Ohio University
College of Health Sciences and Professions

Bench, Bedside & Community Health Research

FACULTY RESEARCH PORTFOLIO
FALL 2011

College Vision

To be a college of distinction in preparing health professionals whose work reflects the highest standards of collaboration, ethics, innovation, and commitment to all, especially underserved individuals and populations.

College Research Mission

To engage faculty and students in the discovery of knowledge that will define the future of health disciplines through applied and basic research, innovation, and entrepreneurship.

Translational Research

“Translational research transforms scientific discoveries arising from laboratory, clinical, or population studies into clinical applications . . . .”*
FACULTY RESEARCH PORTFOLIO
FALL 2011
Faculty Profiles
(Alphabetical)

Mary Agnes Andreano, MSN, RN, CHPN
School of Nursing

Major research area(s):
Patient safety; pain; alcohol withdrawal.

Select publication(s):


RuthAnn Althaus, PhD, MPH, MBA, MSLIS, CHES
Department of Social and Public Health

Major research area(s):
Organization and financing of health systems; interdisciplinary studies of ethics (business, non-profits, and health care); business models for poverty reduction; health care leadership pedagogy.

Select publications:


Cathy J. Baker, PhD, RN, CNS
School of Nursing

Major research area(s):
Culturally-sensitive nursing interventions; smoking cessation.

Select publication(s):


Tania B. Basta, PhD, MPH, CHES
Department of Social and Public Health
Division of Community Health

Major research area(s):
Increasing the quality of life among individuals living with HIV/AIDS; health of rural communities.

Select publications:
Basta T, Shacham E, Reece M. Symptoms of psychological distress: a comparison of rural and urban individuals enrolled in HIV-related mental health care. AIDS Patient Care STDs. 2009;23(12):1053-1057.

Joann P. Benigno, PhD, CCC-SLP
School of Rehabilitation and Communication Sciences
Division of Communication Sciences and Disorders

Major research area(s):
Situational and psychosocial factors related to social communication skills in children with and without developmental disabilities; language and cognitive outcomes of children who are orphans.

Select publications:

Darlene E. Berryman, PhD, RD, LD
School of Applied Health Sciences and Wellness
Division of Nutrition

Major research area(s):
Obesity; depot-specific differences and impact of growth hormone on adipose tissue biology; nutrient and endocrine interplay in obesity and type 2 diabetes.

Select publications:

Mary E. Bowen, RN, DNS, JD, NEA-BC, FNP-BC
School of Nursing

Major research area(s):
Interprofessional nursing education; nursing practice outcomes.

Select publication(s):

Rob Brannan, PhD
School of Applied Health Sciences and Wellness
Division of Nutrition

Major research area(s):
Reducing the fat content of fried foods; developing value-added ingredients from pawpaw; meat science—interactions between antioxidants in meat systems.

Select publications:

Gary Chleboun, PT, PhD
School of Rehabilitation and Communication Sciences
Division of Physical Therapy

Major research area(s):
Mechanics of whole muscle function using ultrasound imaging; change in muscle fascicle length during various daily activities such as walking, stair negotiation, and strengthening exercises; fascicle length adaptation to resistance training; lumbar spine motion in healthy and back pain subjects.

Select publications:
Jeffrey J. DiGiovanni, PhD, CCC-A  
School of Rehabilitation and Communication Sciences  
Division of Communication Sciences and Disorders  

Major research area(s):  
To assess and improve hearing aid efficacy with an emphasis on signal processing that is designed to improve speech intelligibility and/or reduce listening effort.

Select publications:  
DiGiovanni JJ, Stover AK. The role of consonant duration and amplitude processing on speech intelligibility in noise. Proc Meetings Acoust. 2008;4-1–4-5.

Sally Fusner, PhD, RN  
Department of Social and Public Health  
Division of Social Work  

Major research area(s):  
Nursing education.

Recent publication(s):  

Warren B. Galbreath, PhD  
Department of Social and Public Health  
Division of Social Work  

Major research area(s):  
Rural health care; mental health care for at-risk youth; dual relationships in social work practice.

Select publication(s):  
Roger Gilders, PhD

School of Applied Health Sciences and Wellness
Division of Exercise Physiology

Major research area(s):
Effects of exercise (acute and training) on blood pressure in normotensives and hypertensives; factors relating to optimal muscle power outputs (with potential applications to athletic performance, maintaining function during aging); optimal recommendations for improving muscle function and performance.

