

CURRICULUM VITAE

Mohamed A. Sabbahi, PT, PhD

Date of This Vita: 02/01/2008

Education

Ph.D. Year 1976 Neurophysiology, University of Southampton, UK

Graduate studies in Biochemical Pharmacology, 1973, University of
Southampton, UK

B. Sc. Year 1966 Physical Therapy, Cairo University, Cairo, Egypt

Dissertation's Title: "Motoneurone and Monosynaptic Reflexes Excitability
Studies In Man" University of Southampton; Advisor: Professor E. M.
Sedgwick.

Professional Certification/Licensure

- Board Certified specialist in Electrophysiologic Physical Therapy, 1992,
2002
- Texas License 1985

Employment

1992: Professor, Texas Woman's University, School of Physical Therapy,
Houston, Texas

1985: Associate professor, Texas Woman's University, School of Physical
Therapy, Houston, Texas

1983- 1985 Senior research associate, Neuromuscular Research center, Boston
University, Boston, Mass.

1979- 1983 Senior research associate, Liberty Mutual research center, Hopkinton,
Mass.

1976- 1977 Lecturer, Cairo University, Faculty of Physical Therapy, Cairo, Egypt.

1966- 1972 Instructor, Cairo University, School of Physical Therapy

TEACHING

Courses Taught at TWU

Graduate Post-professional Courses (in the last 5 years):

- PT 5293 Pathokinesiology of Gait, fall 2005 (Co-teach)
- PT 5913 Diagnostic EMG/NCV for clinicians, Summer 2005
- PT 5903 Basal Ganglia Disorders, Fall 2003

- PT 5023 Neurobiological basis of movement disorders in patients with spinal cord Injuries.
- PT 6503 Advanced research problems in Physical Therapy (co-teach with Dr. Olson)
- PT 5063 Advanced Instrumentation for Physical Therapists (coordinator)

Professional Program Courses (in the last 5 years):

- PT 5221 Exercise Testing and Prescription (Fall 2007).
- PT 5233 Research in Physical Therapy
- PT 5024 Clinical Neuroscience (Co-teach with Dr Bartlett and others)
- PT 5062 Clinical Medicine- Orthopedic (coordinator)
- PT 5811 Introduction to Physical Therapy Skills (co-teaching)

Doctoral Dissertations

- The effect of closed kinetic chain exercise in the recovery of upper limb function and muscle activity in patients with stroke, 2006 (Chairman)
- Electrophysiological studies of Quadriceps muscle activation in Healthy subjects and subjects with anterior cruciate ligament Injury or reconstruction, 2003 (Chairman)
- Evaluation and Treatment of patients with Stroke: An EMG and H-reflex study, 2002 (Chairman)
- Electrophysiologic evaluation and treatment effects in patients with Tension-type headache, 2002 (Chairman)
- Early detection of cervical spine disorders in industrial and job-related Injuries, 1999 (Chairman)
- H-reflex studies in patients with movement disorders, 1997 (Chairman)
- The optimization of Drug delivery with Iontophoresis, 1993, (Chairman)
- Electromyographic analysis of cervical muscle fatigue in normal subjects and patients with Osteoarthritis of cervical spine, 1991 (Chairman)
- Postural control and the H-reflex in persons with essential tremor: An exploratory study, 1995, (committee member)
- The effects of TENS on Late wave somatosensory evoked cortical potentials and subjective response to experimental pain, 1991, (committee member)
- Arobic Capacity and isometric muscle torque in Children with Juvenile Rheumatoid Arthritis and Healthy Children: A case comparison Study, 1990 (committee member)

Master's Theses

- Volitional and reflex modulation in closed and open Kinetic chain activities of upper extremity in Healthy individuals, 2003 (Chairman)
- H-reflex changes with loading and unloading, 1997 (Chairman)
- Effect of desensitization of muscle receptors by Iontophoresis on Inhibitory mechanisms and muscle mechanics, 1987 (Chairman)

- Correlation of experimental pain and thermal stimulation in Healthy subjects, 1986 (Chairman)

Master's Professional Papers (Chairing an average of 3 professional papers per year during the last 20 years (Sample)

