Cell Physiology of Exercise

BIOL4026

View Online

1.

Lundby, C., Montero, D. & Joyner, M. Biology of VO max: looking under the physiology lamp. Acta Physiologica **220**, 218–228 (2017).

2.

Ramey, D. W. How to Read a Scientific Paper. vol. 45 280–284 (AAEP PROCEEDINGS, 1999).

3.

BAAR, K. Training for Endurance and Strength. Medicine & Science in Sports & Exercise **38**, 1939–1944 (2006).

4.

Baar, K. & Hardie, D. G. Small molecules can have big effects on endurance. Nature Chemical Biology **4**, 583–584 (2008).

5.

Barrès, R. et al. Acute Exercise Remodels Promoter Methylation in Human Skeletal Muscle. Cell Metabolism **15**, 405–411 (2012).

6.

Carè, A. et al. MicroRNA-133 controls cardiac hypertrophy. Nature Medicine **13**, 613–618 (2007).

7.

Chien, K. R. Molecular medicine: MicroRNAs and the tell-tale heart. Nature **447**, 389–390 (2007).

8.

Eto, Y. et al. Calcineurin Is Activated in Rat Hearts With Physiological Left Ventricular Hypertrophy Induced by Voluntary Exercise Training. Circulation **101**, 2134–2137 (2000).

9.

Fernandes, T., Baraúna, V. G., Negrão, C. E., Phillips, M. I. & Oliveira, E. M. Aerobic exercise training promotes physiological cardiac remodeling involving a set of microRNAs. American Journal of Physiology-Heart and Circulatory Physiology **309**, H543–H552 (2015).

10.

Iemitsu, M. et al. Activation pattern of MAPK signaling in the hearts of trained and untrained rats following a single bout of exercise. Journal of Applied Physiology **101**, 151–163 (2006).

11.

Maillet, M., van Berlo, J. H. & Molkentin, J. D. Molecular basis of physiological heart growth: fundamental concepts and new players. Nature Reviews Molecular Cell Biology **14**, 38–48 (2013).

12.

Wilkins, B. J. et al. Calcineurin/NFAT Coupling Participates in Pathological, but not Physiological, Cardiac Hypertrophy. Circulation Research **94**, 110–118 (2004).

13.

Boluyt, M. O. et al. Changes in the rat heart proteome induced by exercise training: Increased abundance of heat shock protein hsp20. PROTEOMICS **6**, 3154–3169 (2006).

14.

Burniston, J. G. Changes in the rat skeletal muscle proteome induced by moderate-intensity endurance exercise. Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics **1784**, 1077–1086 (2008).

15.

Burniston, J. G. Adaptation of the rat cardiac proteome in response to intensity-controlled endurance exercise. PROTEOMICS **9**, 106–115 (2009).

16.

Bye, A. et al. Aerobic capacity-dependent differences in cardiac gene expression. Physiological Genomics **33**, 100–109 (2008).

17.

Bye, A. et al. Gene expression profiling of skeletal muscle in exercise-trained and sedentary rats with inborn high and low VO. Physiological Genomics **35**, 213–221 (2008).

18.

Iemitsu, M., Maeda, S., Miyauchi, T., Matsuda, M. & Tanaka, H. Gene expression profiling of exercise-induced cardiac hypertrophy in rats. Acta Physiologica Scandinavica **185**, 259–270 (2005).

19.

Kong, S. W. et al. Genetic expression profiles during physiological and pathological cardiac hypertrophy and heart failure in rats. Physiological Genomics **21**, 34–42 (2005).

20.

Diffee, G. M. Adaptation of Cardiac Myocyte Contractile Properties to Exercise Training. Exercise and Sport Sciences Reviews **32**, 112–119 (2004).

21.

Kemi, O. J., Haram, P. M., Wisløff, U. & Ellingsen, Ø. Aerobic Fitness Is Associated With Cardiomyocyte Contractile Capacity and Endothelial Function in Exercise Training and Detraining. Circulation **109**, 2897–2904 (2004).

22.

KEMI, O. et al. Moderate vs. high exercise intensity: Differential effects on aerobic fitness, cardiomyocyte contractility, and endothelial function. Cardiovascular Research **67**, 161–172 (2005).

23.

Kemi, O. J. et al. Aerobic interval training enhances cardiomyocyte contractility and Ca2+ cycling by phosphorylation of CaMKII and Thr-17 of phospholamban. Journal of Molecular and Cellular Cardiology **43**, 354–361 (2007).

24.

Kemi, O. J. et al. Activation or inactivation of cardiac Akt/mTOR signaling diverges physiological from pathological hypertrophy. Journal of Cellular Physiology **214**, 316–321 (2008).

25.

Kemi, O. J. & Wisløff, U. Mechanisms of exercise-induced improvements in the contractile apparatus of the mammalian myocardium. Acta Physiologica **199**, 425–439 (2010).

26.

Hsu, C.-P., Huang, C.-Y., Wang, J.-S., Sun, P.-C. & Shih, C.-C. Extracellular Matrix Remodeling Attenuated After Experimental Postinfarct Left Ventricular Aneurysm Repair. The Annals of Thoracic Surgery **86**, 1243–1249 (2008).

27.

Burstein, B. & Nattel, S. Atrial Fibrosis: Mechanisms and Clinical Relevance in Atrial

Fibrillation. Journal of the American College of Cardiology **51**, 802–809 (2008).

28.

KOVANEN, V., SUOMINEN, H. & HEIKKINEN, E. Connective tissue of "fast" and "slow" skeletal muscle in rats...effects of endurance training. Acta Physiologica Scandinavica **108**, 173–180 (1980).

