Elie D. Al-Chaer

Academic Leadership and Strategic Planning
Biomedical and Health-related Sciences
American Jurisprudence and Law

CURRICULUM VITAE
(Updated July 2015)

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Summary of Qualifications

A multilingual professional and a very quick mind with an insider's perspective and proven leadership in higher education, science, health care and related laws. Outstanding organizational and writing skills, with high-impact executive presentation abilities. A demonstrated talent to select, train and retain self-motivated goal-oriented professionals. Well published and recipient of numerous awards and recognitions in Medicine, Biomedical Research, Academic Leadership and Law. Exceptional interpersonal and communication skills with an extensive background in the following:

Biomedical Research	**Legal Counsel**
Nervous & Digestive Systems	**Conflict Resolution**
Clinical & Translational Sciences	**Strategic Planning**
Budget & Resources Management	**Visioning & Persuasion**
Curriculum Innovation & Integration	**High-caliber Negotiation**
Personnel Hiring, Development & Promotion	**Policy, Regulations & Ethics**

- A diverse educational and cultural background with a unique ability to understand and manage sensitivities when communicating and discussing with individuals and groups with different philosophies, cultural backgrounds, perspectives, approaches, and specific needs.
- Outstanding qualifications in strategic planning with comprehensive knowledge of governance, management, organizational development, team building and project execution: successfully led the strategic planning effort for a twenty million dollar Translational Research Institute and served as its Director of Planning and co-Director of Governance.
- Commanding oral presentation ability with a record number of invited speeches delivered to diverse audiences around the world.
- Outstanding interpersonal and negotiation skills and experience in dealing with conflicts, negotiations and conflict resolution.
- Solid track record of cultivating productive relationships with key decision makers and managing projects on a global basis to achieve institutional goals.
- Well-respected high profile in the sciences of the nervous and digestive systems: serving currently on a number of national and international scientific and health advisory boards and editorial boards, and a regularly invited speaker to scientific symposia.
- High impact biomedical research in the fields of Neuroscience and Digestive Diseases: designed, implemented and tested validated models of disease, widely used in translational and pre-clinical trials.
- Proven record of fundraising with an outstanding record of research funding from the National Institutes of Health in the USA, private non-governmental organizations and the pharmaceutical industry.
- Legal advisor on issues including business planning, intellectual property, conflict resolution, health care and business law for a number of businesses, professionals and individuals including medical practitioners, real estate developers, immigration applicants and others.
- Works independently and as a team player depending on the situation.

Name

First: Elie (\ā-ʻlē\)
Middle: Diab
Last: Al-Chaer (\ash- sha-ʻer\)
Professional: Elie D. Al-Chaer, PhD, JD.

Present Academic Position and Address

Professor & Chairperson
Department of Anatomy,
Cell Biology and Physiological Sciences
Faculty of Medicine
American University of Beirut

Physical Address:
DTS Biomedical Research Bldg.
Suite 2-33
PO Box 11-0236
Riad El-Solh 1107 2020
Beirut, Lebanon

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New York, NY 10017-2303
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Electronic Address:
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Biographical

Name: Elie Diab Al-Chaer
Date of birth: April 1968
Place of birth: Lebanon
Sex: Male
Citizenship: United States

Additional Biographical Data Available on Demand

Languages

English, French, and Arabic
All 3 fluently spoken, read and written

Education

After finishing High School at the "Collège des Frères, Mont La Salle" (a *Private French Catholic School*) Aïn Saadé, Lebanon,

1985-1988: Undergraduate student, Department of Mathematics, Faculty of Arts and Sciences, American University of Beirut (AUB), New York Universities Board, Beirut, Lebanon
1989-1991: Graduate student, Department of Physiology, Faculty of Medicine, American University of Beirut, New York Universities Board, Beirut, Lebanon
1993-1996: Ph.D. student, Graduate School of Biomedical Sciences (GSBS), University of Texas Medical Branch (UTMB), Galveston, Texas, USA
1997-2002: Law Student, South Texas College of Law (STCL), Houston, Texas, USA

Degrees and Certificates

B.S. (May 1988)	Mathematics, Faculty of Arts and Sciences, American University of Beirut, New York Universities Board, Beirut, Lebanon
M.S. (Aug. 1991)	Physiology, Faculty of Medicine, American University of Beirut, New York Universities Board, Beirut, Lebanon
Ph.D. (Dec. 1996)	Neuroscience, Graduate School of Biomedical Sciences, University of Texas Medical Branch, Galveston, Texas, USA
J. D. (May 2002)	Doctor of Jurisprudence, South Texas College of Law, Houston, Texas, USA
Certificate (2005)	International Policy and Foreign Affairs Course, Clinton School of Public Service, Little Rock, Arkansas, USA (Jul. 2005)
Certificate (2007)	Leadership Institute, University of Arkansas for Medical Sciences, Little Rock, Arkansas, USA (Jan. – Dec. 2007)

Professional Work History

2015 -	Professor and Chairperson, Department of Anatomy, Cell Biology and Physiological Sciences, Faculty of Medicine, American University of Beirut (AUB), Beirut, Lebanon.
2013 - 2015	Professor and Vice-Chair, Department of Anatomy, Cell Biology and Physiological Sciences, Faculty of Medicine, American University of Beirut (AUB), Beirut, Lebanon.
2009 - 2013	Professor with tenure, Departments of Pediatrics, Internal Medicine (Division of Gastroenterology), Neurobiology and Developmental Sciences, College of Medicine, University of Arkansas for Medical Sciences (UAMS), Little Rock, AR, USA.
2007 (July) - 09	Secondary appointment - Associate Professor, Department of Internal Medicine, Division of Gastroenterology, College of Medicine, UAMS.
2005 (Mar) - 13	Member, Graduate School, UAMS.
2004 (Sep) - 13	Director, Center for Pain Research, College of Medicine, UAMS.

2004 (Sep) - 09	Associate Professor (Tenure Track), Departments of Pediatrics, and Neurobiology and Developmental Sciences, College of Medicine, UAMS.
1999 (Jan.) - 04	Associate member, Neuroscience Graduate Program, University of Texas Medical Branch (UTMB), Galveston, TX, USA.
1999 (Jan.) - 04	Associate member, Graduate School of Biomedical Sciences, UTMB.
1998 (Feb.) - 04	Associate member, Marine Biomedical Institute (MBI), UTMB.
1998 (Feb.) - 04	Assistant Professor (tenure track), Departments of Internal Medicine and Anatomy and Neurosciences; UTMB.
1997 (Jan.)	Assistant member, Marine Biomedical Institute, UTMB.
1997 (Jan.)	Post-Doctoral Fellow, UTMB (Wm. D. Willis, Supervisory Professor).
1994 - 96	Pre-Doctoral Fellow, UTMB (Wm. D. Willis, Supervisory Professor).
1993 - 94	Graduate assistant, Graduate School of Biomedical Sciences, UTMB.
1992	Instructor of "Biomechanics of Human Motion" at the Department of Orthopedics and Orthotics, Faculty of Medicine, American University of Beirut (AUB), Beirut, Lebanon.
1992 - 93	Research Assistant, Faculty of Medicine, AUB.
1988 - 89	Instructor of Mathematics for intermediate classes at a private high school, Lebanon.

Teaching Responsibilities / Experience

A. Medical School

2015 -	Chairman, MED-II Class Teaching Committee, Faculty of Medicine, American University of Beirut, Beirut, Lebanon.
2015 -	Member, Curriculum Committee, Faculty of Medicine, American University of Beirut, Beirut, Lebanon.
2015 -	Member, Student Affairs Committee, Faculty of Medicine, American University of Beirut, Beirut, Lebanon.
2014 -	Lecturer and Lead Consultant, The Ethics and Laws of Health Care course, Medical Professionalism Program, Faculty of Medicine, American University of Beirut, Beirut, Lebanon (Hybrid: online & classroom).
2014 -	Lecturer and co-Coordinator, Integrated Medical Neuroscience course, MED II, Faculty of Medicine, American University of Beirut, Beirut, Lebanon (Fall, 11 contact weeks).
2013 -	Lecturer, Cellular and Molecular Basis of Medicine, MED I, Faculty of Medicine, American University of Beirut, Beirut, Lebanon (Fall, 4 contact hours).
2013 -	Lecturer on *Ethics of Anatomy*, Physicians - Patients and Society course, MED I, Faculty of Medicine, American University of Beirut, Beirut, Lebanon (Fall, 4 contact hours).

