

# CURRICULUM VITAE

**Tarek El-Bialy**  
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## EDUCATION AND TRAINING:

### 1) Degrees

#### *a. Dental degrees/training*

- 2001 Certificate of Specialty in Orthodontics, University of Illinois at Chicago, Orthodontics, 1999-2001
- 2000 M.Sc., Oral Sciences, College of Dentistry, University of Illinois at Chicago
- 1993 M.Sc., Orthodontics, Faculty of Dentistry, Tanta University, Egypt.
- 1987 B.D.S., Faculty of Dentistry, Tanta University, Egypt,

#### *b. Non-Dental degrees*

- 2010-2012: EMBA (Executive Masters of Business and Administration degree), University of Alberta. (Graduated on June 9<sup>th</sup>, 2012)
- 2001 Ph.D., Bioengineering, College of Engineering, University of Illinois at Chicago, USA.
- 1994 License of Law Degree, (LLP) Faculty of Law, Tanta University, Tanta, Egypt, [Concomitant with the MSc in Orthodontics].

### 2) Other Educational activities

- 2012 Chairs & Academic Administrators Management Program (CAAMP), Academy for academic leadership
- 2010 Institute for teaching and learning, Academy for academic leadership, and American Dental Education Association

### **3) Professional Certifications**

2007 Fellow of the Royal College of Dentists of Canada

2006 Diplomate, American Board of Orthodontics

### **HONORS AND RECOGNITIONS:**

2013 Alexander von Humboldt Research Award/Fellowship for Experienced Researchers. Bonn, Germany

2012 Nominated by the American Board of Orthodontics to participate in the ABO/CDABO Resident Advocacy Program

2010 American Association of Orthodontists scholarship for the Institute for Teaching and Learning (ITL), a joint program of the American Dental Education Association and the Academy for Academic Leadership.

2007 Expert, Round Table Group's Expert Network, Expert Witness Search & Referral, USA. <http://www.roundtablegroup.com/>

2006 Faculty Development Award, American Association of Orthodontists Foundation (AAOF).

2003 Inclusion in Who's Who, American Biographical Institute.

2001 Young Investigators Competition, American Association of Dental Research, Chicago Section.

1999 Postdoctoral Research Award, College of Dentistry, University of Illinois at Chicago.

### **PROFESSIONAL MEMBERSHIPS:**

American Association for Dental Research (AADR)  
Canadian Association for Dental Research (CADR)  
International Association for Dental Research (IADR)  
American Association of Orthodontists  
Canadian Association of Orthodontists  
Alberta Society of Orthodontists  
World Federation of Orthodontists  
Alberta Dental Association and College  
Saudi Dental Society (SDS)  
Saudi Orthodontic Society (SOS).  
Egyptian Orthodontics Society

### **EMPLOYMENT**

2011- Present	Adjunct Professor, Egypt Japan University of Science and Technology (E-JUST) and Egypt.
2005- Present	Associate Professor of Orthodontics and Adjunct Associate Professor, Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada. (Tenured granted in 2010).
2001 – Present	Visiting Lecturer, Department of Orthodontics, Faculty of Dentistry, Tanta University, Egypt
2002 – 2005	Assistant Professor of Orthodontics and Bioengineering, Faculty of Dentistry, King Abdul Aziz University (KAAU), Jeddah, Saudi Arabia.
April- July 2002	(Locum) Orthodontic Specialist, Gulf Dental specialty Hospital, Manama, Bahrain.
June- Nov. 2001	Assistant lecturer at Department of Orthodontics, Tanta University.
2001 –2002	Research Assistant Professor, Department of Mechanical Engineering/ Bioengineering, University of Illinois at Chicago,
1999 – 2001	Teaching assistant, Department of Orthodontics, University of Illinois at Chicago.
1993-1997	Assistant Lecturer, Department of Orthodontics, Faculty of Dentistry, Tanta University, Egypt.
1989-1993	Undergraduate Laboratory Instructor, Department of Orthodontics, Faculty of Dentistry, Tanta University, Egypt.

