



Welcome to this month's edition of NEXtNet News. In addition to pertinent announcements, RFAs, and news stories, follow the exciting research advances of NEXtNet members and their investigative teams with links to recent findings.

NEXtNet News is prepared monthly by Jenny Martz, NEXtNet Coordinator. For future editions, please send relevant stories, articles, scientific publications, or announcements to nextnet@uab.edu.

July 2016

Announcements

- Monthly NEXtNet Teleconference – August 9, 2016 10am CST – Harry Rossiter (LA BioMed – Harbor UCLA) presenting. If you are interested in presenting on a future teleconference please email nextnet@uab.edu.
- Faculty Position Openings
 - The Department of Exercise Science in the Arnold School of Public Health at the University of South Carolina invites applications for two tenure-track positions at the Assistant or Associate levels to begin in August 2017. Full job posting attached. To apply send letter of application, vita, and contact information for three references to: AZIZM@mailbox.sc.edu. For more information about the positions, please contact: Dr. Michael W. Beets, Search Committee Chair, 803-777-3003 or beets@mailbox.sc.edu.
- Post-Doctoral Opportunities
 - The Rehabilitation Clinical Trials Center (RCTC) at the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center (LA BioMed) is seeking a postdoctoral candidate to contribute to research in clinical and translational research. The primary mentor will be Harry Rossiter, PhD; co-mentors will include Richard Casaburi, PhD, MD, William Stringer, MD, and Janos Porszasz, MD, PhD. Full position description is attached. Applications accepted until August 19th, 2016 at www.labiomed.org/career. Please direct questions to Harry Rossiter at hrossiter@ucla.edu.
 - The University of Alabama at Birmingham (UAB) is seeking a postdoctoral candidate for the Interdisciplinary Training in Pathobiology and Rehabilitation Medicine program (1T32HD071866). More information and application instructions can be found online at <http://www.uab.edu/medicine/exercise/ucem-postdoctoral-training-program>. Please direct questions to exercise@uab.edu.

Upcoming Meetings and Conferences

- [APS/TPS Joint Meeting: Physiology 2016](#), July 29-31, 2016, Dublin, Ireland
- [Northeast NJ-NYC Regional EIM Professional Credential Workshop](#) July 30, 2016, Teaneck, New Jersey
- [APS Conference: Inflammation, Immunity and Cardiovascular Disease](#) August 24-27, 2016, Westminster,

Colorado

- [European Initiative for Exercise in Medicine \(EIEIM\) 5th Annual Meeting](#) September 5-6, 2016, Charlottehaven, Copenhagen, Denmark
- [Indianapolis Regional EIM Professional Credential Workshop](#) September 17, 2016, Indianapolis, Indiana
- [APS Intersociety Meeting: The Integrative Biology of Exercise VII](#) November 2-4, 2016, Phoenix, Arizona

New Findings from NExTNet Investigators

Aging

- [Dietary Weight Loss and Exercise Effects on Serum Biomarkers of Angiogenesis in Overweight Postmenopausal Women: A Randomized Controlled Trial.](#)
- [The Burden of Obesity, Elevated Blood Pressure, and Diabetes in Uninsured and Underinsured Adolescents.](#)
- [Amino Acid Sensing in Skeletal Muscle.](#)
- [Relationship of Objectively-Measured Habitual Physical Activity to Chronic Inflammation and Fatigue in Middle-Aged and Older Adults.](#)

Cancer

- [Race or Resource? BMI, Race, and Other Social Factors as Risk Factors for Interlimb Differences among Overweight Breast Cancer Survivors with Lymphedema.](#)
- [Extracellular pH Modulates Neuroendocrine Prostate Cancer Cell Metabolism and Susceptibility to the Mitochondrial Inhibitor Niclosamide.](#)

Cardiovascular

- [Racial and Ethnic Differences in Heart Failure Readmissions and Mortality in a Large Municipal Healthcare System.](#)
- [Cardiovascular Events in a Physical Activity Intervention Compared With a Successful Aging Intervention: The LIFE Study Randomized Trial.](#)
- [Delayed Onset Vascular Stiffening Induced by Eccentric Resistance Exercise and Downhill Running.](#)

Cell and Molecular Biology

- [Hypermetabolism and Hypercatabolism of Skeletal Muscle Accompany Mitochondrial Stress Following Severe Burn Trauma.](#)
- [The McArdle's Mouse Model: Providing Important Insight into Skeletal Muscle Regulation.](#)