2005 - 2013 Lecturer, Neuroscience Course, MED I, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR, USA. (April, 1 contact hour).

2003 - 2004 Lecturer and Laboratory teacher, Human Neuroscience and Behavior Course, MED I, Integrated Medical Curriculum, School of Medicine, University of Texas Medical Branch (UTMB), Galveston, Texas, USA. (Spring Term, 50 contact hours)

2000 - 2001 Lecturer, lecture on "Visceral Pain and Irritable Bowel Syndrome" GI and Nutrition Course, MED II, Integrated Medical Curriculum, School of Medicine, UTMB. (Fall Term, 2 contact hours)

1999 - 2002 Facilitator, Human Neuroscience and Behavior Course, MED I, Integrated Medical Curriculum, School of Medicine, UTMB. (Spring Term, 50 contact hours per year)

1999 Laboratory instructor, Human Neuroscience and Behavior Course, MED I, Integrated Medical Curriculum, School of Medicine, UTMB. (Spring Term, 50 contact hours)

1995 Teaching Assistant of Neuroscience, First Year Medical School (MED I), Faculty of Medicine, UTMB.

B. Graduate School

2013 - Lecturer, General Physiology-Cellular Mechanisms course, Graduate Students, Faculty of Medicine, American University of Beirut, Beirut, Lebanon (Fall, 4 contact hours).

2007 - 2013 Lecturer, Cellular and Developmental Neuroscience, Graduate School, University of Arkansas for Medical Sciences (UAMS), Little Rock, AR. Two lectures: "Neuroscience of Pain: Mechanisms and Pathways & Syndromes and Modulation" (Spring Term, 3 contact hours)

2006 - 2013 Lecturer, Graduate Neuroscience Course, Graduate School, UAMS. One lecture: "Pain" (Fall Term, 1 contact hour)

2006 - 2013 Lecturer, Cellular and Developmental Neuroscience, Graduate School, UAMS. Two lectures: "Release of Neurotransmitters" and "Neurotransmitter Receptors" (Spring Term, 3 contact hours)
I prepare the lectures and present them to the graduate students taking the Cellular and Developmental Neuroscience Course and the Graduate Neuroscience Course.

2000 - 2004 Course Director and Lecturer, Core Pain Conference (NEUX 6000-013), Neuroscience Graduate Program, Graduate School of Biomedical Sciences, University of Texas Medical Branch (UTMB), Galveston, Texas, USA. (Fall Term, 20 contact hours)
I oversee the admission process, organize and outline the curriculum, invite the participating faculty and monitor the progress and evaluate the conference.

C. Other

2003 (May) Invited chair and speaker, Professional Symposium on "Central sensitization in visceral pain" – Digestive Disease Week 2003, Title of talk: "*Animal models of central sensitization in visceral pain*" Orlando, Fl, USA.

2003 (Mar.) Speaker, Professional Development Course "Stress and the Gut", British Society of Gastroenterology, Birmingham, UK.

2000 (Nov.) Moderator and Speaker, Professional Development Course on the Management and Pathophysiology of Visceral Pain, American Pain Society, 19th Annual Meeting, Atlanta, GA, USA.

1992 Instructor of "Biomechanics of Human Motion" at the Department of Orthopedics and Orthotics, Faculty of Medicine, American University of Beirut (AUB), Beirut, Lebanon.

Research / Funding

A. Active Research Projects:

1. Impact of neonatal pain or injury on neural development and adult physiology and behavior.
2. The role of sex hormones in the gender differences seen in visceral pain.
3. Molecular and anatomical pathways and mechanisms of visceral pain.
4. The role of glial cells in the neuronal sensitization and associated behaviors.

Translating these findings into clinical application is done through collaboration with clinicians and pharmaceutical companies:

5. Effect of Allergan drugs on symptoms of irritable bowel syndrome in rats – in collaboration with Allergan, Inc, Irvine, CA (***completed***).
6. Validation of an animal model of irritable bowel syndrome – in collaboration with GlaxoSmithKline (GSK), Harlow, UK (***completed***).

Funding for these projects comes from the National Institutes of Health in the USA, intramural funds or from interested pharmaceutical companies (see funding below).

For my *Research Philosophy*, see **Appendix** (provided on demand).

B. Trainees and Visiting Scientists

2015 - George Merhej, MS, Research Assistant, AUB
2010 - 2013 Chun Lin MD/PhD, Postdoctoral Fellow, UAMS
2009 - 2013 Martin Watts (BS), MD/PhD student, UAMS
2008 - 2012 Jennifer Leigh Atchison (BS), MD/PhD student, UAMS
2008 - 2012 Krishnapraveen Yadlapalli DVM/MS, Research Technician, UAMS (patch clamp neurophysiologist)
2006 – 2010 Parul Soni (MS), Research Assistant, UAMS (Electromyography)

2004 - 2013 Kirsten Garner, (MS), Lab Manager (molecular biologist)
2004 - 2013 Chunping Gu MD/PhD, Research Associate, UAMS (molecular biologist)
2003 - 2013 Jing Wang MD/PhD, Visiting Scholar, UTMB, UAMS (neurophysiologist)
2006 (Fall) Omar Rahal (MS), Graduate Student, UAMS
2005 - 2008 Parul Soni, (BS), Research Technician, UAMS
2002 - 2006 Xin Peng (B.S.), Research Assistant, UTMB, UAMS
2003 - 2004 Jiangang Xie (MD, PhD), Research Investigator, UTMB
2002 - 2004 Rodger Song (B.S.), Research Assistant, UTMB
2002 - 2003 Christine Hinze (M.S.), Research Scientist, UTMB
2001 - 2003 Chun Lin (MD, PhD), Visiting Scientist, UTMB
2001 Kimberly Hicks (B.S.), Trainee, UTMB
2001 - 2002 Huaxian Ma (MD), Research Scientist, UTMB
2000 - 2001 Kennichi Arai (MD, PhD), Postdoctoral Fellow, UTMB
1999 - 2000 Kawasaki, Motohiro (M.D., Ph.D.), Postdoctoral Fellow, UTMB
1999 Broussard, Robert (MED II), Medical Student Summer Training, UTMB

C. Grant Support

1) ***Active Research Grants*:**

A) INDUSTRY: NONE

B) NATIONAL INSTITUTES OF HEALTH:

Grant 1:
"Sex Hormones and Visceral Hypersensitivity" $1,800,000.00
Elie D. Al-Chaer, PhD: Principal Investigator (50%) 04/01/08-03/31/14
Agency: National Institute of Digestive Diseases and Kidney
Type: RO1 DK077733

In this study, we propose to identify the hormonal basis of the observed sexual dimorphism in visceral pain as well as the underlying physiological mechanisms. The central hypothesis is that **sex hormones play a crucial role in the sex-specific differences in visceral pain possibly via their action on pain pathways in the central nervous system**. Sex hormones modulate *visceral sensitivity* and *central neural sensitization* via *direct action on estrogen receptors located on PSDC neurons* or *regulation of glutamate receptors located on these neurons*. Defining the physiological and cellular mechanisms that contribute to sexual differentiation in persistent visceral hypersensitivity is of central importance to advancing our understanding of visceral hypersensitivity and to fostering a new approach to gastrointestinal disorders that leads to the development of new, gender-sensitive, therapeutic tools for the management of chronic visceral pain.

