Poster Program

Poster Session I
Monday, July 13, 13:40-15:30

[P1.1.01]	**Acute high-intensity interval cycling induces ryanodine receptor type 1 fragmentation** D. Neyroud*[1,2], N. Ivarsson[3], A. Cheng[3], J. Ochala[4], T. Venckunas[5], B. Kayser[1,2], H. Westerblad[3], N. Place[1], *[1]University of Lausanne, Switzerland, [2]University of Geneva, Switzerland, [3]Karolinska Institutet, Sweden, [4]King's College of London, UK, [5]Lithuanian Sports University, Lithuania*
[P1.1.02]	**Glycerol 3-phosphate dehydrogenase 1 deficiency enhances exercise capacity due to increased lipid oxidation during strenuous exercise** T. Sato*[1], A. Morita[1], N. Mori[2], S. Miura[1], *[1]University of Shizuoka, Japan, [2]Osaka Prefecture University, Japan*
[P1.1.03]	**Metabolomic analysis of the skeletal muscle of mice overexpressing PGC-1α** N. Senoo[1], Y. Hatazawa[2,3], M. Tadaishi[4], Y. Ogawa[2], O. Ezaki[5], Y. Kamei[3], S. Miura*[1], *[1]University of Shizuoka, Japan, [2]Tokyo Medical and Dental University, Japan, [3]Kyoto Prefectural University, Japan, [4]Tokyo University of Agriculture, Japan, [5]Showa Women's University, Japan*
[P1.1.04]	**Vitamin D modulates inflammation and immunological responses following prolonged physical exercise** A.M. Mironas*[1], M.B. Beckmann[1], G.D. Davison[2], L.A.J.M. Mur[1], A.W.J. Jones[1], *[1]Aberystwyth University, UK, [2]University of Kent, UK*
[P1.1.05]	**Functional consequences of cardiac hypertrophy caused by deficiency in cytosolic or mitochondrial creatine kinase** A.H. Maass, *University Medical Center Groningen, The Netherlands*
[P1.1.06]	**The effect of warm up intensity on subsequent exercise tolerance at VO2max in runners** K.T. Dinglasan, D. Parker, R. Quintana*, *California State University, USA*
[P1.1.07]	**Exercise acts as fat burning pill if it is taken before breakfast** K. Iwayama[1], Y. Nabekura[1], R. Kurihara[1], R. Kawabuchi[1], I. Park[1], H. Ogata[1], A. Ogawa[1], M. Kayaba[1], A. Ando[1], K. Tokuyama*[1], *[1]University of Tsukuba, Japan, [2]Kao Corporation, Japan*
[P1.1.08]	**Fibro-adipogenic progenitors in response to acute and prolonged resistance exercise.** J. Farup*[1], U.R. Mikkelsen[2,3], J. Bjerre[1], S.K. Rahbek[1], F. de Paoli[1], M.H. Vendelbo[1], P. Schjerling[2,3], K. Vissing[1], *[1]Aarhus University, Denmark, [2]Copenhagen University, Denmark, [3]Bispebjerg Hospital, Denmark*
[P1.1.09]	**Exploring skeletal muscle plasticity by single fiber proteomics.** M. Murgia*[1,2], N. Nagaraj[1], A.S. Deshmukh[4], P. Cancellara[2], C. Reggiani[2], S. Schiaffino[3], M. Mann[1,4], *[1]Max-Planck-Institute of Biochemistry, Germany, [2]University of Padova, Italy, [3]Venetian Institute of Molecular Medicine, Italy, [4]Novo Nordisk Foundation Center for Protein Research, Denmark*
[P1.1.10]	**Effect of BCAA supplementation in rat skeletal muscle with exercise** T. Sato*[1], T. Watanabe[2], S. Igawa[3], M. Miyazaki[4], K. Seki[4], *[1]Jissen Women's University, Japan, [2]Hachinohe Gakuin University, Japan, [3]Nippon Sport Science University, Japan, [4]Waseda University, Japan*
[P1.1.11]	**Activation of autophagy in human skeletal muscle is dependent on exercise intensity and AMPK activation** C. Schwalm*[1], C. Jamart[1], N. Benoit[1], D. Naslain[1], C. Prémont[1], J. Prévet[1], R. Van Thienen[2], L. Deldicque[2], M. Francaux[1], *[1]Institute of Neuroscience, Université catholique de Louvain, Belgium, [2]Katholieke Universiteit Leuven, Belgium*
[P1.1.12]	**Fat gain with physical detraining correlates with the increased glucose oxidation in subcutaneous and retroperitoneal white adipose tissue in rats** R.A.L. Sertié*, S. Andreotti, A.R.G. Proença, R.O. Caminhotto, P. Nunes, N.C. Castro, G.B. Reis, A. Vianna, F. Lima, *University of São Paulo, Brazil*
[P1.1.13]	**An acute bout of aerobic exercise modulates levels of specific miRNAs in serum and cerebrospinal fluid of trained individuals** B. Ukropcova*[1,2], M. Balaz[1], O. Ziak[2], S. Sutovsky[3], J. Ukropec[1], *[1]Institute of Experimental Endocrinology SAS, Slovakia, [2]Faculty of Medicine, Comenius University, Slovakia, [3]Faculty of Medicine CU and University Hospital, Slovakia*
[P1.1.14]	**Exercise training decreases mitochondrial function and oxidative capacity in brown adipose tissue (BAT)** K.I. Stanford*, H.P.M.M. Lauritzen, M.D. Lynes, K.L. Townsend, Y-H. Tseng, L.J. Goodyear, *Joslin Diabetes Center, USA*
[P1.1.15]	**Modulation of autophagy signaling with resistance exercise and protein ingestion following short-term energy deficit** W.J. Smiles*[1], J.L. Areta[1], V.G. Coffey[3], S.M. Phillips[4], D.R. Moore[5], T. Stellingwerff[6], L.M. Burke[7], J.A. Hawley[1,2], D.M. Camera[1], *[1]Australian Catholic University, Australia, [2]Liverpool John Moores University, UK, [3]Queensland University of Technology, Australia, [4]McMaster University, Canada, [5]University of Toronto, Canada, [6]Canadian Sport Institute, Canada, [7]Australian Institute of Sport, Australia*

