



## **EMPLOYMENT- CLINICAL**

December 2006 to present	On-call Physical Therapist, Shands at The University of Florida, Gainesville, FL
May 2003 to December 2006	Senior Therapist and Clinical Coordinator of Clinical Education Sacred Heart Hospital, Pensacola, FL
March 2001 to May 2003	Physical Therapist / Team Leader Integrated Specialty Hospital, Edmond, OK
April 2000 to March 2001	Physical Therapist Healthsouth Rehabilitation Hospital, Oklahoma City, OK
March 1999 to April 2000	Physical Therapist F.I.R.M. Associates, Inc., Fresno, CA
August 1998 to February 1999	Physical Therapist Nova Care Rehabilitation, Inc., Corpus Christi, TX
1996 to 1998	On-call Physical Therapist Shands at The University of Florida, Gainesville, FL
1994 to 1996	Physical Therapist University of Pittsburgh Medical Center, Pittsburgh, PA

## **AWARDS AND HONORS**

- National Institutes of Health Rehabilitation Research Career Development Program Scholar (K12 HD055929), University of Florida, Awarded January 2011
- Cardiovascular and Pulmonary Section Research Award, Combined Sections Meeting APTA, 2010
- National Institutes of Health Neural Plasticity Research Training Pre-Doctoral Fellowship (T32 HD043730), University of Florida, 2007-present
- Promotion of Doctoral Studies I and II Scholarships. Endowed in honor of Scot C. Irwin, PT, DPT, CCS, 2008-10
- Graduate Research Grant, College of PPHP Research Day, University of Florida, 2009
- Group Assisted Training of Research Mentorship Award, University of Florida and Howard Hughes Medical Institute, 2008-9
- Outstanding Poster Presentation, College of PPHP Research Day, University of Florida, 2007
- American Physical Therapy Association, Mary McMillan Post-Professional Scholarship, 1998
- University of Florida College of Health Professions, Charlotte Liberty Scholarship, 1997
- University of Pittsburgh Medical Center Tuition Remission Scholarship, 1994
- Omicron Delta Kappa Leadership Honor Society, Member Since 1991

## **PEER-REVIEWED PUBLICATIONS**

Smith, B.K., Martin, A.D., Davenport, P.W. Respiratory Muscle Overload Training and Diaphragm Histological Remodeling. *Manuscript in Preparation. Target Journal: Journal of Physiology.*

Martin, A.D., Davenport, P.W., **Smith, B.K.**, Harman, E., Gonzalez-Rothi, R., Baz, M., Layon, J., Banner, M., Caruso, L., Deoghare, H., Huang, T., Gabrielli, A. Inspiratory muscle strength training improves weaning outcome in failure to wean patients: A controlled trial. *Manuscript Under Revision. Critical Care*.

Huang, T., Deoghare, H.V., **Smith, B.K.**, Beaver, T.M., Baker, H.V., Martin, A.D. Gene Expression Changes in the Human Diaphragm Following Cardiothoracic Surgery. *Manuscript Under Revision. Journal of Thoracic and Cardiovascular Surgery*.

Edwards, T.M., **Smith, B.K.**, Watts, D.L., Germain-Aubrey, C.C., Roark, A., Bybee, S., Cox, C.E., Hamlin, H.J., Guillette, L.J. Group-Advantaged Training of Research (G.A.T.O.R.): A Metamorphosis of Mentorship. *Manuscript Accepted by Bioscience*. PMID: pending.

**Smith, B.K.**, Bleiweis, M.S., Zauhar, J., & Martin, A.D. (2010) Inspiratory Muscle Training in a Child with Nemaline Myopathy and Organ Transplantation. *Pediatric Critical Care Medicine*, 11, 6, e1-5. PMID: 20407395

**Smith, B.K.** (2008) A Pilot Study Evaluating Therapist-Nurse Inter-Rater Reliability of Dionne's Egress Test in Morbidly Obese Patients. *Acute Care Perspectives*, 17, 4, 1-7.

**Kellerman, B.A.**, Martin, D., & Davenport, P.W. (2000) Inspiratory Strengthening Effect on Resistive Load Detection and Magnitude Estimation. *Medicine and Science in Sports and Exercise*, 32, 11, 1859-1867. PMID: 11079514

**Kellerman, B.A.** (1996) The Role of Physical Therapy In The Multidisciplinary Treatment of Necrotizing Fasciitis. *Acute Care Perspectives*, 4, 8-9, 24-25.