C) INTRAMURAL FUNDING:

Grant 1:
"Preemptive cuddling reduces long-term consequences of neonatal colon injury" $37,000.00
Elie D. Al-Chaer, PhD: Principal Investigator (50%) 07/01/13-06/30/15
Agency: AUBMC
Type: URB/MPP

2) ***Training Grants*:**

A) NATIONAL INSTITUTES OF HEALTH:

Grant 1:
"Novel Mechanisms of Visceral Pain: Functional Properties of Microglia"
PI: Jennifer L. Watts, MD-PhD Student 7/1/09–6/30/13
Elie D. Al-Chaer, MS, PhD, JD: co-Investigator/mentor
Role: Sponsor / Supervisor
Agency: National Institutes of Health, NIDDK
Type: 1 F30 DK084606

Grant 2:
"Alpha2-adrenoceptors modulate TRPV4 and reduce inflammation-induced visceral pain"
PI: Martin R. Watts, MD-PhD Student 9/1/10–8/31/14
Elie D. Al-Chaer, MS, PhD, JD: co-Investigator/mentor
Role: Sponsor / Supervisor
Agency: National Institutes of Health, NIDDK
Type: 1 F30 DK089660

3) ***Institutional Grants*:**

A) NATIONAL INSTITUTES OF HEALTH:

Grant 1:
"Institute for Clinical and Translational Science" $22,560,000.00
PI: Curtis L. Lowery, Jr., MD 09/01/09-08/31/14
Elie D. Al-Chaer, MS, PhD, JD: co-Investigator 10%
Role: Director of Planning, co-Director of Governance
Agency: National Institutes of Health, NCRR
Type: UL1 RR029884, CTSA application

Grant 2:
"Institute for Clinical and Translational Science" 09/01/06-08/31/07
PI: Philip Kern, MD
Elie D. Al-Chaer, MS, PhD, JD: co-Investigator (20%)
Role: Director of Planning
Agency: National Institutes of Health, NCRR
Type: P20, planning application

Grant 3:
"The Center for Translational Neuroscience" 09/01/04-07/31/09
PI: Edgar Garcia-Rill, PhD
Elie D. Al-Chaer, MS, PhD, JD: Member (6%)
Role: Mentor
Agency: National Institutes of Health, NCRR
Type: COBRE application

4) ***Completed Research Grants*:**

A) INDUSTRY:

Allergan, Inc, Irvine, CA. $639,530.00
Elie D. Al Chaer, PhD, JD: Principal Investigator 04/01/08 - 03/31/12
Allergan, Inc, Irvine, CA. $1,426,530.00
Elie D. Al Chaer, PhD, JD: Principal Investigator 04/01/00 - 12/31/07
GlaxoSmithKline, UK. $360,000.00
Elie D. Al Chaer, PhD, JD: Principal Investigator 05/01/02-09/30/07

B) NATIONAL INSTITUTES OF HEALTH:

Grant 1:
"Role of Microglia in Chronic Visceral Pain" $415,352.00
Elie Al-Chaer, Ph.D.: Principal Investigator (20%) 06/01/09-05/31/12
Agency: National Institute of Digestive Diseases and Kidney
Type: R21DK081628

In this proposal we hypothesize that **hyperactive microglia contribute to chronic VH and neuronal hyperexcitability in the spinal cord**. First, we propose to *establish a correlation between VH and a hyperactive phenotype of microglia in rats with CI* by identifying molecular targets selective for hyperactive microglia, and second, we propose to *reverse neuronal hyperexcitability and chronic VH by suppressing microglial activation using minocycline or by selectively blocking phosphorylated-p38 and P2X4 receptors*, two targets specifically expressed on hyperactive microglia. These studies will help expand the targets of pharmacological intervention to non-neuronal sites within the spinal cord, and improve the analgesic potency of biologic therapies, while minimizing undesirable side effects.

Grant 2:
"Spinal Microglial Mechanisms of Visceral Hypersensitivity" $484,316.00
PI: Carl Y. Saab, PhD (Rhode Island Hospital) 07/01/10-06/30/12
Elie Al-Chaer, Ph.D.: Sub-contract Principal Investigator (20%)
Agency: National Institute of Digestive Diseases and Kidney
Type: R21 DK081845

Grant 3:
"Mechanisms of Chronic Visceral Hyperalgesia" $1,450,000.00
Elie D. Al-Chaer, PhD: Principal Investigator 04/01/01-03/31/07
Agency: National Institute of Neurological Disorders and Stroke
Type: 1 RO1 NS/DK 40434

Grant 4:
"Visceral Pain"
Project 1 of a Program Project Grant (6 individual projects):
Program Director: William D. Willis, M.D., Ph.D.
Elie D. Al-Chaer, PhD: Collaborator 08/01/01-07/31/04
Agency: National Institute of Neurological Disorders and Stroke
Type: 5P01 NS 11255-24 08/15/96-07/31/06

Leadership / Executive Functions

National / International:

2014 Member, NIH Advisory Panel: Multidisciplinary Approach to the Study of Chronic Pelvic Pain (MAPP) Research Network

2011 - 13 Member, American Gastroenterological Association *Political Action Committee* (AGA-PAC)

2011 - 13 Member, American Gastroenterological Association *Underrepresented Minorities Committee*

2010 - 13 Member, Society for Clinical and Translational Sciences *Finance Committee*

2010 (Feb) Member, NIH Grant Application Study Section: Somatosensory and Chemosensory Science (Pain); SCS.

2009 (Aug) *Panelist* on Brain-Gut Communications, Shaping the Future of Enteric Neurosciences, Strategic Planning Forum, Chicago, IL, USA.

2009 - Member, the National Steering Committee for the CTSA (Clinical and Translational Science Awards) Consortium, NIH, USA.

2009 (Mar) *Panelist* on Chronic Pain, National Women's Health Conference, Strategic Planning Forum, the NIH Office of Research in Women's Health, St. Louis, MO, USA.

2008 *Co-Chair*, NIH Special Emphasis Panel on Multi-disciplinary Approaches to the Study of Chronic Pelvic Pain (MAPP) Research Network (U01 grants).

2008 *Chair*, American Gastroenterological Association (AGA) Research Forum on Animal Models of Functional and Motility Disorders. Digestive Diseases Week, San Diego, CA, May 2008.

2007 - 2008 *Chair*, AGA abstract review committee on Animal Models of Functional and Motility Disorders for the Digestive Disease Week (DDW), the annual meeting for digestive diseases societies in the USA with an international membership.

2007 - Member, NIH Special Emphasis Panel to review Specialized Centers of Interdisciplinary Research (SCOR) on Sex and Gender Factors Affecting Women's Health (ZRG1 HOP-U).

2007 - Member, NIH Grant Application Review Council: Neural Sciences and Disorders (NSD-C).

2005 - Member, Advisory Board, International Foundation for Functional Gastrointestinal Disorders.

2005 - Member, NIH Grant Application Study Section: Somatosensory/Pain (ZRG1 IFCN-K).

2004 *Chair*, NIH Special Council on Mind-Body Interactions and Health (ZRG1 RPHB-B 50 R).

2003 Member, NIH Special Emphasis Panel on Behavioral and Social Sciences Research, a special study section to evaluate grant applications for the "Mind-Body Interactions and Health: Research Infrastructure Program".

2003 - 05 Member, NIH Grant Application Study Section: Clinical Neuroplasticity and Neurotransmitters (ZRG1 CNNT-01) / Brain Disorders and Clinical Neuroscience (ZRG1 BDCN2).

2003 - *Invited member and co-author*, Rome III Multinational Team on Functional Gastrointestinal Disorders Policy: a team of distinguished scientists and clinicians from around the world that meets every 10 years to shape the clinical and research policy of functional disorders for the next decade (Membership by invitation only).

2001 - 2003 *Chair*, American Gastroenterological Association (AGA) abstract review committee on Colonic Motility and Disorders for the Digestive Disease Week (DDW), the annual meeting for all digestive diseases societies in the USA with an international membership.

Peer-review services:

2009 - *Editor-in-Chief*, International Journal of Women's Health.

1999 - Ad-hoc reviewer for the following journals: Neuroscience, J. Neuroscience, J. Neurophysiology, Brain Research, Experimental Brain Research, Pain, J. Pain, European J. Pain, Gastroenterology, Neuro-gastroenterology (since 2003), GUT (since 2003).

Ad-hoc reviewer for the National Science Foundation (NSF), the Veterans Administration Health System (VAHS), the National Student Research Forum (NSRF) and a number of international scientific and funding organizations (British, Czech, Chinese, Japanese, etc.).