[P1.1.16]	**Intracerebroventricular injection of ghrelin decreases wheel running activity in rats** Y. Miyatake*[1], T. Shiuchi[1], C. Azuma[1], R. Tsutsumi[1], N. Harada[1], H. Sei[1], Y. Minokoshi[2], K. Gotoh[3], Y. Nakaya[1], H. Sakaue[1], *[1]Tokushima University, Japan, [2]National Institute for Physiological Sciences, Japan, [3]Oita Univerity, Japan*
[P1.1.17]	**Modulation of microRNA expression following concurrent exercise in human skeletal muscle** D.M. Camera*[1,2], J.N. Ong[1], V.G. Coffey[3], J.A. Hawley[1,4], *[1]Australian Catholic University, Australia, [2]RMIT University, Australia, [3]Bond University, Australia, [4]Liverpool John Moores University, UK*
[P1.1.18]	**Hemodynamic response to unilateral eccentric exercise with and without lactotripeptides ingestion in healthy young men** S-G. Ra*[1,2], K. Tagawa[1], Y. Choi[1,2], S. Maeda[1], *[1]University of Tsukuba, Japan, [2]Japan Society for the Promotion of Science, Japan*
[P1.1.19]	**Effect of complex and compound exercises on satellite cell activation in weight lifters** C.H. Lim*[1], L.T. Suong[2], V.V. Bao[2], D.H. Viet[2], L.Q. Phuong[2], H.L. Quan[1], H.J. Yang[1], C.K. Kim[1], *[1]Korea National Sport University, Republic of Korea, [2]Hochiminh City University of Sport, Viet Nam*
[P1.1.20]	**Vitamin C and E supplementation counteracts activation of PPAR target genes upon exercise** M. Hoene*[1], J. Li[2], X. Zhao[2], Y. Li[2], H.U. Häring[1,3], R. Lehmann[1,3], G. Xu[2], C. Weigert[1,3], *[1]University Hospital Tübingen, Germany, [2]Dalian Institute of Chemical Physics, China, [3]German Center for Diabetes Research (DZD), Germany*
[P1.1.21]	**Small heat shock proteins (sHSPs) specific markers of exercise-induced muscle damage and/or adaptation to eccentric exercise** S. Hody*, A. Simonet, Z. Lacrosse, P. Leprince, J.L. Croisier, B. Rogister, *University of Liege, Belgium*
[P1.1.22]	**Aerobic exercise avoids non-alcoholic steatohepatitis but promotes liver inflammation in PPAR-alpha knockout mice** H. Batatinha[1], E. Lima[1], A. Teixeira[1], C. Souza[1], L. Biondo[1], L. Silveira[2], F. Lira[2], J. Rosa-Neto*[1], *[1]University of Sao Paulo, Brazil, [2]University of the state of Sao Paulo, Brazil*
[P1.1.23]	**High intensity exercise induced redox signalling potentiates insulin signalling and sensitivity in obese middle-aged men** L. Parker*[1], N.K. Stepto[1], C. Shaw[2], F.R. Serpiello[1], M. Anderson[1], D.L. Hare[3], I. Levinger[1], *[1]Victoria University, Australia, [2]Deakin University, Australia, [3]University of Melbourne, Australia*
[P1.1.24]	**Gene expression analysis of hyperactive mutant SPORTS rat** T. Horiguchi, K. Miyoshi, A. Tanimura, H. Hagita, Y. Miyatake, H. Sakaue, T. Noma*, *Tokushima University Graduate School, Japan*
[P1.1.25]	**The effects of resistance exercise on muscle ribosome biogenesis is blunted by cold water immersion** V.C. Figueiredo*[1], L.A. Roberts[3], J.F. Markworth[1], J.M. Peake[2], D. Cameron-Smith[1], *[1]University of Auckland, New Zealand, [2]Queensland University of Technology, Australia, [3]University of Queensland, Australia*
[P1.1.26]	**Metabolic adaptions in marathon mice selected for high treadmill performance from microRNAs to metabolic pathway analysis** D. Ohde*, J. Brenmoehl, C. Walz, A. Hoeflich, *Leibniz-Institute for Farm Animal Biology (FBN), Germany*
[P1.1.27]	**Decreased spontaneous activity in AMPK muscle specific kinase dead mice is not caused by changes in brain dopamine content** L.L.V. Møller*, L. Sylow, C.R. Gøtzsche, S.H. Christiansen, P. Weikop, B. Kiens, D.P.D. Woldbye, E.A. Richter, *University of Copenhagen, Denmark*
[P1.1.28]	**CD38 expression is decreased after short-term aerobic exercise training and regulates glucose and lipid metabolism in human skeletal muscle** B. Egan*[2,1], R.J.O. Sjogren[2], D. Gray Lassiter[2], H. Karlsson[2], N. Miyoshi[2], D.J. O'Gorman[3], J.R. Zierath[2], *[1]University College Dublin, Ireland, [2]Karolinska Institutet, Sweden, [3]Dublin City University, Ireland*
[P1.1.29]	**An acute bout of aerobic exercise has a positive effect on metabolic flexibility prolonged over 16 hours post exercise** B.P. Carson*[1], J.A. Higgins[1], P.C. Tully[1], G. Boland[1], C. Seoige[1], G.F. Bellissimo[2], J.E. Edwards[2], *[1]University of Limerick, Ireland, [2]Central Michigan University, USA*
[P1.1.30]	**The acute and chronic effect of nitrate on contraction efficiency of isolated mouse skeletal muscle** S.S. Betteridge[1], G.K. McConell*[1], C.J. Barclay[2], *[1]Victoria University, Australia, [2]Griffith University, Australia*
[P1.1.31]	**Effects of different exercise types on the metabolic fingerprint of men with and without metabolic syndrome** A. Siopi*, V. Manou, O. Deda, D. Palachanis, S. Kellis, G. Theodoridis, V. Mougios, *Aristotle University of Thessaloniki, Greece*
[P1.1.32]	**Skeletal muscle IL-6 regulates hepatic glucose metabolism during prolonged exercise** L. Bertholdt*, A. Gudiksen, C. Schwartz, J.G. Knudsen, H. Pilegaard, *University of Copenhagen, Denmark*