## **NON-REFEREED PUBLICATIONS**

Attia S, **Smith BK**, Mathur S, Ye F, Hotchkiss MT, Darragh BD, Martin AD, Davenport PW, Vandeborne K. "Satellite Cell Activation in the Diaphragm Following Tracheal Occlusion in Rats." (2009) *Gas Exchange: Canadian Physiotherapy Association Cardiorespiratory Division Newsletter*, 2, 5-6.

Darragh B, **Smith BK**, Attia SM, Martin AD. "Ratio of Hamstring to Quadriceps Torque Values in Lung Transplant Recipients." (2009) *Gas Exchange: Canadian Physiotherapy Association Cardiorespiratory Division Newsletter*, 2, 6-7.

## **PUBLISHED REFEREED ABSTRACTS**

**Smith BK**, Martin AD, Vandeborne K, Davenport PW. "Effect of Tracheal Occlusion on Diaphragm Fiber Remodeling." (2010) *American Journal of Respiratory and Critical Care Medicine*, 179, A4385.

Mathur S, **Smith BK**, Senesac C, Lott DJ, Walter GA, Martin AD, Vandeborne K. "Respiratory and Lower Limb Muscle Strength in Boys with Duchenne Muscular Dystrophy." (2009) *Physiotherapy Canada*, 61, S68.

**Smith BK**, Mathur S, Hotchkiss M, Ye F, Martin AD, Vandeborne K, Davenport PW. "Diaphragm Remodeling Following Repeated Bouts of Acute Tracheal Occlusion." (2009) *American Journal of Respiratory and Critical Care Medicine*, 178, A4207.

**Smith BK**, Huang T, Deoghare, Martin AD. "Rate of Inspiratory Pressure Development and Maximal Inspiratory Pressure in Ventilated and Healthy Adults." (2009) *American Journal of Respiratory and Critical Care Medicine*, 178, A3802.

Martin AD, **Smith BK**, Davenport, PW, Banner MJ, Gabrielli A. "Effects of Inspiratory Muscle Strength Training on Loaded Breathing in Difficult to Wean Patients." (2009) *American Journal of Respiratory and Critical Care Medicine*, 178, A3801.

**Smith BK**, Martin AD. "Widespread Presence of ICU-Acquired Weakness in Patients who Require Prolonged Mechanical Ventilation." (2008) *American Journal of Respiratory and Critical Care Medicine*, 177, A500.

**Kellerman BA**, Martin D. "The Role Of Inspiratory Muscle Strength In Predicting Six-Minute Walk Distance In Adults With Severe Obstructive Lung Disease." (1998) *Physical Therapy*, 78, 5, S3.

**Kellerman BA**, Martin D & Davenport PW. The Effect of Inspiratory Muscle Strength Training on Magnitude Estimation (ME) of Resistive Loads (R) in Healthy Adults. (1998) *FASEB Journal*, 12, 2, A785.

**Kellerman BA**, Irrgang J, Delitto A, VanSwearingen J, Ali M, Scarlett C, Valentino J. (1996) Integration of Computerized Documentation To Quantify Treatment Efficacy And Promote Clinical Research. *Physical Therapy*, 76, 5, S53.

## RESEARCH PRESENTATIONS AT MEETINGS AND CONVENTIONS

**Smith BK**, Martin AD, Vandenborne K, Davenport PW. Effect of Tracheal Occlusion on Diaphragm Fiber Remodeling. *Poster Presentation*. American Thoracic Society Meeting, New Orleans, LA. May 18, 2010.

**Smith BK**, Franceschi A, Huang T, Deoghare H, Martin DA. "Lower Extremity Strength Training Following Acute Lung Transplantation: Preliminary Report." *Poster Presentation*. APTA Combined Sections Meeting, San Diego, CA. February 20, 2010.

**Smith BK**, Mathur S, Martin AD, Vandenborne K, Davenport PW. "Diaphragm Fiber Phenotype and Cross-Sectional Area Following Intermittent Tracheal Occlusion." *Poster Presentation*. American Congress of Rehabilitation Medicine Conference, Denver, CO. October 7, 2009.