Institutional:

AUB:

2015- Steering Committee, Diana Tamari Sabbagh Scholars Program
2015- Chairman, MED-II Class Teaching Committee, Faculty of Medicine
2015- Curriculum Committee, Faculty of Medicine
2015- Student Affairs Committee, Faculty of Medicine
2014- Member, Faculty of Public Health Promotion Committee
2014- Member, Professionalism and Ethics Task force, AUBMC
2014- Faculty Consultant, Facilities Renovation and Modernization
2013- Member, PhD Planning and Admission Program Committee

UAMS:

2009-2013 *Associate-Director* for Governance: Translational Research Institute (TRI), funded by NIH (NCRR) through a CTSA.
2009-2013 Executive Committee: TRI
2004-2013 *Director*, Center for Pain Research (CPR)
2007-2009 Co-Director of Governance: TRI (*Title changed in '09 with NIH funding*)
2006-2008 Director of Planning: Planning phase, Center for Clinical and Translational Research (CCTR)
2006-2008 Co-Director: Planning and Development, CCTR
2006-2008 Co-Director: Administrative Committee, CCTR
2006-2008 Chair, Strategic Planning Team, CCTR

2006-2008 Executive Committee, CCTR Planning
2005-2006 CUMG/Dean Grant review committee

UTMB:

2004 Chair, Examination Committee, Neuroscience Graduate Program, Graduate School of Biomedical Sciences

2001 - 2004 Member, Admissions Committee, School of Medicine
Review and evaluate hundreds of medical school applications and interview and rank hundreds of applicants every year.

2001 - 2004 Member, Examination Committee, Neuroscience Graduate Program, Graduate School of Biomedical Sciences
Oversee the Neuroscience Graduate Program Qualifying Exam, by evaluating the questions, the corrections and the grading.

2001 Coordinator, Seminars and Annual Meeting, Gulf Coast GI Research Forum

2000 - 2003 Member, Grant Review Committee, the Gastrointestinal Research Interdisciplinary Program (GRIP)

2000 - 2003 Member, Seminar Committee, GRIP

Departmental:

2015 - Chairperson, Department of Anatomy, Cell Biology and Physiological Sciences, Faculty of Medicine, American University of Beirut (AUB), Beirut, Lebanon.

2013 - 2015 Chair, ad-hoc committees for recruitment and faculty promotion, Department of Anatomy, Cell Biology and Physiological Sciences, Faculty of Medicine, American University of Beirut (AUB), Beirut, Lebanon.

2005 - 2013 Member, Mentoring Committee, Department of Pediatrics, College of Medicine, University of Arkansas for Medical Sciences (UAMS), Little Rock, AR, USA.

2005 - 2013 Member, Graduate Advisory Committee, Neurobiology and Developmental Sciences, College of Medicine, UAMS.

2000 - 2003 Chair, Postgraduate Pain Program Sub-Committee, Department of Anatomy and Neurosciences, University of Texas Medical Branch (UTMB), Galveston, TX, USA.
Objectives: Provide an interactive educational forum for scientists and clinicians interested in Pain management and Research.

1999 - 2002 Coordinator, Seminar Program for the Division of Gastroenterology, UTMB
Select, invite and host guest speakers from around the world.

1999 - 2004 Member, Program Project Grant Committee, Pain Group, Department of Anatomy and Neurosciences, UTMB

1998 - 2002 Webmaster of GI Web, The website development team for the Division of Gastroenterology, UTMB. http://www2.utmb.edu/gastroenterology

Other:

Graduate Students Exam Committees

I mentored, co-mentored and served on the graduate exam committee of the following students:

2009 - Graduate School External Examiner
Hong Kong Baptist University
Doctor of Philosophy Degree Programme
Student: Zhang Jianliang
Supervisor: Dr. Zhang Hongqi
Thesis Title: Electroacupuncture vs Vagus Nerve Stimulation for Epilepsy

2009 - Mentor and PhD Thesis Supervisor, UAMS
Martin Watts, MD/PhD student

2008 - Mentor and PhD Thesis Supervisor, UAMS
Jennifer Leigh Atchison, MD/PhD student

2008 - Neuroscience Graduate Program Examiner, UAMS.
Student: Dong, Chaoxuan (Ph.D. Candidate).
Supervisor: Anand, Kanwaljeet S. MBBS, D Phil.
Thesis Title: "Effects of Ketamine on Apoptosis and Neurogenesis of Rat Fetal Cortical Neural Stem / Progenitor Cells (NSPCs)"

2007 - 09 Neuroscience Graduate Program Examiner, UAMS.
Student: Ye, Meijun (Ph.D. Candidate).
Supervisor: Garcia-Rill, Edgar Ph.D.
Thesis Title: "Cholinergic Modulation of Fast Synaptic Transmission in the Pedunculopontine and Parafascicular Nuclei: Implications for the Regulation of Cortical Arousal"

2008 Graduate School External Examiner
Hong Kong Baptist University
Doctor of Philosophy Degree Programme
Student: Zhang Xiaojun
Supervisor: Dr. Bian ZhaoXiang
Thesis Title: Analgesic Effect of Paeoniflorin in Rats with Visceral Hyperalgesia Induced by Neonatal Maternal Separation

2005 - 2006 Neuroscience Graduate Program Examiner, UAMS.
Student: Fann, Alice MD (Ph.D. Candidate).
Supervisor: Garcia-Rill, Edgar Ph.D.
Thesis Title: "Chronic Low Back Pain: Arousal, Attention, and Frontal Lobe Blood Flow Dysfunctions"

2000 - 2003 Neuroscience Graduate Program Faculty Examiner, UTMB.
Student: Vera-Portocarrero, Louis P. (Ph.D. Candidate).
Supervisor: Westlund-High, Karin N. Ph.D.
Thesis Title: "Descending modulation and visceral pain"

1999 - 2001 Neuroscience Graduate Program Faculty Examiner, UTMB.
Student: Hains, Bryan (Ph.D. Candidate).
Supervisor: Hulsebosch, Claire E., Ph.D.
Thesis Title: "Transplant therapy and cellular mechanisms contributing to chronic pain after spinal cord injury."

1999 - 2001 Neuroscience Graduate Program Faculty Examiner, UTMB.
Student: Saab, Carl (Ph.D. Candidate).
Supervisor: Willis, William D. M.D., Ph.D.
Thesis Title: "Role of the cerebellum in Pain."

Societies and Affiliations

2013 - Member, Advisory Board, The Lebanese Society for the Study of Pain (LSSP)
2011 - 13 Member, American Gastroenterological Association *Political Action Committee* (AGAPAC)
2011 - 13 Member, American Gastroenterological Association *Underrepresented Minorities Committee*
2010 - Member, Society for Clinical and Translational Sciences *Finance Committee*
2008 - Society for Clinical and Translational Sciences (SCTS), member
2006 - DC Bar Association, member
2003 - 04 Galveston County Bar Association, member
2003 - 04 Galveston County Young Lawyers Association, member
2003 - Rome Foundation for Gastrointestinal Disorders, member
2002 - Texas Young Lawyers Association, member
2002 - American Bar Association (ABA), member
2002 - State Bar of Texas, member
2002 - 04 Chair, American Gastroenterological Association (AGA) committee on Colonic Motility and Disorders.
1998 - American Gastroenterological Association (AGA), member
1997 - 02 American Bar Association (ABA), student member
1996 - American Pain Society (APS), member
1996 - American Association for the Advancement of Science (AAAS), member
1995 - American Physiological Society, member
1995 - International Association for the Study of Pain (IASP), member
1993 - Society for Neuroscience, member

Licensure Information

2006 (Feb. 3) – Washington DC Bar, Licensed attorney by the District of Columbia Court of Appeals to practice in all the courts of the District of Columbia.
2002 (Nov. 6) – State Bar of Texas, Licensed attorney and counselor at law by the Supreme Court of Texas to practice in all courts of the State of Texas.

Additional Information

A. Honors, Scholarships and Awards

***Science related honors*:**

2012 International co-Chair, Global Symposium on Pain, hosted by the Pavlov Institute of Physiology and the Russian Academy of Science, St. Petersburg, Russia.

2012 Plenary speaker, The 2012 Neuroscience International Symposium at Minas Gerais: "Dialogues between Neurosciences and the Clinic", Title of talk: "*The physiological basis of sex differences in pain mechanisms and management*" Universidad Federal de Minas Gerais, Belo Horizonte, Brazil.

2009 Plenary speaker, The Institute of Chinese Medicine Forum on Irritable bowel syndrome: "When East Meets West", Title of talk: "*Irritable Bowel Syndrome: A Tale of Sex, Drugs and Pain*" The Golden Egg Auditorium, Hong Kong Science Park, Shatin, Hong Kong, China.

2006 Plenary speaker at the joint conference of the American Gastroenterological Association (AGA) and the British Society of Gastroenterology (BSG), Title of talk: "*Neuroplasticity in visceral pain*", Cambridge, UK.

2003 Plenary speaker, professional development course, the British Society of Gastroenterology

2003 Plenary speaker, Spring Brain Conference, Title of talk: *"The role of the dorsal columns in pain states"* Sedona, AZ, USA.