[P1.1.33]	**Loss of skeletal muscle IL-6 alters metabolic regulation in adipose tissue post exercise** J.G. Knudsen*[1,3], L. Bertholdt[1,3], C. Schwartz[1,3], P. Overby[1,3], A. Gudiksen[1,3], H. Pilegaard[1,3], [1]*University of Copenhagen, Denmark,* [2]*August Krogh Centre, Denmark,* [3]*Centre of Inflammation and Metabolism, Denmark*
[P1.1.34]	**Impact of muscle PGC-1α on exercise training-induced effects in adipose tissue** I.F. Villesen*, J.F. Halling, M. Federspiel, H. Pilegaard, *University of Copenhagen, Denmark*
[P1.1.35]	**IL-6 modulates regulation of pyruvate dehydrogenase during acute prolonged exercise** A. Gudiksen*, C. Schwartz, L. Bertholdt, J.G. Knudsen, H. Pilegaard, *University of Copenhagen, Denmark*
[P1.1.36]	**Burn and disuse with resistance exercise effects on Fibroblast Growth Factor-21 and eNOS in rats** L.A. Baer*[1], J. Song[2], K.I. Stanford[3], S.E. Wolf[2], C.E. Wade[1], [1]*University of Texas Health Science Center-Houston, USA,* [2]*University of Texas Southwestern Medical Center, USA,* [3]*Harvard Medical School and Joslin Diabetes Center, USA*
[P1.1.37]	**Regulation of substrate utilization following exercise in muscle specific IL-6 knockout mice** C. Schwartz*, A. Gudiksen, L. Bertholdt, J.G. Knudsen, H. Pilegaard, *University of Copenhagen, Denmark*
[P1.1.38]	**Activating transcription factor 3 affects chemokine expression in mouse skeletal muscle** R. Fernández-Verdejo*[1], A. Vanwynsberghe[1], A. Essaghir[1], J.B. Demoulin[1], L. Deldicque[2], M. Francaux[1], [1]*Université Catholique de Louvain, Belgium,* [2]*KU Leuven, Belgium*
[P1.1.39]	**Exercise reduces microgliosis and astrogliosis differently in male and female mice** R.Z. Tom*, C.X. Yi, S.C. Schriver, M.H. Tschöp, S.M. Hofmann, *Helmholtz Zentrum, Germany*
[P1.1.40]	**PGC-1α is required for mitochondrial adaptations to low but not high intensity exercise training** N. Brandt*, M.M. Nielsen, H. Pilegaard, *University of Copenhagen, Denmark*
[P1.1.41]	**PGC-1α regulates exercise-induced hepatic ER stress in mice** C.M. Kristensen*, S. Ringholm, H. Pilegaard, *University of Copenhagen, Denmark*
[P1.1.42]	**Intrahepatic lipid accumulation and metabolism after voluntary exercise and diet change intervention in diet-induced obese mice** R. Rinnankoski-Tuikka*, J.J. Hulmi, H. Reunanen, H. Kainulainen, *University of Jyväskylä, Finland*
[P1.1.43]	**Impact of skeletal muscle PGC-1α on exercise training-induced adaptations in mouse liver** M.A. Federspiel*, J.F. Halling, H. Pilegaard, *University of Copenhagen, Denmark*
[P1.1.44]	**Mechanosensitivity of myoblasts: Effect of pulsating fluid shear stress on mediators of proliferation, differentiation and self-renewal** A. De Boer, A.D. Bakker, C. Offringa, J. Klein-Nulend, R.T. Jaspers*, *MOVE Research Institute, The Netherlands*
[P1.1.45]	**The effect of treadmil exercise on lipid peroxidation and SOD in the hippocampus in Zucker Diabetic(ZDF) rat** J.K. Seong*, J.W. Kim, Y.S. Yoon, *Seoul National University, Republic of Korea*
[P1.1.46]	**Exercise induces hippocampal BDNF through a PGC-1a/FNDC5 pathway** C.D. Wrann*[1,2], K.K. Gerber[1,2], J.P. White[1], J. Salogiannis[1], D. Ma[3], J.D. Lin[3], M.E. Greenberg[1], B.M. Spiegelman[1,2], [1]*Dana-Farber Cancer Institute, USA,* [2]*Harvard Medical School, USA,* [3]*University of Michigan Medical Center, USA*
[P1.1.47]	**Acute exercise impacts kynurenine metabolism in type 2 diabetic and healthy people** J.M. Mudry*, L.Z. Agudelo, J.L. Ruas, S. Erhardt, K. Caidahl, J.R. Zierath, A. Krook, H. Wallberg-Henriksson, *Karolinska Institutet, Sweden*
[P1.1.48]	**PGC-1α mediated changes of phospholipids profile in exercise trained skeletal muscle** N. Senoo*[1], N. Miyoshi[1], N. Goto-Inoue[2], A. Morita[1], N. Sawada[3,4], J. Matsuda[5], Y. Ogawa[4], M. Setou[6], Y. Kamei[7], S. Miura[1], [1]*University of Shizuoka, Japan,* [2]*Nihon University, Japan,* [3]*University of Chicago, USA,* [4]*Tokyo Medical and Dental University, Japan,* [5]*National Institute of Biomedical Innovation, Japan,* [6]*Hamamatsu University School of Medicine, Japan,* [7]*Kyoto Prefectural University, Japan*
[P1.1.49]	**Effects of cold water swimming on energy expenditure** N.J. Rehrer*, M.J. O'Neill, S. Bruin, T.W.D. Jowett, J.D. Cotter, *University of Otago, New Zealand*
[P1.1.50]	**Dietary supplementation with unsaturated fatty acids enhances the effects of exercise training on metabolic syndrome patients** J.F. Ortega*, N. Hamouti, V.E. Fernández-Elías, A. Sánchez-Roncero, R.C.R. Martín-Doimeadios, F.J.G. Bernardo, R. Mora-Rodríguez, *University of Castilla-La Mancha, Spain*
[P1.1.51]	**Pulmonary vein thromboses can inhibit PD-1 antibody therapy, which could be improved by warfarin, dabigatran and exercise** H. Takeuchi[1,2], [1]*Nagasakiken Tomie Hospital, Japan,* [2]*Takeuchi Gene Center Ltd, Japan*
[P1.1.52]	**Blunted regulation of adipocyte lipolysis by exercise-induced atrial natriuretic peptide in obese diabetic men** K. Verboven*[1,2], J.W.E. Jocken[1], D. Hansen[2,3], E.E. Blaak[1], [1]*Maastricht University Medical Centre, The Netherlands,* [2]*Hasselt University, Belgium,* [3]*Jessa Hospital Hasselt, Belgium*