Exercise – Drug/Diet/Device/Disease/Surgery/Cultural Interactions

- [A return to ad libitum feeding following caloric restriction promotes hepatic steatosis in hyperphagic OLETF rats.](#)
- [Cordyceps militaris Improves Tolerance to High-Intensity Exercise After Acute and Chronic Supplementation.](#)
- [A Randomized Clinical Trial of a Tailored Lifestyle Intervention for Obese, Sedentary, Primary Care Patients.](#)
- [Canine Detection of the Volatilome: A Review of Implications for Pathogen and Disease Detection.](#)

Metabolic

- [Intrinsic \(Genetic\) Aerobic Fitness Impacts Susceptibility for Metabolic Disease.](#)

Pediatric

- [Satellite cell activation and apoptosis in skeletal muscle from severely burned children.](#)
- [Energy Expenditure of Common Sedentary Activities in Youth.](#)

Additional New Findings

- [Mobility Status as a Predictor of Obesity, Physical Activity, and Screen Time Use among Children Aged 5-11 Years in the United States.](#)
- [Perceived barriers to leisure-time physical activity during pregnancy: A literature review of quantitative and qualitative evidence.](#)

- [Field evaluation of a random forest activity classifier for wrist-worn accelerometer data.](#)
- [Syncope in the young athlete: Assessment of prognosis in subjects with hypertrophic cardiomyopathy.](#)
- [Low back and neck and shoulder pain in members and non-members of adolescents' sports clubs: the Finnish Health Promoting Sports Club \(FHPSC\) study.](#)
- [Increasing the frequency of physical activity very brief advice by nurses to cancer patients. A mixed methods feasibility study of a training intervention.](#)
- [Frailty and sarcopenia as the basis for the phenotypic manifestation of chronic diseases in older adults.](#)
- [Associations between physical activity and the neighbourhood social environment: baseline results from the HABITAT multilevel study.](#)
- [Strenuous physical exercise accelerates the lipid peroxide clearing transport by HDL.](#)
- [Comparison of High-Intensity Interval Training and Moderate-to-Vigorous Continuous Training for Cardiometabolic Health and Exercise Enjoyment in Obese Young Women: A Randomized Controlled Trial.](#)
- [A randomized trial comparing two interventions to increase physical activity among patients undergoing bariatric surgery.](#)
- [Public Parks in Hong Kong: Characteristics of Physical Activity Areas and Their Users.](#)
- [Running related gluteus medius function in health and injury: A systematic review with meta-analysis.](#)
- [Can a transient exertion-related carotid \(TERC\) murmur heard during a symptom-limited exercise test be used as a means for managing sports concussion?](#)
- [Hemodynamic and ventilatory responses during exercise in chronic thromboembolic disease.](#)
- [\[Exercise and Physical Activity for Dementia Prevention\].](#)
- [The relationship between examination-related academic stress, salivary antioxidant capacity and exercise patterns of final-year Saudi dental students.](#)
- [Activation of the hypoxia-inducible factor pathway induced by prolyl hydroxylase domain 2 deficiency enhances the effect of running training in mice.](#)
- [Changes in sport and physical activity participation for adolescent females: a longitudinal study.](#)
- [Exercise in NAFLD: Just do it.](#)
- [Developmental Trends in the Energy Cost of Physical Activities Performed by Youth.](#)
- [Objectively Measured Physical Activity in Home Guard Soldiers During Military Service and Civilian Life.](#)
- [Acute effects of scapular kinesiotaping on shoulder rotator strength, range of motion and acromiohumeral distance in asymptomatic overhead athletes.](#)
- [Relations Between Past-Week Physical Activity and Recent Nonsuicidal Self-Injury in Treatment-Seeking Psychiatric Adults.](#)
- [Effect of dance therapy on blood pressure and exercise capacity of individuals with hypertension: A systematic review and meta-analysis.](#)
- [Vagal reactivation after exercise and cardiac autonomic nervous activity in adult Fontan patients without pacemakers.](#)
- [Sedentary behavior & health-related quality of life among congestive heart failure patients.](#)
- [Mental toughness, sleep disturbances, and physical activity in patients with multiple sclerosis compared to healthy adolescents and young adults.](#)
- [Effect of exhalation exercise on trunk muscle activity and Oswestry disability index of patients with chronic low back pain.](#)
- [Statins and Exercise Training Response in Heart Failure Patients: Insights From HF-ACTION.](#)
- [The impact of thoracic load carriage up to 45 kg on the cardiopulmonary response to exercise.](#)
- [Meta-Analysis of Prognostic Implications of Exercise-Induced Ventricular Premature Complexes in the General Population.](#)
- [EGCG reduces slow-twitch muscle fiber formation and mitochondrial biosynthesis in C2C12 cells by repressing AMPK activity and PGC-1 \$\alpha\$ expression.](#)
- [Reducing falls among older people in general practice: The ProAct65+ exercise intervention trial.](#)
- [Targeting mitochondrial mRNA translation to tackle obesity-induced insulin resistance: thumbs up for exercise.](#)
- [Associations of sedentary time and patterns of sedentary time accumulation with health-related quality of life in colorectal cancer survivors.](#)
- [Health behavior characteristics and all-cause mortality.](#)