2002 Invited speaker on *"The art and science of visceral pain: from neonatal plasticity to adult perception"* the Pain Research Center, the Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.

2002 Invited to evaluate a $7.5 Million Program Project Grant and to speak on"*Plasticity of visceral pain circuitry in adult rats with neonatal colon injury*", Pain Program, University of Maryland Dental School, Baltimore, MD, USA.

2000 **The John C. Liebeskind Early Career Scholar Award**, for exceptional accomplishment and promise in pain scholarship, *American Pain Society*

1999 Outstanding Educator Award, Generalist Physician Investigator Program, UTMB

1998 American Pain Society, Young Investigator Travel Award

1997 The James E. Beall II Memorial Award in Anatomy and the Neurosciences

1997 The Stephen C. Silverthorne Memorial Award for outstanding research in neurology

1996 **The Mustard Seed** Award in Research for outstanding research and service in cancer pain, offered by the Sealy Society

1995 **Who's Who** Among Students in American Universities and Colleges

1990 Diana Tamari Sabbagh (DTS) Award for outstanding researchers in medical sciences

***<u>Law related awards</u>*:**

2001 Phi Beta Phi, International Legal Fraternity, Highest Grade award In International Law.

2001 Who's Who among American Law Students

1999 - 2002 Dean's Honor List, South Texas College of Law

1999 Invited to write for Law Review, South Texas College of Law

1997 Outstanding Academic Achievement (1st Term), South Texas College of Law

***<u>Other awards</u>*:**

1985 AUB scholarship for an outstanding undergraduate student

B. Professional Consultant

2005 - Member, Advisory Board, International Foundation for Functional Gastrointestinal Disorders (IFFGD), USA.
2004 - 2013 Member, Visceral Pain Advisory Board, Allergan Inc, Irvine, CA, USA
2003 - 2004 Strategic consultant, Governing Board, Sigma Health Care, Inc. Galveston, TX, USA.
2003 - 2013 Member, Pain Advisory Board, Allergan Inc, Irvine, CA, USA
2000 - 2004 Member, Professional Advisory Committee, Sigma Health Care, Inc. Galveston, TX, USA.
1999 - 2013 Biomedical research professional consultant, Allergan Inc, Irvine CA, USA

C. Invited Lectures

2014 (Dec) Invited speaker, Make Fibromyalgia Visible (a symposium by the Lebanese Society for the Study of Pain, LSSP), Title of talk: "*Fibromyalgia: a basis for translational studies*", Beirut, Lebanon
2014 (Nov) Guest speaker, Joint Symposium on Pain by the LSSP and the Lebanese Society for the Treatment of Pain, Title of talk: "*Chronic Functional Pain: Early-Life Residues and a Path of Redemption*", Phoenicia Hotel Conference Center, Beirut, Lebanon
2013 (Mar) Invited plenary speaker, Visceral Pain Symposium (organized by the LSSP), Title of talk: "*Hurting from Within: The Ins and Outs of Visceral Pain*", Beirut, Lebanon
2012 (Aug) Invited plenary speaker, Global Symposium on Pain 2012, Title of talk: "*Early Life Colon Injury and Adult Functional Abdominal Pain*", St. Petersburg, Russia.
2012 (Jun) Invited plenary speaker, the 2012 Neuroscience International Symposium at Minas Gerais: "Dialogues between Neurosciences and the Clinic", Title of talk: "*The physiological basis of sex differences in pain mechanisms and management*" Universidad Minas Gerais, Belo Horizonte, Brazil.
2010 (Oct) Invited plenary speaker, International Pelvic Pain Society Annual Scientific Meeting, Title of talk: "*Chronic Pelvic Pain: Early-Life Residues and a Path of Redemption*", Chicago, IL, USA.
2010 (July) Invited speaker, The American University of Beirut – Faculty of Medicine and Faculty of Arts and Sciences, Title of talk: "*A Translational Approach to the Study and Management of Visceral Pain*" Beirut, Lebanon.
2010 (Jan) Invited speaker, Perinatal Research Rounds, The University of Chicago – Pritzker School of Medicine and the NorthShore University Health System, Title of rounds: "*Visceral Pain: Insights from the Platonic Fold*" Evanston, IL, USA.
2010 (Jan) Invited speaker, Medicine and Obstetrics Gynecology Grand Rounds, The University of Chicago – Pritzker School of Medicine and the NorthShore University Health System, Title of grand rounds: "*Pain the Paradox of Scientific Advances and Clinical Retreats*" Chicago, IL, USA.

2010 (Jan) Invited speaker, Nationwide Children's Hospital and Ohio State University, Title of talk: "Age, Pain and Neuroplasticity: Scientific Constructs and Outcome Realities" Columbus, OH, USA.

2009 (Oct) Keynote speaker, Arkansas Chapter of the Society for Neuroscience, Title of talk: "*Neuroplasticity in Animal Models of Pain*" Little Rock, AR, USA.

2009 (July) Invited seminar, Eli Lilly and Company Pain and Migraine Drug Hunting Team, Title of seminar: "*Visceral Pain: Insights from the Platonic Fold*" Indianapolis, IN, USA.

2009 (Apr) Invited workshop, the 8th International Symposium on Functional Gastrointestinal Disorders, Title of workshop: "*Pain Pathways*" Milwaukee, WI, USA.

2009 (Mar) Invited plenary speaker, The Institute of Chinese Medicine Forum on Irritable Bowel Syndrome: "When East Meets West", Title of Talk: "*Irritable Bowel Syndrome: A Tale of Sex, Drugs and Pain*" Hong Kong Science Park, Shatin, Hong Kong.

2008 (Oct) Invited speaker, Department of Medicine, State University of New York (SUNY) Downstate Medical Center, Title of Talk: "*Functional Abdominal Pain: a Gut Feeling in the Brain",* Brooklyn, NY, USA.

2008 (Apr) Invited speaker, Rural Hospital Program, Title of Talk: "*Pain: a Primer on Neural Mechanisms and Management*" (satellite broadcast) Little Rock, AR, USA.

2007 (Apr) Invited plenary speaker, the 6th International Symposium on Functional Gastrointestinal Disorders, Title of Talk: "*Neuroplasticity and Functional Pain*" Milwaukee, WI, USA.

2007 (Apr) Invited workshop, the 6th International Symposium on Functional Gastrointestinal Disorders, Title of workshop: "*Pain Pathways*" Milwaukee, WI, USA.

2006 (Oct) Distinguished lecture, the Oklahoma Center for Neuroscience and the Department of Physiology, Oklahoma University Health Science Center. Title of talk: "Visceral Pain: Reflections on Phylogeny, Physiology and Pathways", Oklahoma City, OK, USA.

2006 (Sep) Invited Speaker, Queen Mary, University of London and The Royal London Hospital, Title of Talk: "*Visceral Pain: The Rhapsody of a Nervous System*", invited speaker, London, England, UK.

2006 (Sep) Plenary lecture, the joint conference of the American Gastroenterological Association and the British Society for Gastroenterology. Title of talk: "Neuroplasticity in Visceral Pain", Cambridge University, England, UK.

2006 (Jul) Plenary lecture, the Brain-Gut Symposium held at St. Anne's College, Oxford University. Title of talk: "*Animals Models of Visceral Pain*", Oxford, England, UK.

2005 (June) Invited Speaker, The University of Florida Comprehensive Center for Pain Research and the College of Dentistry Dean's Seminar Series, Title of talk: "*Functional Pain: the Rhapsody of a Nervous System*" The University of Florida, Gainesville, FL, USA.

2005 (Apr) Invited plenary speaker, the 6th International Symposium on Functional Gastrointestinal Disorders, Title of Talk: "*Neuroplasticity and Functional Pain*" Milwaukee, WI, USA.

2005 (Apr) Invited workshop, the 6th International Symposium on Functional Gastrointestinal Disorders, Title of workshop: "*Pain Pathways*" Milwaukee, WI, USA.

2005 (Mar) Invited Physiology Seminar, Title of talk: "*Behavioral and Neural Changes in Adult Rats Exposed to Neonatal Colon Injury*" Department of Physiology, College of Medicine, UAMS.

2005 (Feb) Invited Neurology Grand Rounds, Title of talk: "*Pain: Reflections on Phylogeny, Physiology and Pathways*" Department of Neurology, College of Medicine, UAMS

2005 (Feb) Seminar, "*Pain: the Rhapsody of a Nervous System*" Pain Arkansas Club, UAMS.