[P1.1.53]	**Synergistic effects of mild exercise and astaxanthin supplementation on hippocampal-dependent spatial memory and neurogenesis in adult mice** J.S. Yook*[1], M. Okamoto[1], M.C. Lee[1], J. Shibato[1], T. Matsui[1], R. Rakwal[1], M. Yassa[2], H. Soya[1], *[1]University of Tsukuba, Japan, [2]University of California, Irvine, USA*
[P1.1.54]	**Cardiac phosphoproteome response to a graded exercise test of peak oxygen uptake (VO_2peak)** J.G. Burniston*[1], H. Guo[2], R. Isserlin[2], A. Emili[2], *[1]Liverpool John Moores University, UK, [2]University of Toronto, Canada*
[P1.1.55]	**Obese subjects are resistant to insulin antilipolytic action during exercise** V. Stich*[1], F. Crampes[2], M. Siklova[1], E. Czudkova[1], J. Kracmerova[1], C. Moro[2], I. De Glisezinski[2], *[1]Charles University, Czech Republic, [2]Institute of Metabolic and Cardiovascular Diseases, France*
[P1.1.56]	**Key regulators of muscle metabolic adaptation are robustly and equally induced by acute exercise in type 2 diabetic and weight-matched healthy individuals** R. Sabaratnam*[1], A. Pedersen[1], T. Eskildsen[1], J. Kristensen[1], J. Wojtaszewski[2], K. Højlund[1], *[1]University of Southern Denmark, Denmark, [2]University of Copenhagen, Denmark*
[P1.1.57]	**The long-term effectiveness of resistance exercise combined with intra-dialytic oral nutrition on forearm skeletal muscle protein homeostasis in maintenance hemodialysis patients** S.M. Deger, J. Gamboa, C.D. Ellis, C. Booker, F. Sha, T.A. Ikizler*, *Vanderbilt University Medical Center, USA*
[P1.1.58]	**Effect of a weight loss diet concurrent or following aerobic interval training on the metabolic syndrome: A randomized control trial** R. Mora-Rodriguez*[1], J.F. Ortega[1], N. Hamouti[1], V.E. Fernandez-Elias[1], F. Morales-Palomo[1], M. Ramirez-Jimenez[1], V. Guio de Prada[1,2], R.K. Nelson[3], *[1]University of Castilla-La Mancha, Spain, [2]The University of Toledo Medical Center, Spain, [3]Central Michigan University, USA*
[P1.1.59]	**Systemic insulin sensitivity and skeletal muscle insulin signaling in rats selected for low and high aerobic capacity** R.T. Morris*[1], K. Fulghum[1], S.L. Britton[2], L.G. Koch[2], S. Zimmerman[1], B. Timson[1], *[1]Missouri State University, USA, [2]University of Michigan, USA*
[P1.1.60]	**A comprehensive map of the adaptive transcriptional alternations to endurance exercise in skeletal muscle and non muscle organs** A. Georgiadi*, M. Xiaochuan, M. Bosma, M. Johansson, J.O. Westholm, P. Boström, *Karolinska Institute, Sweden*
[P1.1.61]	**Increased aerobic capacity is responsible for enhanced hippocampal neurogenesis and cognition** C.M. Tognoni*[1], E.A. Babb[2], J.M. Saikia[3], L.G. Koch[4], S.L. Britton[4], L.W. Jones[5], C.L. Williams[1], *[1]Duke University, USA, [2]University of North Carolina, USA, [3]University of California, USA, [4]University of Michigan, USA, [5]Sloan-Kettering Cancer Center, USA*
[P1.1.62]	**Vitamin D as the modyfing factor of the effectiveness of the cold water immersion-supported recovery process of professional athletes** E. Ziemann*[1], D.J. Flis[2], J. Jaworska[1], K. Micielska[1], K. Witek[3], P. Habrat[4], R. Laskowski[1], *[1]Gdansk University of Physical Education and Sport, Poland, [2]Medical University of Gdansk, Poland, [3]Institute of Sport, Poland, [4]Warsaw School of Social Sciences and Humanities, Poland*
[P1.1.63]	**Endurance exercise induces REDD1 expression in rat skeletal muscle** T. Murakami*, M. Hayasaka, H. Tsunekawa, M. Yoshinaga, *Shigakkan University, Japan*
[P1.1.64]	**Voluntary exercise by obese mothers prior to and during pregnancy at a modest level has beneficial effects in offspring** M.J. Morris*, M. Raipuria, H. Bahari, *UNSW, Australia*
[P1.1.65]	**Early signaling events involved in muscle remodeling after exercise** F. Solagna[1,2], K. Dyar[3], K. Vissing[4], M. Krüger[5], I. Moretti[1,2], B. Blaauw*[1,2], *[1]University of Padova, Italy, [2]Venetian Institute of Molecular Medicine, Italy, [3]Helmholtz-Zentrum München, Germany, [4]Aarhus University, Denmark, [5]University of Cologne, Germany*

Poster Session II
Tuesday, July 14, 13:00-14:30

	BROWNING OF WHITE FAT
[P2.1.01]	**Enhanced browning of white adipose tissue in ahnak KO mice** J.K. Seong*, J.H. Shin, Y.N. Kim, I.Y. Kim, S.H. Lee, J.Y. Oh, *Seoul National University, Republic of Korea*
[P2.1.02]	**MKK6 signaling control browning of white fat and contributes to obesity and insulin resistance** N. Matesanz[1], E. Bernardo[1], S. Pérez-Sieira[3], M.E. Rodríguez-Andrés[1], L. Hernández[2], M.V. Montalvo[1], F. Centeno[4], M. Marcos[2], R. Nogueiras[3], G. Sabio*[1], *[1]Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III, Spain, [2]Hospital Universitario de Salamanca, Spain, [3]University of Santiago de Compostela-Instituto de Investigación Sanitaria, Spain, [4]University of Extremadura, Spain*
[P2.1.03]	**Exercise-induced myokines impact on white fat cell metabolism in vitro** C. Laurens*[1,2], K. Louche[1,2], V. Bourlier[1,2], D. Langin[1,2], C. Moro[1,2], *[1]Inserm UMR1048, Institute of Metabolic and Cardiovascular Diseases, France, [2]Paul Sabatier University, France*