- Effect of loading, unloading and spinal posture on the soleus and FCR H-reflex. (in progress) (Chairman)
- Comparison of Ipsilateral upper and lower limb H-reflex behavior. 2005 (Chairman)
- Test/retest reliability study of volitional and reflex modulation in closed & open Kinetic chain activities of the upper extremities in a patient with stroke, 2005 (Chairman)
- Nerve conduction changes with different wrist postures, 2004 (Chairman)
- H-Reflex Changes with posture. 2002 (Chairman)
- Blood Pressure changes with Rocking. 2001 (Chairman)

SCHOLARSHIP/CREATIVE ACHIEVEMENTS

1. Books (give author(s), title, press and date of publication)

- (1) Sabbahi, M.A. Modern Trends in Physical Therapy for Neurology. Cairo, Egypt: Cairo Press, 1978.
- (2) Sabbahi, M.A., "The use of topical anesthesia in the rehabilitation of patients with spasticity" Neurotrauma: Treatment, Rehabilitation and Related Issues. Miner and Wagner (Edts), Butterworth, Boston, 65-80, 1987.
- (3) Nalty T. and Sabbahi M. Electrotherapy : Clinical Procedures Manual. McGraw Hill (Pub.) 2001

2. Chapters (give author(s), titles, press, date of publication and page numbers)

- (1) DeLuca, C.J., Sabbahi, M.A., Stulen, F.B. and Bilotto, G. "Some properties of the median frequency of the myoelectric signal during localized muscular fatigue", *Biochemistry of Exercise*, Kuttgen, H., Vogel, J. and Poortmans, J. (edts), pp. 175-186, (1983).

3. Articles (Last 10 years)

- (1) Lin F and Sabbahi M. The aging effect on the EMG and mechanical responses of the human wrist-flexor stretch reflexes. *EMG. Clin. Neurophysiology* 38:323-331,1999.

- (2) Lin F and Sabbahi m. Correlation of Spasticity with the hyperactive stretch reflexes and the motor dysfunction in hemiplegia. *Arch Phys. Med. Rehab.* 80:526-530, 1999.
- (3) Abdulwahab S and Sabbahi M. Neck retractions, Cervical Root Decompression, and Radicular Pain. *JOSPT* 30:4-12, 2000.
- (4) Abdulwahab S and Sabbahi M. Cervical root compression monitoring by flexor carpi radialis H-reflex in normal subjects. *Spine* 24:137-141, 1999.
- (5) Abdulwahab S and Sabbahi M. Electrodiagnosis-based evaluation and treatment of patients with cervical radiculopathy. Submitted for Publication.
- (6) Al-jawayed I., Sabbahi M., Etnyre B. and Hasson S. The H-reflex Modulation in Lying and a semireclining (sitting) position. *Clin, Neurophysiol.* 110:2044-2048. 1999.
- (7) Ali A., Sabbahi M. H-Reflex Changes Under Spinal Loading and Unloading Conditions in Normal Subjects. *Clin. Neurophysiol.* 111: 664-670, 2000.
- (8) Sabbahi M, Etnyre B., Aljawayed I., Hasson S. and Jankovic J. Methods of H-reflex evaluation in early stages of Parkinson's Disease. *Journal Clin. Neurophysiol.* 19 (1): 67- 72, 2002
- (9) Ali A., Sabbahi M. Test – Retest Reliability of the Soleus H-Reflex in Three Different Positions. *Electromyog. Clin. Neurophysiol.* 41, 209-214, 2001
- (10) Sabbahi M., Etnyre B., Al-Jawayed I., Jankovic J. H-Reflex recovery Curves to differentiate essential tremor from Parkinson's disease and the combination of essential tremor and Parkinson's disease. *Journal of Clin. Neurophysiol.* 19, 519- 526, 2002
- (11) Sabbahi M. H-Reflex Changes Under Spinal loading and Unloading of the spine and their relation to the diagnosis of lumbosacral radiculopathy in mechanical back pain.. *Clin. Neurophysiol.*112;1952-1954, 2001
- (12) Sabbahi M. Etnyre B., Aljawayed I., Hasson, and Jankovic J. Soleus H-reflex measures in Patients with Focal and Generalized Dystonis. *Clin. Neurophysiol.* 114; 288-294, 2003.
- (13) Brennan K., Sabbahi M., Etnyre B., Olson S. Pain Disability Outcomes of Manual Therapy in patients with sub-acute low back Pain. Submitted: J. Orthop. & Sports Physical Therapy.
- (14) Pineda E., Sabbahi M. Etnyre B. H-reflex test-re-test reliability in five standing postures between healthy individuals and patients with stroke. Submitted for publication.
- (15) Pineda E., Sabbahi M., Etnyre B. Soleus H-reflex and EMG acitivity of the ankle antagonists: Can measures from static postures parallel the variation observed during normal gait?. Submitted for publication.
- (16) Al-Rowayeh H., Sabbahi M., Etnyre B. Soleus and Vastus Medialis H-reflexes: Similarities and differences during selective functional and movement Tasks. *J. Neurosci. Methods* 144; 215-225, 2005.