**LICENSED ORTHODONTIST IN:**

Alberta, Canada (2007- present)  
Egypt (1993- present)  
Qatar (2009- present)  
Saudi Arabia (2002- present)

**CURRENT RESEARCH ACTIVITIES/ GRANT PROPOSALS:**

**A) RESEARCH FOCUS**

1. The study of the effect of Ultrasound on:
  - Teeth root resorption prevention/regeneration after orthodontic treatment in animals and in Humans;
  - Non-surgical techniques for mandibular condylar growth in animals and in Humans.
  - Stem cell expansion and differentiation for dentofacial tissue engineering.

2. Development of innovative orthodontic/orthopedic appliances.

**B) RESEARCH SUPPORT**

- 2012-2013 Industry supported clinical trial (Sponsored by SmileSonica company, a spin-off company of the University of Alberta). The Effect of ultrasound on tooth movement. CAD 43,875. El-Bialy (PI)
- 2012-2012 Public Health Agency of Canada: Diabetes, Oral Health, and Nutrition: Interrelationships and Interventions. CAD 10,080. El-Bialy (PI)
- 2012-2012 Public Health Agency of Canada: The relationship between inflammation and the complications of type 2 diabetes. CAD 23,760.00. El-Bialy (PI)
- 2012-2013 Fund for dentistry: Optimization of therapeutic ultrasound for mandibular growth enhancement in rabbits. CAD 4,500. (My graduate student [Yasamin Hadaegh] is the PI).
- 2011-2011 NSERC Research Tools and Instruments: A Small Animal Imager for Drug Delivery and Tissue Engineering Research. (CAD 87,000.00) (Hasan Uludag PI; Lavasanifar, Afsaneh; Tian Tang; El-Bialy, Tarek; Larry Unsworth; Yaman Boluk [CO-PIs].
- 2010-2013: Qatar National Research Fund (QNRF) [Qatar]: Using Pluripotent gingival cells and ultrasound for dental/periodontal tissue engineering. (USD **1,042,545.00**) (El-Bialy, T. PI) (Mamdouh Farid and Khaled Abdel Ghaffar Co-PIs).
- 2010-2011: University Hospital Foundation. The effect of infrared on mandibular growth in rats. CAD 25,000.00, (El-Bialy, T. PI) (Nadr Jomha co-PI).
- 2009-2011: Women and Children's Health Research Institute, Edmonton: Treatment of obstructive sleep apnea by gene therapy and ultrasound. (CAD 29,978.00) (El-Bialy, T. PI) (Hasan Uludag and Ayman El-Kadi Co-PIs)
- 2009-2011: Advanced Cranio-Maxillofacial Forum (ACMF) Sponsored by Stryker, Germany: Study the mechanical properties of ultrasound-assisted tissue engineered mandibular condyles. CAD 30,591.00, (El-Bialy, T. PI) (Reda Elgazzar Co-PI).
- 2009-2010: Fund for Dentistry (University of Alberta): Effect of non-viral vector loaded basic fibroblast growth Factor (bFGF) gene therapy and therapeutic ultrasound on mandibular growth modification. CAD 5,000.00, (El-Bialy PI).
- 2008-2009 Royal Embassy of Saudi Arabia. Study the effect of ultrasound and basic