Select publications:

Judi T. Haberkorn, MSW, MPH, MBA, PhD

Department of Social and Public Health
Division of Social Work

Major research area(s):
Public health for poor and underserved; health communication; social work education and practice.

Select publication(s):

Brooke Hallowell, PhD, CCC-SLP, F-ASHA

School of Rehabilitation and Communication Sciences
Division of Communication Sciences and Disorders

Major research area(s):
Eyetracking Comprehension Assessment System (ECAS) for use in clinical and research environments.

Select publications:
Hallowell B, Lansing C. Tracking eye movements to study cognition and communication. ASHA Leader. 2004;9(21):1,4-5,22-25.
Deborah Henderson PhD, RN, CNE
School of Nursing

Major research area(s):
Simulation training nursing education.

Select publication(s):

David H. Holben, PhD, RD, LD
School of Applied Health Sciences and Wellness
Division of Nutrition

Major research area(s):
The impact of food access on the health outcomes of individuals, households, and communities.

Select publications:

Jennifer Horner, PhD, JD
College of Health Sciences and Professions
Associate Dean

Major research areas:
Law and ethics for health professions; research integrity; neurologic disorders.

Select publications:


Cheryl A. Howe, PhD, CES, CSCS, CEP
School of Applied Health Sciences and Wellness
Division of Exercise Physiology

Major research area(s):
Dose of physical activity required to prevent childhood obesity and obesity-related diseases; evidence-based structured physical activity interventions implemented in school settings to correct the daily energy surplus related to childhood obesity.

Select publications:
Howe CA, Freedson PS. Physical activity and academic performance. The President’s Council on Physical Fitness and Sport E-Newsletter. 2008(Fall).


Gregory Janson, PhD
Department of Social and Public Health
Division of Child and Family Studies

Major research area(s):
The physiological and psychological impact of trauma and its treatment; working with severely disturbed children, adolescents and families; the effects of emotional maltreatment on young children in school settings.

Select publications:


Fuh-Cherng Jeng, MD, PhD
School of Rehabilitation and Communication Sciences
Division of Communication Sciences and Disorders

Major research area(s):
Event-related and cognitive potentials to help identify babies who are at risk for developing language disorders, and to enhance the ability of scientists and therapists to create methods to prevent and treat hearing loss and communication disorders for individuals who speak tonal and non-tonal languages around the world.

Select publications:


**Teresa W. Julian, PhD, RN, FNP-BC**  
School of Nursing  

**Major research area(s):**  
Individual and family health, and community empowerment.

**Select publication(s):**  


**Youngsun Kim, PhD, CCC-SLP**  
School of Rehabilitation and Communication Sciences  
Division of Communication Sciences and Disorders  

**Major research area(s):**  
Dysphagia (swallowing disorders); biomechanical and temporal characteristics of normal and disordered swallowing; refinement of diagnostic tools and develop intervention strategy for patients who aspirate.

**Select publications:**  


**Andrew Krause, PhD, AT**  
School of Applied Health Sciences and Wellness  
Division of Athletic Training  

**Major research area(s):**  
Neuromuscular adaptations to orthopaedic physical rehabilitation intervention, including cryotherapy and immobilization.

**Select publications:**  


Michael R. Kushnick, PhD
School of Applied Health Sciences and Wellness
Division of Exercise Physiology

Major research area(s):
Therapeutic lifestyle modification to attenuate chronic disease, namely, cardiovascular disease and T2DM by (a) using slow digesting starch to modulate blood glucose response and (b) using physical activity/exercise to modify risk factors associated with chronic diseases.

Select publications:

Chao-Yang Lee, PhD
School of Rehabilitation and Communication Sciences
Division of Communication Sciences and Disorders

Major research area(s):
Speech perception: The cognitive processes involved in extracting information from the acoustic signal to understand spoken language.

Select publications:

Mingun Lee, PhD, MSW
Department of Social and Public Health
Division of Social Work

Major research area(s):
Social work program evaluation, school prevention program; evidence-based practice in rural settings; social work education and field evaluation; cultural competence.