**Smith BK**, Mathur S, Hotchkiss M, Ye F, Martin AD, Vandenborne K, Davenport PW. "Diaphragm Remodeling Following Repeated Bouts of Acute Tracheal Occlusion." *Poster Presentation*. American Thoracic Society Meeting, San Diego, CA. May 19, 2009.

**Smith BK**, Huang T, Deoghare, Martin AD. "Rate of Inspiratory Pressure Development and Maximal Inspiratory Pressure in Ventilated and Healthy Adults." *Poster Presentation*. American Thoracic Society Meeting, San Diego, CA. May 18, 2009.

**Smith BK**, Attia S, Darragh B, Martin AD. "Training Adaptations in Quadriceps Torque Generation and Decay in Lung Transplant Recipients." *Poster Presentation*. Southeastern American College of Sports Medicine Conference. Birmingham, AL. February 13, 2009.

Darragh B, **Smith BK**, Attia SM, Martin AD. "Ratio of Hamstring to Quadriceps Torque Values in Lung Transplant Recipients." *Poster Presentation*. Southeastern American College of Sports Medicine Conference. Birmingham, AL. February 13, 2009.

Attia S, **Smith BK**, Mathur S, Ye F, Hotchkiss MT, Darragh BD, Martin AD, Davenport PW, Vandenborne K. "Satellite Cell Activation in the Diaphragm Following Tracheal Occlusion in Rats." *Poster Presentation*. Southeastern American College of Sports Medicine Conference. Birmingham, AL. February 12, 2009.

**Smith BK**, Huang T, Deoghare H, Martin AD. "Inspiratory Training Improves Sub-Maximal Pressure Development in Adults with Mechanical Ventilation." *Platform Presentation*. APTA Combined Sections Meeting. Las Vegas, NV. February 11, 2009.

**Smith BK**, Huang T, Deoghare H, Martin AD. "Inspiratory Pressure Development and Maximal Inspiratory Pressure in Healthy and Ventilated Adults." *Poster Presentation*. 4<sup>th</sup> Annual Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. December 5, 2008

**Smith BK**, Martin AD. "Widespread Presence of ICU-Acquired Weakness in Patients who Require Prolonged Mechanical Ventilation." *Poster Presentation*. American Thoracic Society Meeting. Toronto, ON. May 19, 2008.

Deoghare HV, Huang T, **Smith BK**, Davenport PW, Gabrielli A, Banner MJ, Caruso L, Layon AJ, Martin AD. "Catecholamine and Heart Rate Variability Changes During Failed Spontaneous Breathing Trials in Difficult to Wean Patients." *Poster Presentation*. American Thoracic Society Meeting. Toronto, ON. May 19, 2008.

Huang T, Deoghare H, **Smith BK**, Baz MA, Gonzalez-Rothi R, Harman EM, Martin AD. "Factors Predicting Weaning Outcome in Difficult to Wean Adult Patients." *Poster Presentation*. American Thoracic Society Meeting. Toronto, ON. May 19, 2008.

**Smith BK**, Martin AD. "Strength Characteristics of Critically Ill Patients Requiring Prolonged Mechanical Ventilation." *Poster Presentation*. APTA Combined Sections Meeting. Nashville, TN. February 8, 2008.

**Smith BK**, Mathur S, Hotchkiss M, Ye F, Vandeborne K, Martin AD, Davenport PW. "Histological Features of the Diaphragm Following Acute Bouts of Tracheal Occlusion." *Poster Presentation*. 3<sup>rd</sup> Annual Neuromuscular Plasticity Symposium, University of Florida, Gainesville, FL. January 31, 2008.

**Smith BK**, Martin, AD. "Inspiratory Muscle Training Improves Strength in Difficult to Wean Patients." *Poster Presentation*. 20<sup>th</sup> Annual College of Public Health and Health Professions Research Day. Gainesville, FL. April 12, 2007.

**Smith BK**, Hines, AP. "Measuring Inter-Rater Reliability of the Egress Test." *Poster Presentation*. American Physical Therapy Association Scientific Meeting and Exposition. Orlando, FL. June 24, 2006.

**Smith BK**, Raybourn M, Field D, Austermann MA. "Building an Acute Care Physical Therapy Electronic Medical Record (EMR) Across the Age Continuum." *Poster Presentation*. American Physical Therapy Association Scientific Meeting and Exposition. Orlando, FL. June 23, 2006.