[P2.1.04]	**UCP3-related changes in brown and brite/beige adipose tissues in cold-acclimated mice** I.G. Shabalina*, A.V. Kalinovich, A. Pauter, N. Petrovic, B. Cannon, J. Nedergaard, *Stockholm University, Sweden*
[P2.1.05]	**Modulation of admsc with beneficial effect on thermogenesis and adipokines expression** D.H. Vargas*, J.J. Duque, J.M. Carulla, S. Ramirez, W. Rosales, F. Lizcano, *Universidad de La Sabana, Colombia*
	EXERCISE AND AGING
[P2.2.01]	**Mechanisms influencing lifetime-apex VO_{2max} may not control its decline** R.G. Toedebusch, G.N. Ruegsegger, F.W. Booth*, *University of Missouri, USA*
[P2.2.02]	**Dicer function in adipose tissue is essential to the adaptive metabolic effects of exercise in mice** B.B. Brandão*[1], A. Marins[2], B.A. Guerra[1], M.A. Mori[1], *[1]Federal University of São Paulo, Brazil, [2]FSU College of Medicine Graduate, USA*
[P2.2.03]	**Exercise training protects against aging-induced mitochondrial fragmentation in mouse skeletal muscle in a PGC-1α dependent manner** J.F. Halling*, S. Ringholm, M.M. Nielsen, J. Olesen, C. Prats, H. Pilegaard, *University of Copenhagen, Denmark*
[P2.2.04]	**Protective effects of exercise on optic nerve survival, structure and function after injury** V. Chrysostomou*, I.A. Trounce, J.G. Crowston, *Centre for Eye Research Australia, University of Melbourne, Australia*
[P2.2.05]	**Genetic background, adulthood physical activity and lifespan** S.M. Karvinen*[1], K. Waller[1], M. Silvennoinen[1], L.G. Koch[2], S.L. Britton[2], J. Kaprio[3,4], H. Kainulainen[1], U. Kujala[1], *[1]University of Jyväskylä, Finland, [2]University of Michigan Medical School, USA, [3]University of Helsinki, Finland, [4]National Institute for Health and Welfare, Finland*
[P2.2.06]	**Endurance training improves insulin-induced plasma lactate and skeletal muscle PDH phosphorylation in aged individuals** L.A. Consitt*[1], G. Saxena[1], A. Saneda[1], J.A. Houmard[2], *[1]Ohio University, USA, [2]East Carolina University, USA*
	EXERCISE AND EPIGENETICS
[P2.3.01]	**Different exercise modalities have distinct effects on the transcriptome profile in the male rat femoral diaphysis** D.M. Sontam*[1,2], E.C. Firth[1,2], P. Tsai[1], M.H. Vickers[1,2], J.M. O'Sullivan[1,2], *[1]University of Auckland, New Zealand, [2]Gravida, New Zealand*
[P2.3.02]	**Transgenerational inheritance of skeletal muscle mitochondrial function and endurance performance capacity** R. Freitas-Dias, J.M. Costa Jr., E.M. Carneiro, C.C. Zoppi*, *University of Campinas, Brazil*
[P2.3.03]	**Exercise and genome-wide histone modifications in human skeletal muscle** M. Hargreaves*[1], M. Flores-Opazo[1], A. Garnham[2], M. Ziemann[3], K.N. Harikrishnan[3], I. Khurana[3], A. Kapsi[3], H. Rafehi[3], A. El-Osta[3], *[1]The University of Melbourne, Australia, [2]Deakin University, Australia, [3]Baker IDI Heart & Diabetes Institute, Australia*
[P2.3.04]	**A novel transcription factor in the regulation of macrophage polarisation** A.J. Knights*[1], R.C.M. Pearson[1], A.P.W. Funnell[1], K.G.R. Quinlan[1], K.S. Bell-Anderson[2], M. Crossley[1], *[1]UNSW, Australia, [2]University of Sydney, Australia*
[P2.3.05]	**Sarcopenia and aspartic acid magnesium** S. Yamada*, E. Kizaki, A. Ozeki, M. Nakagawa, H. Fujita, *Graduate School of Human Life Science Jissen Women's University, Japan*

[P2.3.06]	**Histone deacetylase 4 (HDAC4) regulates exercise induced adaption of cardiac metabolism and calcium handling** L.H. Lehmann*, M. Mollova, D. Finke, M. Völkers, H.A. Katus, J. Backs, *University Hospital of Heidelberg, Department of Cardiology, Germany*
[P2.3.07]	**DNA methylation regulates exercise-induced gene expression in human white adipose tissue** O. Fabre*[1], I. Donkin[1], L.R. Ingerslev[1], J.R. Zierath[1,2], R. Barrès[1], *[1]The Novo Nordisk Foundation Center for Basic Metabolic Research, Faculty of Health Sciences, University of Copenhagen, Denmark, [2]Karolinska Institute, Sweden*
[P2.3.08]	**PCOS is characterised by a specific epigenetic signature in peripheral blood mononuclear cells** D.S. Hiam*[1], D. Simar[2], A.J. Trewin[1], H. Teede[3], N.K. Stepto[1], *[1]Victoria University, Australia, [2]University of New South Wales, Australia, [3]Monash University, Australia*
	EXERCISE MIMETICS
[P2.4.01]	**Skeletal muscle AMPK and ACC2 S212 phosphorylation is not required for fatty acid oxidation during exercise** H.M. O'Neill*[1,2], J.S. Lally[1], S. Galic[2], T. Pulinilkunnil[4], J.R. Dyck[4], B.J. Van Denderen[2], B.E. Kemp[2], G.R. Steinberg[1,2], *[1]McMaster University, Canada, [2]St. Vincent's Institute of Medical Research and Department of Medicine, University of Melbourne, Australia, [3]Bond University, Australia, [4]University of Alberta, Canada*
[P2.4.02]	**TGF-b signaling in exercise or micro-damage results in coordinate recruitment of Immune cells to muscle tissue, affecting efficient remodeling and restoration of muscle function** V. Krishnan*[1], B. Yaden[1,2], G. Dai[2], H.U. Bryant[1], Y. Wang[1,2], A. Culver[1,2], P. Shetler[1], A. Datta-Manan[1], J. Croy[1], *[1]Lilly Research Laboratories, USA, [2]IUPUI, USA*