29.

Daniels, A., van Bilsen, M., Goldschmeding, R., van der Vusse, G. J. & van Nieuwenhoven, F. A. Connective tissue growth factor and cardiac fibrosis. Acta Physiologica **195**, 321–338 (2009).

30.

Creemers, E. E. J. M. et al. Deficiency of TIMP-1 exacerbates LV remodeling after myocardial infarction in mice. American Journal of Physiology-Heart and Circulatory Physiology **284**, H364–H371 (2003).

31.

Williams, P. E. & Goldspink, G. Connective tissue changes in immobilised muscle. **138**, 343–350.

32.

MURPHY, G. & NAGASE, H. Progress in matrix metalloproteinase research. Molecular Aspects of Medicine **29**, 290–308 (2008).

33.

Di Biase, V. & Franzini-Armstrong, C. Evolution of skeletal type e–c coupling. The Journal of Cell Biology **171**, 695–704 (2005).

34.

Meeusen, R. et al. Hormonal responses in athletes: the use of a two bout exercise protocol to detect subtle differences in (over)training status. European Journal of Applied Physiology **91**, 140–146 (2004).

35.

BOOTH, F. W., TSENG, B. S., FLUCK, M. & CARSON, J. A. Molecular and cellular adaptation of muscle in response to physical training. Acta Physiologica Scandinavica **162**, 343–350 (1998).

36.

Hill, M., Wernig, A. & Goldspink, G. Muscle satellite (stem) cell activation during local tissue injury and repair. Journal of Anatomy **203**, 89–99 (2003).

37.

Reid, M. B. Response of the ubiquitin-proteasome pathway to changes in muscle activity. American Journal of Physiology-Regulatory, Integrative and Comparative Physiology **288**, R1423–R1431 (2005).

38.

Hambrecht, R. et al. Regular Physical Activity Improves Endothelial Function in Patients With Coronary Artery Disease by Increasing Phosphorylation of Endothelial Nitric Oxide Synthase. Circulation **107**, 3152–3158 (2003).

39.

Haram, P. M. et al. Time-course of endothelial adaptation following acute and regular exercise. European Journal of Cardiovascular Prevention & Rehabilitation **13**, 585–591 (2006).

40.

Haram, P. M., Kemi, O. J. & Wisloff, U. Adaptation of endothelium to exercise training: Insights from experimental studies. **13**, 336–346 (1AD).

41.

Linke, A., Erbs, S. & Hambrecht, R. Effects of exercise training upon endothelial function in patients with cardiovascular disease. **13**, 424–432 (1AD).

42.

Miyachi, M., Iemitsu, M., Okutsu, M. & Onodera, S. Effects of endurance training on the size and blood flow of the arterial conductance vessels in humans. Acta Physiologica Scandinavica **163**, 13–16 (1998).

43.

Spence, A. L., Carter, H. H., Naylor, L. H. & Green, D. J. A prospective randomized longitudinal study involving 6 months of endurance or resistance exercise. Conduit artery adaptation in humans. The Journal of Physiology **591**, 1265–1275 (2013).

44.

Bogdanis, G. C., Nevill, M. E., Boobis, L. H., Lakomy, H. K. & Nevill, A. M. Recovery of power output and muscle metabolites following 30 s of maximal sprint cycling in man. The Journal of Physiology **482**, 467–480 (1995).

45.

Casey, A., Constantin-Teodosiu, D., Howell, S., Hultman, E. & Greenhaff, P. L. Creatine ingestion favorably affects performance and muscle metabolism during maximal exercise in humans. American Journal of Physiology-Endocrinology and Metabolism **271**, E31–E37 (1996).

46.

Jørgensen, S. B., Richter, E. A. & Wojtaszewski, J. F. P. Role of AMPK in skeletal muscle metabolic regulation and adaptation in relation to exercise. The Journal of Physiology **574**, 17–31 (2006).

47.

Kiens, B. & Richter, E. A. Utilization of skeletal muscle triacylglycerol during postexercise recovery in humans. American Journal of Physiology-Endocrinology and Metabolism **275**, E332–E337 (1998).

48.

Tsintzas, O. K., Williams, C., Boobis, L. & Greenhaff, P. Carbohydrate ingestion and single muscle fiber glycogen metabolism during prolonged running in men. Journal of Applied Physiology **81**, 801–809 (1996).

49.

Walter, G., Vandenborne, K., McCully, K. K. & Leigh, J. S. Noninvasive measurement of phosphocreatine recovery kinetics in single human muscles. American Journal of Physiology-Cell Physiology **272**, C525–C534 (1997).

50.

KEMI, O. et al. Exercise training restores aerobic capacity and energy transfer systems in heart failure treated with losartan. Cardiovascular Research **76**, 91–99 (2007).

51.

Wisløff, U. Aerobic exercise reduces cardiomyocyte hypertrophy and increases contractility, Ca2+ sensitivity and SERCA-2 in rat after myocardial infarction. Cardiovascular Research **54**, 162–174 (2002).

52.

Wisløff, U. et al. Superior Cardiovascular Effect of Aerobic Interval Training Versus Moderate Continuous Training in Heart Failure Patients. Circulation **115**, 3086–3094 (2007).

53.

Hawley, J. A., Hargreaves, M., Joyner, M. J. & Zierath, J. R. Integrative Biology of Exercise. Cell **159**, 738–749 (2014).

54.

Rowe, G. C., Safdar, A. & Arany, Z. Running Forward. Circulation **129**, 798–810 (2014).