- (17) Al-Rowayeh H, Sabbahi M., Etnyre B. Vastus Medialis H-reflex Reliability during Standing. *J. Clin. Neurophysiol.*145; 79-84, 2006
- (18) Al-Rowayeh H, Sabbahi M. and Etnyre B., Medial and Lateral Gastrocnemius H-reflexes Intersession Reliability during Standing and Lying Postures at varied Foot Positions in Healthy Participants. *EMG. Clin. Neurophysiology.* (In press)
- (19) Al-Rowayeh H., Sabbahi, M.; Etnyre B. H-reflex Asymmetry in Non-Specific Low Back Pain with no Radicular Symptoms: Evidence of Neural Compromise *EMG. Clin. Neurophysiology.* (In press)

Presentations at Professional Meetings (Last 10 years)

- (1) Sabbahi M., Hussein T., and Delitto T. Innovation in Evaluation and Treatment of patients with Back and Neck Pain based on Electrophysiologic Testing. Symposium at the Combined Section Meeting of the APTA, Seattle, Washington, 1999.
- (2) Sabbahi M. Treating Low Back pain in Two weeks: A Quick-fix for lumbosacral radiculopathy Based on Electrophysiologic testing. Proc. of the WCPT meeting, Yokohama, Japan, p. 187, 1999.
- (3) Balba'a A. and Sabbahi M. Early Detection of Cervical Spine Disorders in Computer Workers. Proc. WCPT meeting in Yokohama, Japan, p. 189, 1999.
- (4) Sabbahi A. and Abdulwahab S. A quickfix for cervical radiculopathy based on Electrophysiologic testing. Pro. WCPT Mtg. in Yokohama, Japan, p. 190, 1999.
- (5) Hussain T. and Sabbahi M. Back Pain Treatment Based on Electrophysiologic Testing: Gait Improvement. Proc. WCPT meeting, Yokohama, Japan, P. 193, 1999.
- (6) Ali A. and Sabbahi M. Test-retest Reliability of the Soleus H-Reflex in three different positions. Proc. WCPT meeting, Yokohama, Japan, p. 194, 1999.
- (7) Abdulwahab S. and Sabbahi M. Electrodiagnosis-Based Evaluation and Treatment of Patients with Cervical Radiculopathy. Proc. WCPT, Yokohama, Japan, p. 344, 1999.
- (8) Etnyre B., Sabbahi M., Aljawayed I. H-Reflex modulation in Lying and semi- reclining (sitting) position. Proc. Annual Meeting of the Society for Neuroscience, Miami, Florida, P.109 , 1999.
- (9) Stanton V., Sabbahi M. Spinal Postural Modification Causes No Changes in the Soleus H-Reflex of Normal Subjects. Proc. of the Annual Meeting of the APTA, Indianapolis, IN, 2000.
- (10) Sabbahi M., Etnyre B., Al-Jawayed I. H-Reflex Changes in Dystonia. Proc. Ann. Meeting Soc. Neuro. Sci., New Orleans, LA., P 1231, 2000.