[P2.4.03]	**HC toxin (a HDAC inhibitor) enhances IRS1-AKT signalling and metabolism in mouse myotubes** H.W.S. Tan, A.Y.L. Sim, Y.C. Long*, *National University of Singapore, Singapore*
[P2.4.04]	**Decreased AMPK activity in adipose tissue of very obese humans and restoration by bariatric surgery** N.B.R. Ruderman*, J.X. Xu, J.C. Cacicedo, W.P. Pories, C.L.D. Dohm, T.M. Mikkelsen, C.A. Apovian, *Boston University School of Medicine, USA*
[P2.4.05]	**Exploring resistance training to improve whole body metabolism** B.C. Yaden*[1], V. Krishnan[1], J.T. Brozinick[1], J.M. Mackrell[1], A. Culver[1], A. Skljarevski[2,1], Y. Wang[1], *[1]Eli Lilly and Company, USA, [2]Indiana University, USA*
[P2.4.06]	**Daily heat stress treatment did not normalize denervation-activated ER stress in mouse skeletal muscle** Y. Tamura*, Y. Kitaoka, Y. Matsunaga, H. Hatta, *Department of Sports Sciences, The University of Tokyo, Japan*
[P2.4.07]	**Possible reappraisal of the angina pectoris drug trimetazidine in the treatment of skeletal muscle atrophy** F. Molinari, L. Gatta, S. Gorini, P. Costelli, G. Rosano, E. Ferraro*, *IRCCS San Raffaele Pisana, Italy*
[P2.4.08]	**Branched-chain amino acid supplementation during 2 weeks of detraining maintained endurance training-induced mitochondrial biogenesis in skeletal muscle** Y. Matsunaga*, Y. Tamura, Y. Kitaoka, H. Hatta, *The University of Tokyo, Japan*
[P2.4.10]	**Synergism of pharmacological AMPK activation and exercise** E.C. Cokorinos*, T.T. Ross, D.A. Beebe, A. Jatkar, R.A. Miller, *Pfizer Inc., USA*
	MITOCHONDRIAL MATTERS
[P2.5.01]	**AMP-activated kinase controls exercise training- and AICAR-induced increases in SIRT3 and MnSOD** M.A. Andersen*[1], J. Brandauer[1,2], H. Kellezi[1], S. Risis[1], C. Frøsig[3], S.G. Vienberg[1], J.T. Treebak[1], *[1]Section of Integrative Physiology, The Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen, Denmark, [2]Department of Health Sciences, Gettysburg College, Gettysburg, USA, [3]Section of Molecular Physiology, Department of Nutrition, Exercise and Sports, The August Krogh Centre, University of Copenhagen, Denmark*
[P2.5.02]	**Hibernating bear muscle shows slow-fiber shifting and mitochondrial biogenesis despite prolonged physical inactivity** M. Miyazaki*[1], M. Shimozuru[2], T. Tsubota[2], *[1]Health Sciences University of Hokkaido, Japan, [2]Hokkaido University, Japan*
[P2.5.03]	**Resistance exercise and mitochondrial dynamics** Y. Kitaoka*, R. Ogasawara, Y. Tamura, H. Hatta, *The University of Tokyo, Japan*
[P2.5.04]	**Skeletal muscle mitochondrial ROS emission is elevated 3 hrs after exercise independent of exercise intensity** A.J. Trewin*[1], L. Parker[1], C. Shaw[1,2], A. Garnham[2], D. Hiam[1], I. Levinger[1], G. McConell[1], N. Stepto[1], *[1]Victoria University, Australia, [2]Deakin University, Australia*
[P2.5.05]	**CPEB2-activated UCP1 RNA translation to burn fat** H.F. Chen*, C.M. Hsu, Y.S. Huang, *Institute of Biomedical Sciences, Taiwan*

[P2.5.06]	**The mitochondrial calcium uniporter controls skeletal muscle trophism in vivo** C. Mammucari*[1], G. Gherardi[1], I. Zamparo[1], A. Raffaello[1], S. Boncompagni[2], F. Chemello[1], S. Cagnin[1], F. Protasi[2], D. De Stefani[1], R. Rizzuto[1], [1]*University of Padova, Italy,* [2]*University of Chieti, Italy*
[P2.5.07]	**Identification and characterization of a novel MICU1 splicing variant in skeletal muscle** A. Raffaello*, D. Vecellio Reane, R. Rizzuto, *University of Padova, Italy*
[P2.5.08]	**Tissue specificity of alterations of mitochondrial substrates utilization by skeletal muscles after chronic hypoxia exposure** A. Malgoyre*[1], C. Chabert[1,2], N. Koulmann[1], H. Sanchez[1], [1]*Institut de Recherche Biomedicale des Armées, France,* [2]*Inserm U1055, France*
[P2.5.09]	**Qualitative and quantitative mitochondrial improvements following strength and endurance training in normoxia and hypoxia in sedentary humans** D. Pesta*[1], F. Hoppel[1], C. Macek[1], H. Messner[1], M. Faulhaber[1], C. Kobel[1], W. Parson[1], M. Burtscher[1], M. Schocke[1], E. Gnaiger[1], [1]*University of Innsbruck, Austria,* [2]*Medical University of Innsbruck, Austria*
[P2.5.10]	**An electrically conductive mitochondrial reticulum in skeletal muscle** B. Glancy*, L.M. Hartnell, D. Malide, Z.X. Yu, C.A. Combs, P.S. Connelly, S. Subramaniam, R.S. Balaban, *National Institutes of Health, USA*
[P2.5.11]	**Can mitochondrial MTCH2 provide clues towards the concept of "exercise in a pill"?** L. Buzaglo-Azriel, A. Ruggiero, Y. Kuperman, L. Shachnai, M. Tsoory, S. Zaidman, A. Gross*, *Weizmann Institute, Israel*
[P2.5.12]	**Patho-physiological implication of the nuclear receptor Rev-erbα in skeletal muscle** H. Duez*[1], Y. Sebti[1], A. Mayeuf-Louchart[1], E. Woldt[1], S. Lancel[1], M. Hesselink[2], C. Duhem[1], S. Delhaye[1], P. Schrauwen[2], B. Staels[1], [1]*Institute Pasteur De Lille, France,* [2]*Maastricht University, The Netherlands*
