKalpha2 enhances pyruvate dehydrogenase activity during exercise**

Klein, D. K., Pilegaard, Henriette, Treebak, Jonas Thue, Jensen, Thomas Elbenhardt, Viollet, B., Schjerling, Peter & Wojtaszewski, Jørgen F P, 2007, In: *American Journal of Physiology: Endocrinology and Metabolism*. 293, 5, p. E1242-E1249 8 p.

**Role of AMPKalpha2 in basal, training-, and AICAR-induced GLUT4, hexokinase II, and mitochondrial protein expression in mouse muscle**

Jørgensen, S. B., Treebak, Jonas Thue, Viollet, B., Schjerling, P., Vaulont, S., Wojtaszewski, Jørgen F P & Richter, Erik A., 2007, In: *American Journal of Physiology: Endocrinology and Metabolism*. 292, 1, p. E331-E339 9 p.

**AMPK-mediated AS160 phosphorylation in skeletal muscle is dependent on AMPK catalytic and regulatory subunits.**

Treebak, Jonas Thue, Glund, S., Deshmukh, Atul Shahaji, Klein, D. K., Long, Y. C., Jensen, Thomas Elbenhardt, Jørgensen, S. B., Viollet, B., Andersson, L., Neumann, D., Wallimann, T., Richter, Erik A., Chibalin, A. V., Zierath, J. R. & Wojtaszewski, Jørgen F P, 2006, In: Diabetes. 55, 7, p. 2051-8 7 p.

**Exercise in rats does not alter hypothalamic AMP-activated protein kinase activity**

Andersson, U., Treebak, Jonas Thue, Nielsen, J. N., Smith, K. L., Abbott, C. R., Small, C. J., Carling, D. & Richter, Erik A. , 2005, In: Biochemical and Biophysical Research Communications. 329, 2, p. 719-725 7 p.

**alpha 2-AMPK knockout abolishes AICAR but not exercise training-induced GLUT4 and HKII protein expression in mouse skeletal muscle**

Jørgensen, Solvejg, Treebak, Jonas Thue, Viollet, B., Andreelli, F., Schjerling, Peter, Vaulont, S., Wojtaszewski, Jørgen F P & Richter, Erik A., 2005, In: FASEB Journal.