2005 (Jan) Invited Neurosurgery Grand Rounds, Title of talk: "*Visceral Pain: Mechanisms, Pathways and Surgical Solutions*" Department of Surgery, College of Medicine, UAMS.

2003 (Nov) Guest Speaker, The Arkansas Children's Hospital and the Department of Pediatrics at the University of Arkansas Medical School, Title of talk: "*Neonatal injury: an etiology of functional pain in adults*" Little Rock, AR, USA.

2003 (May) Invited Chair and Speaker, Symposium on Central Sensitization, Title of talk: *"Animal models of sensitization"* Digestive Diseases Week 2003, Orlando, FL, USA.

2003 (Mar.) Invited Plenary Speaker, Postgraduate Professional Development Course - British Society of Gastroenterology, Title of talk: *"Neonatal stressors and adult visceral hypersensitivity in GI disease"* Birmingham, UK.

2003 (Mar.) Invited Plenary Speaker, Spring Brain Conference, Plenary Session III, Title of talk: *"The role of the dorsal columns in pain states"* Sedona, AZ, USA.

2003 (Feb.) Guest Speaker, The Pain Advisory Board for Allergan Inc, Title of Talk: *"Pharmacological validation of an animal model of chronic functional abdominal pain"* Irvine, CA, USA.

2002 (Sep.) Moderator, Symposium on Basic Science – American Motility Society. Galveston, TX, USA.

2002 (June) Guest Speaker, The Pain Research Center at the Brigham and Women's Hospital, Harvard University. Title of talk: *"The art and science of visceral pain: from neonatal plasticity to adult perception"* Boston, MA, USA.

2002 (April) Speaker, The Spring Pain Research Conference. Title of talk: "*Chronic abdominal pain: the ghost of a painful past*" Grand Cayman, British West Indies.

2002 (April) Speaker, GlaxoSmithKline/Cambridge University Symposium. Title of talk: "*Functional bowel disorders in an animal model of chronic visceral pain*" Harlow, UK.

2002 (Mar.) Speaker, NIH Symposium: Oral, Craniofacial and Persistent Deep Pain. Title of talk: "*Neural plastic changes initiated by neonatal injury: the culprit in chronic visceral pain*" Baltimore, MD, USA.

2002 (Mar.) Guest Speaker, University of Maryland Dental School, Pain Program. Title of talk*: "Plasticity of visceral pain circuitry in adult rats with neonatal colon injury*" Baltimore, MD, USA.

2001 (Nov.) Speaker, The 2nd Annual International Course and Workshop On Gastrointestinal Motility/Functional Disorders. Title of talk: *"Biological Basis of Abdominal Pain"* Galveston, TX, USA.

2001 (Sep.) Speaker, The 18th International Symposium on Neurogastroenterology and Motility. Title of talk: *"Painful neonatal memories and functional bowel disorders"* Madison, Wisconsin, USA.

2001 (July) Speaker, "2001: A Brain-Gut Odyssey" meeting of the International Society for Brain-Gut Studies. Title of talk: *"On the Journey of Pain: from Gut to Brain"* University of Oxford, Oxford, UK.

2001 (May) Speaker, "Evolving Animal Models for Functional Gastrointestinal Disorders" a research symposium at the Digestive Diseases Week, 2001. Title of talk: *"Rat Model of Persistent Visceral Hyperalgesia Following Early Life Gut Irritation"* Atlanta, GA, USA.

2001 (April) Speaker, Seminar series at CURE, University of California at Los Angeles. Title of talk: *"Chronic Abdominal Pain: The Wounds That Never Heal"* Los Angeles, CA, USA.

2000 (Dec.) Speaker, International Course on Motility and Functional Bowel Disorders. Title of talk: "*The Pathogenesis of Visceral Hyperlagesia.*" Galveston, TX, USA.

2000 (Dec.) Coordinator and Speaker, Symposium on Gastrointestinal Pain. Title of talk: *"An Animal Model of IBS: The Key to the Puzzle in a Long Abandoned Challenge?*" University of Texas Medical Branch, Galveston, TX, USA.

2000 (Nov.) Chair and Speaker, Professional Development Course for the American Pain Society, Atlanta, GA, USA. Title of talk: "*Management of chronic visceral pain: an overview of basic research, psychophysics, symptoms, treatments and social correlates*."

1999 (Oct.) Chair and Speaker, Symposium for the American Pain Society, Ft. Lauderdale, FL: "*Pathogenesis, pathways and processing of colon pain: a "state of the science" address.*"

1999 (Oct.) Speaker, Lecture for the Society for Neuroscience, "*Pain Research - On the Threshold of a New Millennium.*" Miami, FL.

1999 (May) Speaker, Seminar given for the Neuroscience Graduate Program, University of Texas Medical Branch, Title of talk: "*Ode to an Empty Bowel*" Galveston, Texas.

1998 (May) Speaker, Seminar, Digestive Disease Week 98, Title of talk: "*A quantitative basis for the dorsal column dominant role in visceral pain*". New Orleans, LA, USA.

1996 (Oct.) Speaker, Dissertation Defense Seminar, Dept. of Anatomy and Neurosciences, University of Texas Medical Branch, Title of talk: "*The role of the dorsal column in visceral pain*"; Galveston, Texas, USA.

1996 (Feb.) Speaker, Seminar given at the University of Oklahoma, Health Sciences Center. Title of talk: "*The role of the dorsal column in visceral pain*" Oklahoma City, OK.

1995 (Jan.) Speaker, Dissertation Proposal seminar for the degree of Doctor of Philosophy, Dept. of Anatomy and Neurosciences, UTMB, "*Visceral input into the ventral posterolateral nucleus of the thalamus: a pathway in the*

fasciculus gracilis involving the postsynaptic dorsal column system" Galveston, Texas, USA.

1994 (Aug.) Speaker, Seminar given at the Dept. of Anatomy and Neurosciences, UTMB, title of talk: "*Viscero-somatic interactions in the thalamus: a possible role of the dorsal column*" Galveston, Texas, USA.

1991 (July) Speaker, Dissertation Defense seminar for the degree of Master of Sciences, Dept. of Physiology, Faculty of Medicine, AUB. Title of talk: "*Dorsal column input into the nucleus locus coeruleus*" Beirut, Lebanon.

1990 (June) Speaker, Seminar given at the dept. of Physiology, AUB. Title of talk: "*The role of the nucleus locus ceoruleus in antinociception*" Beirut, Lebanon.

D. Making News

2011: Guest on the live broadcast of the National Public Radio: "Science Café" for a call-in interview on Pain; followed by a community forum at Science Café – Little Rock (http://youtu.be/zjFhjGYcRLA)

2006: Interviewed on the live broadcast of Voice of America's (VOA) daily international radio discussion "Talk to America", Nov. 14, 2006, on the topic of Pain. "Talk to America" is the world's only international daily call-in/discussion program, broadcast in English aired over VOA's global short-wave transmitter network, as well via satellite, local radio stations overseas and the Internet. http://www.voanews.com/talk.

2005: Featured in "the Buzz", a UAMS Newsletter.

1999: Interviewed by *Science News* for an article entitled "Pain, Pain, Go Away" *Science News* 155: 108-110, February 1999.

1999: Interviewed by *BioPhotonics International* for an article entitled "Functional MRI shows pathway for visceral pain" *BioPhotonics International* pp. 26-28, March/April 1999.

1999: Featured in the *UTMB Quarterly*, pp. 18-21, Fall 1999.

1999: Interviewed by the British Broadcasting Corporation (BBC), Science Department, for a program entitled BBC Horizon on October 07, 1999.

1999: Interviewed by Medscape, CBS on October 23rd, 1999.

1998: Interviewed by *IMPACT* (UTMB Newsletter) for an article entitled "Researchers determine how gut pain affects the brain. *IMPACT* 22 (20): 3, November 16, 1998.

1998: Interviewed by *Radiology and Imaging Letter* for a Feature Article entitled "Researchers use Brain fMRI to find New Pathway to Resolve Pelvic Pain." *RIL* 18 (21): 163 – 165, December 1, 1998.

1996: Featured in *the Galveston County Daily News* under "UTMB Society awards 5 for services" *The Galveston County Daily News* 154 (61): 7-A, Monday June 10, 1996.