[P2.5.13]	**Mitochondrial calcium signaling during zebrafish development** G. Pallafacchina*[1], E. Lidron[1], E. Moro[2], F. Argenton[2], R. Rizzuto[1], [1]*University of Padova and CNR Neuroscience Institute, Italy,* [2]*University of Padova, Italy*
	MOLECULAR AND CELLULAR CHANGES IN THE SKELETAL AND CARDIOVASCULAR SYSTEM
[P2.6.01]	**The effect of voluntary exercise on the autophagy and mitochondrial quality in skeletal muscle of mice** D. Cui*[1,2], S.Z. Ding[1], S.T. Qiu[1], H.Y. Wang[1], Y. Sun[1], [1]*Key Laboratory of Adolescent Health Assessment and Exercise Intervention, Minstry of Education, China,* [2]*East China Normal University, China*
[P2.6.02]	**Muscle-specific gys1 deletion caused glucose intolerance, insulin resistance, impaired exercise and endurance capacity in adult mice** C.E. Xirouchaki*, S.P. Mangiafico, Z. Ruan, A. Huang, J. Proietto, S. Andrikopoulos, *University of Melbourne, Australia*
[P2.6.03]	**β-actin is dispensable for muscle glucose transport but may regulate mTORC1 signaling** A.L.B. Madsen*, Y. Angin, L. Sylow, J.R. Knudsen, E.A. Richter, T.E. Jensen, *Univeristy of Copenhagen, Denmark*
[P2.6.04]	**Involvement of mechanosensitive transcriptional network in contraction-dependent muscle fiber type conversion analyzed using "in vitro exercise model"** M. Hosoya, Y. Uda, H. Hatakeyama, M. Kanzaki*, *Tohoku University, Japan*
[P2.6.05]	**NOX2 inhibition alters adaptive signaling induced by endurance exercise in skeletal muscle** C. Henriquez-Olguín*[1,2], H. Cerda[1], A. Díaz-Vegas[1], Y. Utreras[1], M. Arias[1], A. Contreras[1], P. Llanos[1], F. Altamirano[1], E. Jaimovich[1], D. Valladares[1], [1]*Center of Molecular Studies of the Cell, Faculty of Medicine, Universidad de Chile, Chile,* [2]*Laboratory of Integrative Exercise Physiology, Chile*
[P2.6.06]	**Exercise-induced adaptive responses in the zebrafish (Danio rerio) heart** M. Rovira*[1], A.P. Palstra[1,2], J.V. Planas[1], [1]*Universitat de Barcelona, Spain,* [2]*Institute for Marine Resources and Ecosystem Studies-IMARES, The Netherlands*
[P2.6.07]	**Molecular characterization of fibronectin type III domain containing 5 (FNDC5) in the zebrafish (Danio rerio) skeletal muscle** G. Arrey*, C. Puig, M. Rovira, J.V. Planas, *University of Barcelona, Spain*
[P2.6.08]	**Additive effect of fenugreek increases creatine uptake in L6C11 muscle cells** K.A. Tomcik*[1], W.J. Smiles[1], D.M. Camera[1], H.M. Hugel[2], J.A. Hawley[1,3], R. Watts[1], [1]*Australian Catholic University, Australia,* [2]*RMIT University, Australia,* [3]*Liverpool John Moores University, UK*
[P2.6.09]	**Satellite cell content in slow and fast-twitch muscles after ischemia-reperfusion in mouse skeletal muscle** C.H. Lim*[1], H.J. Son[1], S.Y. Kim[2], D.J. Baek[2], H.L. Quan[1], H.J. Yang[1], H.J. Kim[1], C.K. Kim[1], [1]*Korea National Sport University, Republic of Korea,* [2]*Han Yang University, Republic of Korea*
[P2.6.10]	**p38γ and δ promote heart hypertrophy by targeting the mTOR-inhibitory protein DEPTOR for degradation p38γ/δcontrol heart hypertrophy through mTOR pathway** B. González-Terán, J.A. López, E. Rodríguez, S. Martínez-Martínez, L.J. Jiménez-Borreguero, J.M. Redondo, J. Vazquez, G. Sabio*, *Centro Nacional de Investigaciones Cardiovasculares Carlos III, Spain*

[P2.6.11]	**Exercise may improve cell functions via activating several genes by heat shock proteins** H. Takeuchi[1,2], *[1]Nagasakiken Tomie Hospital, Japan, [2]Takeuchi Gene Center Ltd., Japan*
[P2.6.12]	**Exercise may activate estrogen receptor alpha via activating heat shock protein** H. Takeuchi[1,2], *[1]Nagasakiken Tomie Hospital, Japan, [2]Takeuchi Gene Center Ltd., Japan*
[P2.6.14]	**Molecular signalling response to short duration high intensity/low volume resistance training in human skeletal muscle** T. Moro*[1], C. Reggiani[1], F. Naro[2], L. Monaco[2], A. Paoli[1], *[1]University of Padova, Italy, [2]Sapienza University, Italy*
[P2.6.15]	**IL-1β impairs insulin-stimulated GLUT4 translocation in L6 myotubes** K.E. Cogan*, B. Egan, *University College Dublin, Ireland*
[P2.6.16]	**PAK1 is necessary for exercise training to increase insulin action in skeletal muscle** L. Sylow*, M.R. Jaurji, R. Kjobsted, L.L. Moller, T.E. Jensen, E.A. Richter, *Department of Nutrition, Exercise and Sports, Section of Molecular Physiology, University of Copenhagen, Denmark*
[P2.6.17]	**Abnormal extracellular matrix deposition and intrinsic insulin resistance in skeletal muscle of women with polycystic ovary syndrome and the impact of exercise** N.K. Stepto*[1,2], N. Hatzirodos[3], D. Hiam[1], R. Rodgers[3], H.J. Teede[2], *[1]Institute of Sport Exercise & Active Living (ISEAL), Victoria University, Australia, [2]Monash Centre of Health Research and Implementation, School of Public Health & Preventive Medicine, Monash University, Australia, [3]The Robinson Research Institute, University of Adelaide, Australia*