- (11) Sabbahi M. Topical Anesthesia may reduce disability and improve functional performance in selected patients with neurological disorders. Proc. 2nd. Intl. Conference on disability Rehabilitation. Riyadh, KSA, 2000.
- (12) Sabbahi M. Sabbahi's Technique of Electrodiagnosis-based evaluation and treatment of radiculopathy may reduce disability in Low back pain Patients. Proc. 2nd. Intl. Conference on Disability Rehabilitation. Riyadh, KSA, 2000.
- (13) Sabbahi M. Etnyre B. The Use of H-reflexes in Electrodiagnostic Testing of Neurologic and Orthopedic Conditions. Symposium, Combined Sections meeting of the APTA, San Antonio, Tx., 2001.
- (14) Sabbahi M. & Pineda E. Volitional & H-reflex modulation during five upright postures. Proc. ANN. Meeting of Society for Neuroscience, San Diego, CA, 2001.
- (15) Sabbahi M. Electrophysiologic Basis for Evaluation & Treatment of Patients with Back & Neck Pain. Annual Meeting of the North American Spine Society (NASS), Seattle, WA, 2001.
- (16) Pineda E. , Sabbahi M. Volitional and reflex modulation of the ankle antagonists in Hemiparetic subjects during gait-simulating postures: An EMG and H-reflex study. Annual Meeting of the APTA, Cincinnati, OH. 2002.
- (17) Atteya M. , Sabbahi M. Head Posture changes neck muscle activity in patients with tension-type headache. Annual Meeting of the APTA, Cincinnati, OH, 2002
- (18) Al-Rowayeh H., Sabbahi M. Soleus and Vastus Medialis H-reflex Behaviors are different in Normal Subjects. Proc. Soc. Neuroscience, Orlando, FL. 2002.
- (19) Pineda E., Sabbahi M. Evaluation and treatment of Patients with Stroke: An EMG and H-reflex study. Proceedings of the WCPT meeting, Barcelona, Spain, 2003.
- (20) Sabbahi M. Acute Low Back Pain can be Evaluated and Treated with H-Reflex-based Technology. Proceedings of the WCPT meeting, Barcelona, Spain, 2003.
- (21) Atteya M., Sabbahi M. Head Posture and Cold application effects on the EMG activity in Tension-Type Headache. Proceedings of the WCPT meeting, Barcelona, Spain, 2003.
- (22) Sabbahi M., Balbaa A. Functional Changes after Positioning and exercise in the Optimum Spinal posture in patients with radiculopathy. Proceedings of the WCPT meeting, Barcelona, Spain, 2003.
- (23) Balbaa A., Sabbahi M. Changes of the EMG frequency parameters in symptomatic and non-symptomatic neck disorders- A study on computer users. Proceedings of the WCPT meeting, Barcelona, Spain, 2003.
- (24) Alrowayeh H, Sabbahi M. H-Reflex Inhibition in patients with ACL Injuries. Proceedings of the WCPT meeting, Barcelona, Spain, 2003.
- (25) Alrowayeh H., Sabbahi M. Does reflex inhibition change with ACL reconstruction. Proceedings of the ACSM meeting, San Francisco, Ca. 2003.

- (26) Alattas A., Sabbahi M. Modulation of the FCR H-reflex by closed and Open Kinetic chain exercise. Proceedings of the annual meeting of the Society for Neuroscience, San Diego, Ca., Oct. 2004.
- (27) Alattas A., Sabbahi M. Closed Kinetic chain Exercises Improve Hand Function and Normalize reflex and volitional control in a patient with stroke. Combined Sections meeting of the APTA, New Orleans, LA, Feb. 2005.
- (28) Sabbahi M. Is Non-Specific Low Back Pain Associated with Neural compression? Presented at the WCPT meeting, Vancouver, Canada, 2007
- (29) Al-Attas A., Sabbahi M., Roddey T, Hamilton M. and Olson S. Effect of Closed Kinetic Chain. Presented at the WCPT meeting, Vancouver, Canada, 2007
- (30) Hesham N. Alrowayeh; Mohamed A. Sabbahi; Talal A. Alshatti. Flexor Carpi Radialis H-reflex Modulation during Spinal Loading and Unloading with Varied Forearm Postures. Annual meeting of the Society for Neuroscience, Washington DC, 2008
- (31) Sabbahi M., Al-Rowayeh H. Medial & Lateral H-reflex modulation during loading & unloading in normal subjects. Annual meeting of the ACSM, Indianapolis, IN. 2008