**Kellerman BA**, Martin AD. "The Role Of Inspiratory Muscle Strength In Predicting Six- Minute Walk Distance In Adults With Severe Obstructive Lung Disease." *Poster Presentation*. American Physical Therapy Association Scientific Meeting and Exposition. Orlando, FL. June 7, 1998.

**Kellerman, BA**, Martin D, Davenport PW. "The Role Of Inspiratory Muscle Strength In Magnitude Estimation Of Resistive Loads." *Poster Presentation*. Federation of Applied Science and Experimental Biology. San Francisco, CA. April 22, 1998.

**Kellerman BA**, Irrgang J, Delitto A, VanSwearingen J, Ali M, Scarlett C, Valentino J. "Integration Of Computerized Documentation To Quantify Treatment Efficacy And Promote Clinical Research." *Platform Presentation*. American Physical Therapy Association Scientific Meeting and Exposition. Minneapolis, MN. June 15, 1996.

**Kellerman BA**, Brown T. "The Role of Physical Therapy In The Multidisciplinary Treatment of Necrotizing Fasciitis." *Platform Presentation*. APTA Combined Sections Meeting. Atlanta, GA. February 16, 1996.

## INVITED PRESENTATIONS- LOCAL

“Inspiratory muscle training and de-training effects on strength and ventilatory function in an infant with Pompe disease.” Neuromuscular Plasticity Noons Seminar, University of Florida, Gainesville, FL. July 29, 2010.

“Lower Extremity Strength Training Following Lung Transplantation: Preliminary Analysis.” Neuromuscular Plasticity Noons Seminar, University of Florida, Gainesville, FL. June 26, 2009.

“Exercise After Stroke.” University of Florida Stroke Support Group. Gainesville, FL. April 16, 2009.

“Inspiratory Muscle Training in Patients with Prolonged Mechanical Ventilation.” University of Florida Capital Campaign, Department of Physical Therapy Alumni Event, Gainesville, FL. September 27, 2007.

“Building Your Professional Toolbox.” Physical Therapist Assistant Commencement Ceremony, Pensacola Junior College, Pensacola, FL. June 24, 2007.

“Cardiopulmonary Update.” 4-Week Clinical Inservice Series, Baptist Health Systems, Pensacola, FL. January and February, 2004.

## RESEARCH FUNDING

*Rehabilitation Research Career Development Program (K12 HD055929).* K. Ottenbacher, Principal Investigator, **B.K. Smith**, K12 Scholar. National Institutes of Health. 2011.

*A Phase I, Open-Label Safety, Tolerability, PK/PD Study of ZC-701 (Gilt-Tagged Recombinant Human GAA) in Patients with Late-Onset Pompe Disease.* B.J. Byrne, Site Principal Investigator, **B.K. Smith**, Sub-Investigator. BioMarin Pharmaceutical, Inc. 2011

*Lower Extremity Strength Training After Lung Transplantation.* A.D. Martin, Principal Investigator, **B.K. Smith**, Co-Investigator. Children’s National Medical Center. 2008.

## TEACHING EXPERIENCES

### University of Florida, Department of Physical Therapy

*Course Instructor*, Spring 2011, Basic Clinical Skills- PHT 6207C

- Principles of aerobic capacity testing and endurance training
- Muscle strength testing and training therapeutic exercise prescription
- Progression of an exercise prescription
- Modification of an exercise prescription in the presence of disease or injury

*Project Mentor*, Spring 2010-11, Evidence-Based Practice III- PHT 6609

- Guidance of student research project and report- study design, consideration for data collection, statistical analysis, writing
- Jason Shi – Reliability of automatic sphygmomanometers in acute care physical therapy, 2010
- Dwight Bueno – Functional capacity reserve gait training and self-selected walking speed, 2011

*Guest Instructor*, Summer 2008 -2010, Differential Diagnosis in Physical Therapy- PHT 6730

- Cardiovascular and Pulmonary Units: pathophysiology, symptom recognition and red flags, clinical decision-making
- Differential diagnosis of shoulder pain

*Participant*, Spring and Summer 2008, Course Design and Teaching Strategies for Physical Therapy Faculty

- Twelve-week faculty enrichment seminar instructed by Dr. Linda Behar-Horenstein, Distinguished Teaching Scholar and Professor, College of Education, University of Florida
- Developed a Teaching Philosophy
- Designed syllabus materials and strategies for maximizing critical thinking experiences in the classroom
- Administered a cardiopulmonary instructional experience for review by seminar attendees and instructor