[P2.6.18]	**Physical inactivity and high fat diet synergistically enhance the accumulation of intramyocellular diacylglycerol and induce insulin resistance in murine soleus muscle** S.K. Kakehi*, Y.T. Tamura, R.K. Kawamori, H.W. Watada, *Juntendo University, Japan*
[P2.6.19]	**The divergent effects of exercise training after myocardial infarction versus aortic stenosis depend critically on endothelial nitric oxide synthase** Y. Octavia*[1,2], E.D. Van Deel[1], M.C. De Waard[1], M. De Boer[1], D.J. Duncker[1], *[1]Erasmus MC, The Netherlands, [2]Maastricht University, The Netherlands*
[P2.6.20]	**Effect of chronic hypoxia on protein metabolism in human skeletal muscle** G. D'Hulst*[1], A. Ferri[1,4], F. Billaut[1,2], N. Marquet[1,3], D. Naslain[1,3], L. Bertrand[1,3], S. Horman[1,3], M. Francaux[1,3], D.J. Bishop[1,2], L. Deldique[1], *[1]KU Leuven, Belgium, [2]Victoria University, Australia, [3]Université Catholique de Louvain, Belgium, [4]Sapienza University of Rome, Italy*
[P2.6.21]	**Both tensile strain and pulsating fluid shear stress stimulate nitric oxide production and il-6 and cox-2 gene expression in primary mouse myotubes** F. De Weijer*[1], A. Pincini[2], A.D. Bakker[1], J. Klein-Nulend[1], A. Sotiropoulos[2], R.T. Jaspers[1], *[1]VU University, The Netherlands, [2]Institut Cochin, France*
[P2.6.22]	**Regulation of myoglobin expression in hypertrophied rat cardiomyocytes** E.L. Peters, D. Kos, C. Offringa, W.J. Van der Laarse*, R.T. Jaspers, *VU University Amsterdam, The Netherlands*
[P2.6.23]	**Use of wearable devices to improve management of physical exercise as a therapy for diabetic patients: Clinical and biochemical effects of a three months trial of metabolic fitness** P. Orlando*, S. Silvestri, F. Brugè, T. Bacchetti, I. Cirilli, *Polytechnic University of Marche, Italy*
[P2.6.24]	**Regulation of glucose transporter type 4 (Glut4) expression by undercarboxylated osteocalcin and estrogen receptors in rat muscle** A. Pandey*, T. Chandrasekaran, R. Medhamurthy, *Indian Institute of Science, India*
[P2.6.25]	**Metformin inhibits palmitate induced myostatin gene expression in C2C12 myotubes** J.W. Son*, E.J. Kim, H.J. Lee, O.K. Hong, S.J. Yoo, *St. Mary's Hospital, The Catholic University of Korea, Republic of Korea*
[P2.6.26]	**Intrinsic exercise capacity influences the expression of lipid droplet-regulating proteins in skeletal muscle** C.S. Shaw*[1], S.O. Shepherd[2], A.J.M. Wagenmakers[2], L.G. Koch[3], S.L. Britton[3,4], J.G. Burniston[2], *[1]Deakin University, Australia, [2]Liverpool John Moores University, UK, [3]University of Michigan, USA, [4]Norwegian University of Science and Technology, Norway*
[P2.6.27]	**The effects of 21 days of bed rest on mitochondrial oxidative capacity** H.C. Kenny*[4], F. Rudwill[2], L. Breen[1], M. Heer[3], S. Blanc[2], D.J. O'Gorman[4], *[1]National Institute for Cellular Biotechnology, Ireland, [2]Université de Strasbourg, France, [3]Profil Institute for Metaboliic Research GmbH, Germany, [4]Centre for Preventive Medicine, School of Health and Human Performance, Dublin City University, Ireland*
[P2.6.28]	**Transcriptional regulation by "Live High-Train Low and High" hypoxic training in human skeletal muscle** L. Deldicque*[1], F. Brocherie[2], G. D'Hulst[1], R. Van Thienen[1], G.Y. Millet[2], O. Girard[2], *[1]KU Leuven, Belgium, [2]University of Lausanne, Switzerland*

[P2.6.29]	**Phosphoproteomic analyses of exercise signaling in skeletal muscle from AMPK$\alpha_1\alpha_2$ muscle-specific double KO mice** R. Kjøbsted*[1], H. Huang[2], J. Fentz[1], M. Foretz[3,4], B. Viollet[3,4], M.R. Larsen[2], J.F.P. Wojtaszewski[1], *[1]University of Copenhagen, Denmark, [2]University of Southern Denmark, Denmark, [3]Institut Cochin, France, [4]Université Descartes, France*
[P2.6.30]	**Insulin-dependent mitochondrial Ca^{2+} handling drive retrograde regulation of GLUT4 translocation and glucose uptake in skeletal muscle fibers: Role of inositol 1,4,5-trisphospate receptor in high-fat diet induced insulin resistance** A. Díaz-Vega, Y. Utreras, P. Llanos, M. Arias, E. Jaimovich, A. Contreras-Ferrat*, *Universidad De Chile, Chile*
[P2.6.31]	**Metabolic capacity at rest and during physical exercise in huntington patients** M. Zuegel*, C. Lübbehüsen, K. Lindenberg, E. Calzia, U. Schumann, G.B. Landwehrmeyer, A.C. Ludolph, J.M. Steinacker, P. Weydt, *Ulm University, Germany*
[P2.6.32]	**Prox1 transcription factor is essential for satellite cell differentiation and skeletal muscle phenotype** R. Kivelä*[1,2], I. Salmela[1,2], Z. Wiener[2], H.Y. Nguyen[3], E. Mervaala[2], H. Koistinen[3], K. Alitalo[1,2], *[1]Wihuri Research Institute, Finland, [2]University of Helsinki, Finland, [3]Minerva Research Institute, Finland*
[P2.6.33]	**Correlation between aerobic fitness and EV miRNAs from plasma** M. Guescini*, B. Canonico, F. Lucertini, S. Maggio, G. Annibalini, E. Barbieri, F. Luchetti, S. Papa, V. Stocchi, *University of Urbino Carlo Bo, Italy*
[P2.6.34]	**The RabGAP TBC1D1 plays a central role in exercise regulated glucose metabolism in skeletal muscle** J. Stoeckli*, D.E. James, *The University of Sydney, Australia*