- fibroblast growth factor on mandibular growth. CAD 20,000.00 (For Jamal Alqahtani [postdoctoral fellow in orthodontics]) El-Bialy, T, PI).
- 2008-2010: Women and Children's Health Research Institute, Edmonton. Effects of ultrasound and local growth hormone injections on lower jaw growth in rats. CAD 34,478 per year, (El-Bialy, T. PI) (Ayman El-Kadi Co-PI).
- 2008-2009 Fund for Dentistry, University of Alberta, Department of Dentistry. CAD 3,000.00. Effect of infrared radiation on mandibular growth in Class II malocclusion. (Neel Kaipature PI [my previous volunteer student]).
- 2008-2009 Royal Embassy of Saudi Arabia. Study craniofacial morphology in children with chronic renal failure. CAD 20,000.00. (For Yousef Althomali [postdoctoral fellow in orthodontics]) El-Bialy, T, PI).
- 2007 Alberta Heritage Foundation for Medical Research (AHFMR) Major Equipment Award Competitions, CAD 90,000.00 (Uludag H. PI) (Co-PIs [El-Bialy, T., Lavasanifar, and Samuel, J]).
- 2007-2009: Canadian Institutes of Health Research (CIHR): Carbon-nanotube Device for DNA Sequencing, CAD 74,850.00 per year for two years (Jie Chen PI) (Co-PIs [El-Bialy, T; Pilarski, L., and Tsui, Y.]).
- 2007-2008: Fund for Dentistry, University of Alberta, Department of Dentistry. CAD 4,760.00 (Project Grant # 2007-02) Optimizing rat bone marrow stem cell differentiation by ultrasound into nerve cells for dental pulp tissue engineering (Ashraf Abd-Elmeguid PI [my previous student])
- 2007-2008: Fund for Dentistry, University of Alberta, Department of Dentistry. CAD 4,760.00 (Project Grant # 2007-01) Stimulation of human mesenchymal stem cell and human umbilical cord privascular cell expansion and differentiation by ultrasound for craniofacial tissue engineering Dr. Taghreed Aldosary [My MSc graduated student]– El-Bialy, T., PI)
- 2007-2008: Fund for Dentistry, University of Alberta, Department of Dentistry. CAD 2,926.00 (Project Grant # 2007-03) The effect of LIPUS (Low Intensity Pulsed Ultrasound) on odontoblasts *in-vitro*. (Dr. Saleh Al-Daghreer [PhD in Orthodontics student] – El-Bialy, T. PI)
- 2007-2008: Fund for Dentistry, University of Alberta, Department of Dentistry. CAD 3,860.00 (Project Grant # 2007-08) The effect of EMD (Emdogain) and ultrasound on the proliferation and differentiation of human gingival fibroblasts for tooth fracture healing. (Nesrine Mostafa –PI [My graduated Ms student])
- 2006-2011 Royal Embassy of Saudi Arabia. Biological and mechanical evaluation of

- the effect of ultrasound on orthodontically induced root resorption repair. CAD 75,000.00. (For Saleh Aldaghreer [PhD in Orthodontics student] – El-Bialy, T. PI).
- 2006-2009 Royal Embassy of Saudi Arabia. Study the effect of ultrasound on stem cell expansion and differentiation for craniofacial tissue engineering. CAD 45,000.00. (For Taghreed Aldosary) El-Bialy, T, PI).
- 2006-2007: Natural Sciences and Engineering Research Council of Canada (NSERC): Idea to Innovation (I2I) program "Intraoral wireless Device for Dental tissue Formation and Tooth-Root Healing". CAD 124,975.00 (Ying Tsui PI) (Co-PIs [El-Bialy, T. and Chin, J.]).
- 2006-2007: Alberta Heritage Foundation for Medical Research (AHFMR): Tooth borne ultrasound device, CAD 35,000.00 per year (EL-Bialy, T. PI).
- 2006-2007: University of Alberta, University Hospital Foundation: Ultrasound assisted engineering craniofacial tissues, CAD 22,500.00 per year (El-Bialy, T. PI, Walied Moussa Co-PI).
- 2006-2007: Fund for Dentistry, Faculty of Medicine and Dentistry, UA: Stimulation of stem cell expansion by ultrasound for craniofacial tissue engineering, CAD \$3,499.00 per year. (El-Bialy, T. PI).
- 2005-2009: University of Alberta, Startup Fund, CAD 60,000.00. (El-Bialy, T. PI)
- 2004-2005: King Abdul Aziz University, Research Council Award, Saudi Arabia. Growth Modification of the mandible using ultrasound in Monkeys. SR 93,000 per year. (El-Bialy, T. PI).
- 2002-2003: Campus Research Board, University of Illinois at Chicago, USA. Development of new paradigm in monitoring bone fracture and health-2. USD 45,000. (Thomas J. Royston, PI, El-Bialy, T Co-PI).
- 2001-2002: Campus Research Board, University of Illinois at Chicago, USA. Development of new paradigm in monitoring bone fracture and health-1. USD 50,000. (Thomas J. Royston, PI, El-Bialy, T Co-PI).
- 1999-2001: American Association of Orthodontic Foundation, USA. Biomedical Research Award, "Outcome of mandibular distraction in adult orthodontic patients" USD 14,000. (EL-Bialy, PI, Evans, C.A Co-PI).
- 1999-2000: Odontographic Society of Chicago, research prize, USA. Effect of ultrasound in promoting bone healing after mandibular osteodistracted in Rabbits. USD 1,000 per year. (EL-Bialy, PI, Evans, C.A Co-PI).