1996: Featured in *IMPACT* (UTMB Newsletter) as the recipient of the Sealy Society Mustard Seed Award in Research for 1995. *IMPACT* 20 (12): 1-2, June 17, 1996.

1988: Interviewed by "*Le Nouveau Magazine*" (weekly political, economical and cultural Middle Eastern magazine in French) for an article entitled "Le Club Culturel de L'OCP en mission diplomatique." *Le Nouveau Magazine* No. 1591, January 30 1988.

A. Articles in Peer-Reviewed Journals

1. **Al-Chaer, E.D**., Lawand, N.B., Westlund, K.N. and Willis, W.D. Visceral nociceptive input into the ventral posterolateral nucleus of the thalamus: a new function of the dorsal column. J. Neurophysiol. 76:2661-2674, 1996.

2. **Al-Chaer, E.D**., Lawand, N.B., Westlund, K.N. and Willis, W.D. Pelvic visceral input into the nucleus gracilis is largely mediated by the postsynaptic dorsal column pathway. J. Neurophysiol. 76: 2675-2690, 1996.

3. Hirshberg, R.M., **Al-Chaer, E.D**., Lawand, N.B. Westlund, K.N. and Willis, W.D. Is there a pathway in the dorsal funiculus that signals visceral pain? Pain 67:291-305, 1996.

4. **Al-Chaer, E.D**., Westlund, K.N. and Willis, W.D. Potentiation of thalamic responses to colorectal distension by visceral inflammation. NeuroReport 7:1635-1639, 1996.

5. **Al-Chaer, E.D**., Westlund, K.N. and Willis, W.D. The dorsal column: A possible role in visceral hyperalgesia. In Jensen, T.S., Turner, J.A. and Wiesenfield-Hallin, Z. (ed): *Proceedings of the 8th world congress on pain*, vol. 8, 1997, pp. 839-853.

6. **Al-Chaer, E.D**., Westlund, K.N. and Willis, W.D. The nucleus gracilis: an integrator for visceral and somatic information. J. Neurophysiol. 78:521-527, 1997.

7. **Al-Chaer, E.D**., Westlund, K.N. and Willis, W.D. Effects of colon inflammation on the responses of postsynaptic dorsal column cells to visceral and cutaneous stimulation. NeuroReport 8: 3267-3273, 1997.

8. **Al-Chaer, E.D**., Feng, Y. and Willis, W.D. A role for the dorsal column in nociceptive visceral input into the thalamus of primates. J. Neurophysiol. 79 (6): 3143-3150, 1998.

9. Feng, Y., Cui, M., **Al-Chaer, E.D**. and Willis, W.D. Epigastric antinociception by cervical dorsal column lesion in rats. Anesthesiology 89 (2): 411-420, 1998.

10. **Al-Chaer, E.D**., Feng, Y. and Willis, W.D. A comparative study of viscerosomatic input onto postsynaptic dorsal column and spinothalamic tract neurons in the primate. *J. Neurophysiol*. 82 (4):1876-1882, 1999.

11. Willis, W.D., **Al-Chaer, E.D**., Quast, M. J. and Westlund, K. N. A visceral pain pathway in the dorsal column of the spinal cord. In: The Neurobiology of Pain. By: The National Academy of Sciences (USA). *PNAS* 96 (14): 7675-7679, 1999.

12. Saab C.Y., Makki A., Quast M., Wei J., **Al-Chaer E.D.**, Willis W.D. Is the cerebellum involved in pain? In: *Proceedings of the 9th World Congress on Pain*, vol 16. IASP Press, Seattle, pp 515–522, 2000.

13. **Al-Chaer, E.D**., Kawasaki, M. and Pasricha, P.J. A new model of chronic visceral hypersensitivity: in adult rats induced by colon irritation during postnatal development. *Gastroenterology* 119: 1276–1285, 2000.

14. Saab C.Y., Kawasaki M., **Al-Chaer E.D.** and Willis, W.D. Cerebellar cortical stimulation increases spinal visceral nociceptive responses. *J. Neurophysiol*. 85(6): 2359-2363, 2001.

15. Zhang, H.Q., **Al-Chaer, E.D**. and Willis, W.D. Effect of tactile inputs on thalamic responses to noxious colorectal distension in rat. *J. Neurophysiol*. 88:1185-1196, 2002.

16. Zhang, H.Q., Rong, P.J., Zhang, S.P., **Al Chaer, E.D.** and Willis, W.D. Noxious visceral inputs enhance cutaneous tactile responses in rat thalamus. Neurosci. Lett. 336:109-112, 2003.

17. Lin, C. and **Al-Chaer, E.D**. Long-term sensitization of primary afferents in adult rats exposed to neonatal colon pain. Brain Res. 971: 73-82, 2003.

18. Kawasaki, M. and **Al-Chaer, E.D.** Intradermal capsaicin inhibits lumbar dorsal horn neuronal responses to colorectal distension. *NeuroReport* 14 (7): 985-9, 2003.

19. Arai, Y-C.P., Ueda, W. and **Al-Chaer, E.D.** Pre-anesthetic maternal separation increases pups' locomotor behavior during emergence from anesthesia in rats. *Acta Anaesthesiol Scand* 48: 174-177, 2004.

20. Saab, C.Y., Arai, Y-C.P. and **Al-Chaer, E.D.** Modulation of visceral nociceptive processing in the lumbar spinal cord following thalamic stimulation or inactivation and after dorsal column lesion in rats with neonatal colon irritation. *Brain Res.* 1008 (2): 186-192, 2004.

21. Arai, Y-C.P., Ueda, W and **Al-Chaer, E.D.** Pre-anesthetic presence of an injured dam influences pups' locomotor behavior during emergence from anesthesia in rats. *Acta Anaesthesiol Scand* 49: 166-169, 2005.

22. Lin, C and **Al-Chaer, E.D.** Differential effects of glutamate receptor antagonists on dorsal horn neurons responding to colorectal distension in a neonatal colon irritation rat model. World J Gastroenterol 41:6495-6502, 2005.

23. Grundy, D., **Al-Chaer, E.D.**, Aziz, Q., Collins, S.M., Ke, M., Tache, Y., Wood, J.D. Fundamentals of neurogastroenterology: basic science. *Gastroenterology* 130(5):1391-1411, 2006.

24. Saab, C.Y., Wang J., Gu, C., Garner, K.N. and **Al-Chaer, E.D.** Microglia: A newly discovered role in visceral hypersensitivity? *Neuron Glia Biology* 2: 271-277, 2006.

25. Hayar A.M., Gu C. and **Al-Chaer E.D**. An improved method for patch clamp recording and calcium imaging of neurons in the intact dorsal root ganglion in rats. *J. Neurosci. Methods* 173(1): 74-82, 2008.

26. Wang, J., Gu, C. and **Al-Chaer, E.D.** Altered behavior and digestive outcomes in adult male rats primed with minimal colon pain as neonates. *Behav Brain Funct*. 4(1): 28, 2008.

27. Chaloner A., Rao A., **Al-Chaer E.D.**, Greenwood-Van Meerveld B. Importance of neural mechanisms in colonic mucosal and muscular dysfunction in adult rats following neonatal colonic irritation. Int J Dev Neurosci. 28(1):99-103, 2010.

28. Romanovsky D., Wang J., **Al-Chaer E.D.**, Stimers J.R., Dobretsov M. Comparison of metabolic and neuropathy profiles of rats with streptozotocin-induced overt and moderate insulinopenia. Neuroscience. 170(1):337-347, 2010.

29. Norwood A.P., **Al-Chaer E.D.**, Fantegrossi W.E. Predisposing effects of neonatal visceral pain on abuse-related effects of morphine in adult male Sprague Dawley rats. Psychopharmacology (Berl): 231(22): 4281-4289, 2014. Epub 2014 Apr 23.

B. Reviews

1. **Al-Chaer, E.D**., Feng, Y. and Willis, W.D. Visceral pain: a disturbance in the sensorimotor continuum? Pain Forum 7 (3): 117-125, 1998.

2. **Al-Chaer, E.D**. and Traub R.J. Biological basis of visceral pain: recent developments. *Pain* 96: 221-225, 2002.

3. Grundy D, **Al-Chaer ED**, Aziz Q, Collins SM, Ke M, Tache Y, Wood JD. Fundamentals of neurogastroenterology: basic science. *Gastroenterology* 130(5):1391-1411, 2006.