*Guest Instructor, Fall 2007, Cardiopulmonary Physical Therapy- PHT 6318C*

- Cardiac and pulmonary auscultation assessment
- Arterial blood gases and pulmonary function tests
- Hemodynamic responses to exercise

**Pensacola Junior College, Department of Dental and Emergency Services,**

*Course Instructor, Fall 2006, Therapeutic Techniques and Disabilities II PHT 2162/2162-L, Physical Therapist Assistant Curriculum*

- Coursework content included pathophysiology, anatomy, and treatment of neurological and congenital disorders throughout the lifespan

**University of Florida, Department of Physical Therapy,**

*Graduate Teaching Assistant, 1996 to 1998*

- Therapeutic Exercise and Neurologic Evaluation Classes
- Exercise Physiology Class
- Modalities Class
- Orthopedics Class
- Human Diseases Class
- Modalities Class

**University of Pittsburgh, Department of Physical Therapy, Pittsburgh, Pennsylvania, 1994-1996**

*Guest Lecturer- Introduction to Human Diseases*

## **UNDERGRADUATE STUDENT MENTORSHIP**

Lauren Donnangelo, 2010-11	College of Liberal Arts and Sciences, Biology Major Topic: Respiratory Overload Training and Abdominal Muscle Histology
Brittany Darragh, 2008-11	College of Liberal Arts and Sciences, Honors Thesis in Biology University of Florida-Howard Hughes Medical Institute Mentee Project: Overload Training and Crural Diaphragm Remodeling
Sara Attia, 2008-9	University of Florida-Howard Hughes Medical Institute Mentee Topic: Satellite Cell Responses to Tracheal Occlusion in a Rat Model Finalist: Research Poster Award, Southeastern American College of Sports Medicine Conference, February 12-14, 2009
Christine Ancheta, 2007-8	College of Public Health and Health Professions Senior Honors Thesis Topic: Fluid Balance and Spontaneous Breathing Trials in Ventilated Adults
Lisa Carter, 2007-8	College of Public Health and Health Professions Senior Honors Thesis Topic: Respiratory Pattern and Outcome of Spontaneous Breathing Trials

Samantha Justice, 2007-8

College of Public Health and Health Professions Senior Honors Thesis  
Topic: Effect of Inspiratory Muscle Training on Inspiratory Strength  
Awardee: Outstanding Poster Presentation, College of Public Health and  
Health Professions Research Day, April 16, 2008

## **PROFESSIONAL ACTIVITIES AND AFFILIATIONS**

- American Physical Therapy Association. Member since 1994.
  - *Section Member* – Cardiopulmonary (1995-1998, 2007-present), Acute Care (1995-present), Research (1996-8, 2007-present)
  - *Nominating Committee Member*- Acute Care Section, 2008-11, *Committee Chair*- 2010-11
  - *Chairperson*- Gainesville sub-district of Northern Florida Physical Therapy Association, 1996-1997
  - *Continuing Education Committee Member*- Southwestern Pennsylvania Physical Therapy Association, 1993 to 1996
- Member- American Thoracic Society, 2008-present
- Member- American Congress of Rehabilitation Medicine, 2009-present
- Member- Arthritis Health Professionals of Western Pennsylvania, 1994 to 1996

## **PROFESSIONAL SERVICE ACTIVITIES**

American Physical Therapy Association

- Volunteer Mentor- Members Mentoring Members, 2006-2010
- Volunteer Contributor- Hooked on Evidence, 2008-present

Sacred Heart Health System, Pensacola, FL, 2003-2006

- Certified Clinical Preceptor and mentor of new associates
- Member- Rehab and Ambulatory Services Leadership Committee
- Coordinator- Rehab Services Journal Club

Healthsouth of Oklahoma City, Oklahoma City, OK, 2000-2001

- Member- Cardiopulmonary Care Committee.

University of Pittsburgh Medical Center, Pittsburgh, PA, 1994-1996

- Member- Peer Review and Electronic Medical Record Committees
- Physical Therapy Journal Club

## **UNIVERSITY SERVICE ACTIVITIES**

University of Florida, Gainesville, FL

- Graduate Student Council Representative- Physical Therapy Department, 1996-8, 2007-8
- Graduate Student Council Liaison- Baby Gator Child Care, 1997-8