Select publications:
Randy Leite, PhD
College of Health Sciences and Professions
Dean

Major research area(s):
Father involvement with children, post-divorce family dynamics, family policy.

Select publication(s):

John McCarthy, PhD, CCC-SLP
School of Rehabilitation and Communication Sciences
Division of Communication Sciences and Disorders

Major research area(s):
Improving computer interfaces for speech generating devices for children and adults with a wide range of physical, intellectual, and sensory disabilities; at the community level, changing attitudes of children and adults without disabilities toward individuals who use speech generating devices to improve social and vocational outcomes.

Select publications:

Marinellie SA, Kneile L. Acquiring knowledge of derived nominals and derived adjectives in context. *Lang Speech Hear Serv Sch.* In press.
Charman L. Miller, MSN  
School of Nursing

**Major research area(s):**  
Forensic nursing; human simulation in nursing education.

**Select publication(s):**  


James Montgomery, PhD, CCC-SLP, F-ASHA  
School of Rehabilitation and Communication Sciences  
Division of Communication Sciences and Disorders

**Major research area(s):**  
Cognitive-based psychometric models of auditory sentence comprehension in school age children with and without specific language impairment, ie, investigating the contribution of six cognitive mechanisms to the comprehension of spoken and written language.

**Select publications:**  


Michele Morrone, PhD  
Department of Social and Public Health  
Division of Environmental Health

**Major research area(s):**  
Public perception of environmental health risks; environmental justice; environmental education and risk communication.

**Select publications:**  


Helmut W. Paschold, PhD, CIH, CSP, PE (TX)
Department of Social and Public Health
Division of Industrial Health

Major research area(s):
Occupational whole-body vibration (WBV), with a focus on research-to-practice applications.

Select publications:

Jetta Nicole Pennington, NSM, RNC, NBCSN
School of Nursing

Major research area(s):
Lifespan nursing care; education of nurse practitioners.

Select publication(s):

Natalie D. Pope, PhD, LCSW
Department of Social and Public Health
Division of Social Work

Major research area(s):
Gerontology; caregiving; quantitative and qualitative methods applied to social work education and practice.

Select publication(s):
### Brian G. Ragan, PhD, AT
School of Applied Health Sciences and Wellness  
Division of Exercise Physiology

**Major research area(s):**  
Develop new tools to accurately measure and diagnose health conditions; specifically, to measure function and person/environment interactions with accelerometry and spatial data from geographic information systems (GIS) and global positioning systems (GPS).

**Select publications:**  
- Baanowski T, Masse L, Ragan BG, Welk G. How many days was that? We’re still not sure, but we’re asking the question better! Med Sci Sport Exerc. 2008;40(7):S544-S549.  

### Sharon Rana, PhD
School of Applied Health Sciences and Wellness  
Division of Exercise Physiology

**Major research area(s):**  
Effect of fatigue and exercise on neuromuscular function specifically mechanomyographic (MMG) and electromyographic (EMG) signals; muscular performance with exercise intervention, exercise threshold estimations, and childhood growth/obesity studies.

**Select publications:**  

### Dennis Ries, PhD, CCC-A
School of Rehabilitation and Communication Sciences  
Division of Communication Sciences and Disorders

**Major research area(s):**  
Sensory psychology of hearing and auditory memory in children and adults focusing on the delineation of the normal maturational time course for acoustic features of auditory objects to ascertain the effect of auditory processing and other central disorders upon perception and performance.

**Select publications:**  
David W. Russ, PT, PhD  
School of Rehabilitation and Communication Sciences  
Division of Physical Therapy

**Major research area(s):**  
Skeletal muscle physiology and fatigue at the molecular, organelle, tissue and organism levels, including human and rat models to determine what factors other than muscle mass can affect muscle force production, particularly in cases of aging and disuse.

**Select publications:**  


Timothy Ryan, PhD, RS, CIH  
Department of Social and Public Health  
Division of Environmental Health Science & Industrial Hygiene

**Major research area(s):**  
Indoor environment (carbon monoxide detectors, prevalence and risks of MRSA bacteria, and microbial volatile organic compounds); distance education pedagogy testing of delivery methods for an applied sciences curriculum via various media platforms, and the assessment of efficacy of such efforts.