C. Articles Submitted / In Press

Wang, J., Gu, C., Garner K.N. and **Al-Chaer, E.D.** Sex differences in the processing of viscerosensory information.

D. Other (Book Chapters)

1. Willis, W.D., **Al-Chaer, E.D**., Quast, M. J. and Westlund, K. N. Evidence for the presence of a visceral pain pathway in the dorsal column of the spinal cord. In *Somatosensory processing: from single neuron to brain imaging*. Editors: Rowe, M.J. and Iwamura Y. pp. 51-75, 2001. Harwood Academic Publishers, Amsterdam, The Netherlands.

2. K. J. S. Anand, A. T. Bhutta, R. W. Hall, C. R. Rovnaghi, and **E. D. Al-Chaer**. Long-term effects of repetitive pain in the neonatal period: neuronal vulnerability, imprinting, and plasticity. In Neonatal Pain, Hodgson DM (Ed), Section IV, Chapter 15, pp. 197 – 210, Taylor and Francis Medical Books, London, 2005.

3. **Al-Chaer, E.D**. Descending Modulation of Visceral Pain. In *Descending Modulation of Spinal Nociceptive Processing.* Section Editor: Ronald Dubner. Encyclopedia of Pain. Schmidt R. and Willis W.D. Springer-Verlag, Heidelberg, Germany, 2006, pp. 576-578.

4. **Al-Chaer, E.D**. Visceral Pain / Irritable Bowel Syndrome Model. In *Animal Models and Experimental Tests to Study Nociception and Pain.* Section Editor: Jin Mo Chung. Encyclopedia of Pain. Schmidt R. and Willis W.D. Springer-Verlag, Heidelberg, Germany, 2006, pp. 2623-2626.

5. Wood JD, Grundy D, **Al-Chaer ED**, Aziz Q, Collins SM, Ke M, Tache Y. Fundamentals of neurogastroenterology: basic science. In ROME III, The Functional Gastrointestinal Disorders, 3rd Ed. (Drossman et al. Eds.), Degnon Associates, Inc. McLean, VA, pp. 31-88, 2006.

6. **Al-Chaer, E.D**. Postsynaptic Dorsal Column Neurons, Responses to Visceral Input. In *Ascending Transmission of Nociceptive Signals.* Section Editor: Glenn J. Giesler Jr. Encyclopedia of Pain. Schmidt R. and Willis W.D. editors. Springer-Verlag, Heidelberg, Germany, 2006, pp. 1954-1956.

7. **Al-Chaer, E.D.** and Willis W.D. Neuroanatomy of visceral pain: Pathways and processes in "Chronic abdominal and visceral pain: theory and practice" PJ Pasricha, WD Willis and GF Gebhart (Eds), Chapter 4, pp. 33-44, Informa Health Care, Inc. New York, NY, 2007.

8. Anand KJS, **Al-Chaer ED,** Bhutta AT and Hall RW. Development of Supraspinal Pain Processing. In: 3rd Edition of "Pain in Neonates & Infants" (Anand, Stevens, McGrath Eds.) Pain Research and Clinical Management, Chapter 3, Elsevier Churchill-Livingstone, Edinburgh, pp. 25-44, 2007.

9. Sternberg W.F. and **Al-Chaer, E.D.** Long-term Consequences of Neonatal and Infant Pain from Animal Models. In: 3rd Edition of "Pain in Neonates & Infants" (Anand, Stevens, McGrath Eds.) Pain Research and Clinical Management, Chapter 5, pp. 57-66, Elsevier Churchill-Livingstone, Edinburgh, 2007.

10. **Al-Chaer, E.D.** and Hyman, P.E. Visceral pain in infancy, In: 3rd Edition of "Pain in Neonates & Infants" (Anand, Stevens, McGrath Eds.) Pain Research and Clinical Management, Chapter 14, pp. 201-210, Elsevier Churchill-Livingstone, Edinburgh, 2007.

11. **Al-Chaer, E.D**. Visceral Pain. In "*Mechanisms of Pain in Peripheral Neuropathy*" (Maxim Dobrestov and Jun Ming Zhang, Eds), chapter 2, pp 29 – 45, 2008.

12. **Al-Chaer, E.D**. The Neuroanatomy of Pain and Pain Pathways, In "Biobehavioral Approaches to Pain" (Rhonda J. Moore, Editor), Chapter 2, pp 17 - 44, Springer, New York, 2009.

13. **Elie D. Al-Chaer** and Shelley A. Weaver. Early life trauma and chronic pain. In "*Functional Pain Syndromes: Presentation and Pathophysiology*", (Emeran A. Mayer and M. Catherine Bushnell, Editors), Chapter 20, pp 423 – 454, IASP press, Seattle, WA, 2009.

14. **Al-Chaer ED**. Neuroanatomy of pain and pain pathways, In "*Handbook of Pain and Palliative Care: Biobehavioral Approaches for the Life Course*" (Rhonda J. Moore, Editor), Chapter 18; pp. 273-294. Springer: New York, NY; 2012.

15. Rabih A. Moshourab, Michael Schafer, and **Elie D. Al-Chaer**. Chronic Pain in Neurotrauma: Implications on Spinal Cord and Traumatic Brain Injury, In "*Brain Neurotrauma: Molecular, Neuropsychological, and Rehabilitation Aspects*" (Firas H. Kobeissy, Editor), Chapter 11; pp. 117-129. CRC Press 2015.

E. Abstracts

1. Jabbur, S.J., **El-Chaer, E**., Atweh, S.F. and Saadé, N.E. Activation of locus coeruleus neurons by dorsal column (DC) stimulation (st). Society for Neuroscience Abstracts, 1991, 17:292.

2. **Al-Chaer, E.D**., Saadé,N.E., Atweh, S.F. and Jabbur, S.J. Dorsal column input into the nucleus locus ceoruleus in cat. Lebanese Association for the Advancement of Science Abstracts, 1992, 11:194.

3. Jabbur, S.J., Atweh, S.F., **Al-Chaer, E.D**. and Saadé, N.E. Modulation of discharges of cuneate neurons (CN) by conditionning stimuli to the lateral and medial vestibular nuclei. Society for Neuroscience Abstracts, 1993, 19:329.

4. Rees, H., Tsuruoka, M., **Al-Chaer, E.D**. and Willis, W.D. Excitation and inhibition of STT cells by stimulation of the pretectal region in the anesthetized primate. J. Physiol. Proc. 4760: 47, 1994.

5. **Al-Chaer, E.D.**, Rees, H., Tsuruoka, M. and Willis, W.D. Facilitation of superficial STT cells by stimulation of the pretectal region in the primate. Society for Neuroscience Abstracts, 1994, 20:548.

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Manuscripts in Preparation

A. Books

Elie D. Al-Chaer, PhD, JD. Managing People's Creativity on an Institutional Budget: The Paradox of Academic Leadership.

B. Original Scientific Articles

1. Wang, J., Peng, X., and **Al-Chaer, E.D**. Role of N-methyl-D-aspartate (NMDA) receptors in the visceral hypersensitivity to colorectal distension (CRD) in adult rats exposed to neonatal colon irritation (CI).

2. Wang, J., Gu C. and **Al-Chaer, E.D**. Sex differences in the role of the postsynaptic dorsal column in visceral pain.

Recreation

"You can build your mind, you can build your body and you can build your CV."
Elie D. Al-Chaer

Besides a few visits to the gym every now and then, a game of tennis when a partner is available or a hike to the nearest trail when the weather permits, I am not much of a body builder. So, when I am not engaged in activities that build my CV, I immerse myself in problems of geometry, philosophy, knowledge and existence; "mental gymnastics." The mathematician in me likes to draw logical deductions that the philosopher likes to challenge. The geometrician likes to draw lines and to sketch plans in an attempt to realize a nagging idea or give shape to a fleeting dream. The strategist often calls for another game of chess or backgammon, or sometimes SimCity® where my political and public administration skills are put to test at reasonable risk, in the virtual world of tomorrow. At the end of the day (or the night), I find myself with an idiosyncratic house plan, a highly critical opinion written in a blog on a website of my design, or on my knees purifying my soul and praying for a revelation that will bring me closer to the Truth.

Having said all that, I find the most rewarding activity to be the play-time and quality-time that I spend with my son. Seeing the world through the fresh eyes of a twelve year old never fails to give me a renewed perspective on life.