- [Effects of a DVD-delivered exercise program on patterns of sedentary behavior in older adults: a randomized controlled trial.](#)
- [Treadmill exercise induces age and protocol-dependent epigenetic changes in prefrontal cortex of Wistar rats.](#)
- [Person-Centered, Physical Activity for Patients with Low Back Pain: Piloting Service Delivery.](#)
- [A Systematic Review of the Effects of Exercise and Physical Activity on Non-Specific Chronic Low Back Pain.](#)
- [Origins in the Womb: Potential Role of the Physical Therapist in Modulating the Deleterious Effects of Obesity on Maternal and Offspring Health Through Movement Promotion and Prescription During Pregnancy.](#)
- [Estimation of the Maximal Lactate Steady State Intensity by the Rating of Perceived Exertion.](#)
- [Systematic, Evidence-Based Review of Exercise, Physical Activity, and Physical Fitness Effects on Cognition in Persons with Multiple Sclerosis.](#)
- [Incidence of atrial fibrillation is associated with age and gender in subjects practicing physical exercise: A meta-analysis and meta-regression analysis.](#)
- [Slowing down glioblastoma progression in mice by running or the anti-malarial drug dihydroartemisinin? Induction of oxidative stress in murine glioblastoma therapy.](#)
- [Effects of various acute hypoxic conditions on the hemorheological response during exercise and recovery1.](#)
- [Study Protocol on Hormonal Mediation of Exercise on Cognition, Stress and Immunity \(PRO-HMECSI\): Effects of Different Exercise Programmes in Institutionalized Elders.](#)
- [Impact of Long-Term Endurance Training vs. Guideline-Based Physical Activity on Brain Structure in Healthy Aging.](#)
- [Finding Ways to Lift Barriers to Care for Chronic Pain Patients: Outcomes of Using Internet-Based Self-Management Activities to Reduce Pain and Improve Quality of Life.](#)
- [HOME-BASED AEROBIC EXERCISE TRAINING IMPROVES SKELETAL MUSCLE OXIDATIVE METABOLISM IN PATIENTS WITH METABOLIC MYOPATHIES.](#)

RFA's / FOAs

- Predictors and Determinants of Age-Related Changes in Resiliencies to Physical Stressors in Humans: (UH2/UH3) <http://grants.nih.gov/grants/guide/rfa-files/RFA-AG-17-014.html>
- Mechanisms Mediating Osteoarthritis in Aging: R01 <https://grants.nih.gov/grants/guide/pa-files/PA-16-239.html>; R21 <http://grants.nih.gov/grants/guide/pa-files/PA-16-240.html>
- Dissemination and Implementation Research in Health: R01 <http://grants.nih.gov/grants/guide/pa-files/PAR-16-238.html>; R21 <http://grants.nih.gov/grants/guide/pa-files/PAR-16-236.html>; R03 <https://grants.nih.gov/grants/guide/pa-files/PAR-16-237.html>
- Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival <https://grants.nih.gov/grants/guide/pa-files/PAR-16-122.html>
- Testing Interventions for Health-Enhancing Physical Activity: R01 <http://grants.nih.gov/grants/guide/pa-files/PAR-14-315.html>

In the News

- [Integrating mHealth Interventions to Promote Physical Activity in Cardiovascular Disease Prevention](#)
- [Exercise ability in middle age may be one key to longer life](#)
- [Lack of Fitness Second Only to Smoking as Predictor of Early Death](#)
- [Even a Little Exercise May Help Younger Women's Hearts](#)
- [Brisk Walking May Help Ward Off Diabetes](#)
- [6 Tips for a Health Family Vacation](#)