Honors, Grants, and Fellowships

1966	Achievement Award in Higher Education from the National Science Foundation. Cairo, Egypt
1972-1976	Egyptian Government Scholarship to U.K.
1978-1979	Project HOPE Secretariat Fellowship to the U.S.
1982	Who is Who in Frontier Science and Technology
1987	Diplomat of the American Academy of Neuro-orthopedic Electrodiagnosis

GRANT ACTIVITY

- Topical anesthesia: Modulation of Motoneuron Excitability of the Upper Limb. Office of research and grant administration, 1985 – Granted \$3,250.00 (PI)
- Topical Anesthesia: Spinal reflex modulation after desensitization of the skin. TWU – Organized Research Award for Time (Research Associate Award), 1985 – Granted: 6 work units, (PI).
- Electromyographic analysis of cervical muscle fatigue in patients with osteoarthritis, Office of Research and grant administration, 1987, \$4000, Funded (PI)

- Topical Anesthesia: Rehabilitation of patients with spasticity. , requested \$500,000. The Moody Foundation, 1985 (Not Granted) (PI).
- Topical Anesthesia: Rehabilitation of patients with spasticity. Beutlick Pharmaceutical Company (Not Granted) (PI).
- Topical Anesthesia: Changes in the excitability of the muscle spindle afferent of the upper limb flexor muscles. TWU - Biomedical Research Support Grant 9BRSG), 1985 (Not Granted) (PI).
- Rehabilitation of Patients with Lidocaine Iontophoresis. Small Business Innovation Research, NIH, (NINCDS), 1986, (Not Granted) (PI).
- Rehabilitation of spasticity with Anesthetic Ionthophoresis. TWU - Organized Research Grant Award, 1986. (Not Granted) (PI)
- Rehabilitation of spasticity by iontophoretic anesthesia. NINCDS (NS25297-01) 1987-1989 \$50,000 Funded (PI).
- Measurement of localized muscle fatigue using the frequency spectrum analysis of the myoelectric signal. Arthritis Foundation 1989-1990, \$10,000 Funded (Co-PI).
- Optimization of drug delivery by Iontophoresis' proposal submitted for funding from NIH for 1990-1993, \$191,059 (Not Funded) (PI).
- Optimization of drug delivery by Iontophoresis, 1992, Life Tech, \$12,000. (Funded) (PI).
- Promoting nerve regeneration with natural conduits, 1995 NIH, \$313,324. (Co-PI) (Not funded).
- Rehabilitation of Essential tremor with topical anesthesia. The VA medical center, Houston (Center of excellence in Movement disorders, \$ 32,047, 1995 (not funded) (Co-PI)
- Rehabilitation of Essential Tremor with topical anesthesia. Advance Research program, Texas Higher coordinating Board, \$111,982, 1995 (not funded) (PI)
- Modulation and Rehabilitation of wrist and hand movements by sensory intervention, 1996 NIH, \$459,817 (not funded) (PI).

- On-line monitoring of soleus H-reflex during spinal manipulation in patients with low back Pain. ORGA, 2002, \$3000,00, (not funded), (PI)
- Soleus H-reflex modulation during spinal mobilization in Back Pain. RehabNet West, \$107, 377 (for two years), 2002, not funded (PI)
- H-Reflex changes with limb side, body position and trunk posture: A computerized analysis. Texas Physical Therapy education and research foundation 2005, \$3000, Not funded, (PI).
- H-reflex changes with limb side, body position and trunk posture: A computerized analysis. Office of Research and sponsored programs 2005, \$ 6000.00 (not funded) (PI).
- EMG evaluation of thigh musculatures during Selected Functional Activities and Patient Satisfaction in Patients Implanted with the JOURNEY Bi-Cruciate Stabilized Knee System and Stryker Triathlon: A synopsis. The Methodist Hospital Research Institute. Principal Investigator. \$48,000 (funded, on-going)

Scholarly Works in Progress

Include expectations as to when each will be completed and in what form it will appear.