**Select publications:**  


Susan Kiss Sarnoff, DSW  
Department of Social and Public Health  
Division of Social Work

**Major research area(s):**  
Poverty and justice; social work pedagogy.

**Select publication(s):**  


Alexander V. Sergeev, MD, PhD, MPH
Department of Social and Public Health
Division of Public Health

Major research area(s):
Atherosclerosis-related diseases (such as ischemic heart disease, myocardial infarction, stroke, and hypertension); environmental exposure to persistent organic pollutants (POPs) and their interaction with conventional risk factors (such as diabetes and obesity); large population-based study designs and multivariate biostatistical methods.

Select publications:
Sergeev AV. Persistent organic pollutants and atherosclerosis: are there sufficient facts to draw the ultimate conclusion? Kardiologiya (Cardiol). In press.
Sergeev AV, Carpenter DO. Exposure to persistent organic pollutants increases hospitalization rates for myocardial infarction with comorbid hypertension. Primary Prevention Insights. In press.
Sergeev AV, Carpenter DO. Hospitalization rates for stroke with comorbid hypertension in relation to residential proximity to environmental sources of persistent organic pollutants. Submitted.

Betty Sindelar, PT, PhD
School of Rehabilitation and Communication Sciences
Division of Physical Therapy

Major research area(s):
Examination of the inter-play between structure and function in the development of temporomandibular joint (TMJ) using an animal model (pig) through application of immunohistochemical assays, material testing, EMG analysis, and other biochemical assays; testing novel approaches for the treatment of periodontal disease.

Select publication(s):

Anne Elizabeth Sparks, PhD
Department of Social and Public Health
Division of Social Work

Major research area(s):
Low income families; relationship education.

Select publication(s):
Solveig Spjeldnes, MSW, PhD
Department of Social and Public Health
Division of Social Work

Major research area(s):
Effects of re-entry services and environmental factors on recidivism rates; relationship to child criminal behavior; male-female romantic relationships amongst at-risk populations.

Select publication(s):

Chad Starkey, PhD, LAT
School of Applied Health Sciences and Wellness
Division of Athletic Training

Major research area(s):
(a) Epidemiology of injuries and illnesses occurring in the NBA; (b) epidemiological/financial impact of athletic training services provided to Southeastern Ohio High Schools; and (c) effects and efficacy of therapeutic electrical stimulation used in the treatment of musculoskeletal pathologies.

Select publications:

James Thomas, PT, PhD
School of Rehabilitation and Communication Sciences
Division of Physical Therapy

Major research area(s):
Changes in motor coordination in low back pain; interactions of psychological and motor behaviors in the prediction of recurrent low back pain; the neurophysiological mechanisms of trunk muscle fatigue as well as spinal manipulation techniques.

Select publications:
Jason White, MS, PhD
School of Applied Health Sciences and Wellness
Division of Exercise Physiology

**Major research area(s):**
Human performance (normal, healthy population and athletic population) with a focus on muscle development (muscle strength, endurance, hypertrophy and recovery, preventing muscle loss and attenuating sarcopenia).

**Dissertation:**
White J. Effects of Supersets Versus Traditional Strength Training Methods on Muscle Adaptations, Recovery, and Selected Anthropometric Measures
Athens, OH: Ohio University; 2011 (June).

Richard W. Willy, PT, PhD
School of Rehabilitation and Communication Sciences
Division of Physical Therapy

**Major research area(s):**
Reducing the risk of the development of knee osteoarthritis (OA) with the overall goal of mitigating risk factors for chronic disease such as obesity and diabetes.

**Select publications:**
Silbernagel KG, Willy RW, Davis IS. Pre- and post-injury running analysis along with measurements of strength, endurance, and tendon length in a patient with an Achilles tendon rupture. Submitted.


Willy RW, Pohl M, Davis I. Calculation of vertical load rates in the absence of vertical impact peaks in runners. Submitted.

Li Xu, MD, PhD
School of Rehabilitation and Communication Sciences
Division of Communication Sciences and Disorders

**Major research area(s):**
Speech perception with cochlear implants: (a) studies on speech perception theories and speech processing strategies to improve performance of cochlear implant patients; b) evaluation of speech perception performance (eg, lexical tone perception and production) in prelingually deafened children with cochlear implants.

**Select publications:**