- Research project entitled “ Computerized evaluation of H-reflexes in patients with lumbosacral and cervical radiculopathy”
- Research project entitled “Evaluation & treatment of patients with spine pain using electrodiagnostic approach”.
- Research project entitled “The use of Open & closed kinetic changes in rehabilitation of patients with Stroke”
- Research project entitled “Modulation of soleus & FCR H-reflex by vestibular stimulation”

PROFESSIONAL SERVICE

Governance and Other Professionally Related Service

- Manuscripts reviewer for the following journals:
 - Physical Therapy
 - Journal of Clinical Neurophysiology.
 - Physical Therapy: Theory & Practice
 - Archive of Physical Medicine & Rehabilitation.
 - Journal of gerontology.
 - Brain Research
 - Journal of Orthopedic and Sports Physical Therapy.

- Neuroscience letters.
- Perceptual and motor Skills.
- Liaison of the EMG section of the APTA at the state of Texas.

Service Activities for the University, College, Component

University Committees:

- University Research Support Committee (2006-2008)
- Intercultural Service Advisory Board Committee.
- University senate (covering for Dr. Roddey) 2006.
- University senate representing Houston center for 2 years, 1998.
- Intellectual property committee (1995-1997)
- Research support committee member (1992-1994)
- Human subject review committee (Houston) member (1991-1993)

College Committees:

- Member, College of health science research council (for the last 2 yrs).
- Member, Curriculum review committee (2003 – 2004)

School of Physical Therapy:

- Member, Admission committee (since 1999)
- Member, Search committee (for the last 3 yrs)
- Member, Vision committee (2004)
- Member, Post-professional admission committee (2000-2004)
- Member, DPT curricular committee.

Professionally Related Service

1976	Brain Research Association (U.K.)
1976	Egyptian Physical Therapy Association (President, 1978)
1977	World Confederation of Physical Therapy
1978	International Society of Electrophysiological Kinesiology
1979	Society of Neuroscience (USA)
1985	European Brain and Behavior Society
1989	American Academy of Neurologic and Orthopedic Surgeons
2001	North American Spine Society

OTHER

Significant Professional Development Activities

Invited Speakers:

- Advances in Diagnostic and Interventional Electrotherapy. Commissioned training 2006. Co-Ordinating committee in Physiotherapy Hospital Authority, Hong Kong. Presented three lectures and two workshops. Dec. 8- 11, 2006.
- New Horizons in Rehabilitation. An International Physical Therapy Conference hosted by the Saudi Arabia Physical Therapy Association & Sultan Bin Abdulaziz Humanitarian City, Riyadh, KSA, Presented 2 lectures and member of the scientific committee for the conference. Dec. 6th- 8th., 2005.
- Electrodiagnosis-based evaluation and treatment of patients with spine pain. Southeastern district meeting, TPTA, Houston, Texas 2001.
- Sabbahi M. Etnyre B. The Use of H-reflexes in Electrodiagnostic Testing of Neurologic and Orthopedic Conditions. Symposium, Combined Sections meeting of the APTA, San Antonio, Tx., 2001.
- Sabbahi, M.A. "Topical Anesthesia: Rehabilitation of Spasticity". Proceedings of the Annual Meetings of the American Congress of Rehabilitation Medicine, Kansas City, p. 20, 1985.

Continuing Education Courses presented Overseas:

- Sabbahi's Technique for evaluation and Treatment of Patients with lumbosacral radiculopathy. Jeddah, 2007.
- Electrodiagnostic testing procedures for Orthopedic and Neurological conditions. EMG/NCV studies. King Abdulazeez University, Jeddah, June 12-16, 2004.
- Sabbahi's Technique for Evaluation and Treatment of Neck and Back Pain. National Guard Health Affairs & King Abdulaziz Medical City, Riyadh, KSA, Dec 20-24, 2003.
- Sabbahi's Technique for Evaluation & Treatment of Patients with Back & Neck Pain. Directorate of Health center, Ministry of Health, Kingdom of Bahrain, Dec. 18th.-24th., 2002.
- Electrophysiologic Based Evaluation and Treatment of patients with Back and Neck Pain. King Faisal University, Dammam, KSA, April 18th.- 19th., 2001.

Sessions Chairman:

- WCPT meeting- Barcelona, 2003.
- Second Intl. Conference on Disability Rehabilitation. Riyadh, KSA, 2000.
- APTA annual meeting, Denver Colorado, 1992.
- International Society of Electrophysiologic Kinesiology (ISEK) 1979.