

Curriculum Vitae

CHUKWUKA C OKAFOR, MD, MBA, CIME

PERSONAL INFORMATION

Place of Birth: Boston, MA

CURRENT POSITION

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|----------------|---|--------------|
| 2010 – Present | Spine Institute of Central Florida
President
Orthopaedic Spine Surgeon | Lakeland, FL |
| 2011 – Present | University of South Florida
<i>Affiliate Assistant Professor</i>
Department of Orthopaedic Surgery and Sports Medicine | Tampa, FL |

Board Certified by the American Board of Orthopaedic Surgery

Board Certified by the American Board of Independent Medical Examiners (ABIME). ABIME-certified physicians possess the necessary medical skills and training in physical, behavioral, psychological and occupational assessment. Certification through the American Board of Independent Medical Examiners is a prestigious distinction which sets apart Physicians as internationally recognized medical examiners. They draw upon in-depth experience to perform credible evaluations; provide thorough, objective, written analysis regarding diagnoses, causation, prognosis, maximal medical improvement, impairment, work capacity, appropriateness of care and care management. They testify as an expert medical witness, they recognize the value of impartiality and thoroughness in case evaluation. They strive to conduct timely, cost-effective evaluations abiding by ABIME guidelines of conduct and ethical practice. They exhibit commitment to professional excellence and integrity. They provide the highest quality independent medical examinations, and case reviews. They recognize exaggerated or understated impairment ratings. Reports generated are very credible and reflect evidence based medicine and accepted practices and consistent with the most up to date and current American Medical Association guidelines.

FELLOWSHIP TRAINING

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|-----------|---|-----------|
| 2009-2010 | Spine Surgery Fellowship
Florida Orthopaedic Institute
Combined Neurosurgery and Orthopaedic Spine Fellowship
<i>Special Emphasis on Minimally Invasive Spine Surgery</i> | Tampa, FL |
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RESIDENCY TRAINING

- 2004-2005 **General Surgery Internship** Philadelphia, PA
Thomas Jefferson University Program
- 2005-2009 **Orthopaedic Surgery Residency** Philadelphia, PA
Thomas Jefferson University Program

A total of 12-months of Dedicated Spine Surgery Training:

Alexander R. Vaccaro MD, PhD; Todd J. Albert MD; Alan S. Hilibrand MD; D. Greg Anderson MD.
(includes 6 months as a Chief Resident).

3-months Pediatric Scoliosis and Spine Surgery Training:

Alfred I. DuPont Hospital for Children, Wilmington, DE

POST GRADUATE TRAINING

- ***American College of Disability Medicine and American Board of Independent Medical Examiners American Medical Association Guides to the Evaluation of Permanent Impairment, with Review of Principles of Disability Assessment – Chicago, IL August 13-14, 2011 (6th Edition Guide)***
- SI-BONE iFuse Implant System – for Sacroiliac Joint Arthrodesis
- Neuronavigation/Computer assisted surgery
 - Medtronic
 - Synthes
- Complex Image Guided Spine Surgery and Pedicle Screw Placement
- Cervical Spine Decompression and Reconstruction
- Artificial Disc- Lumbar
 - ProDisc-L
- Artificial Disc- Cervical
 - ProDisc-C
- Kyphoplasty
- Vertebroplasty
- Cervical Instrumentation
 - Anterior
 - Posterior
- Minimally Invasive Anterolateral Interbody Fusion (Transpsoas Approach)
 - Nuvasive, Globus, Synthes
- Minimally Invasive Anterolateral Thoracic Interbody Fusion (Retropleural Approach)
 - Nuvasive
- Chest Tube Placement – (Thoracostomy Tube Placement)
 - If needed following Anterior Thoracic Spine Reconstructions/Approaches
- Thoracic Spine Instrumentation
 - Globus
 - Medtronic
 - Synthes
- Anterior and Retroperitoneal Lumbar Spine Instrumentation
- Osteotomies (Pedicule Subtraction; Smith-Peterson; Ponte)
 - For reconstruction of Thoracic, and Lumbar Spine Deformities
- Minimally Invasive Endoscopic Spinal Decompression (Cervical; Thoracic; Lumbar Spine)
 - Medtronic
 - DePuy Spine
- Minimally Invasive Endoscopic Transforaminal Lumbar Interbody Fusion
 - Medtronic
 - DePuy Spine
- Pediatric Scoliosis Correction
- Neuromodulation -- Spinal Cord Stimulation
 - Advanced Neuromodulation Systems (ANS)
- Intrathecal Drug Delivery Pumps
 - ANS; Medtronic

EDUCATION

- 1999-2004 **Boston University School of Medicine** Boston, MA
M.D. (Doctor of Medicine), May 16, 2004
- 2002-2003 **American University (Kogod) School of Business** Washington, DC
M.B.A. (Masters of Business Administration), December 17, 2003
Dual specializations:
- ***Entrepreneurship and Management***
 - ***Health Care Management and Administration***

KOGOD Special Merit-Based Tuition Scholarship Recipient for entire MBA Studies.

Beta Gamma Sigma, the National Business Honorary Society (Inducted 2003)

Member, MBA Kogod School of Business Admission Committee

Member, Kogod Entrepreneurs Club

Member, Kogod Investment Group

Member, International Business Association

Graduate Business Association *Economics and Accounting* Tutor

Graduate Scholar list, all semesters.

Dean's List, all semesters

GPA: 3.92/4.00

Highest GPA in MBA Graduating Class

First Student to Complete the 51-credit M.B.A. Program in 1-year.

- 1995-1999 **University of Massachusetts, Boston** Boston, MA
Bachelor of Science, June 5, 1999
Major: Biochemistry
GPA: 3.90/4.00

Graduated ***Summa Cum Laude*** with ***Honors in Biochemistry***

*Delivered the **Valedictory Speech** to an audience of over 20,000 people, on behalf of my entire 1999 college graduating class during graduation.*

*Awarded the **John F. Kennedy Award** on graduation day – **JFK Award** is the highest honor and recognition bestowed on any University of Massachusetts student, for excellence in leadership, academics and service.*

Departmental Prizes received during graduation:

(1) *Distinction in Biochemistry*

(2) *Biochemistry Department Book Award.*

APPOINTMENTS

- 2004-2008 **Clinical Performance Improvement Committee**
Resident-Physician Representative
Thomas Jefferson University Hospital
- 2003 –2004 **2003 & 2004 American Business Awards Judge**
The American Business AwardsSM - "The SteviesTM" (equivalent to the Entertainment Industry's Emmy Awards), are presented to the companies and individuals who best exemplify all that's right about business in the U.S.A.
- 2002 – 2003 **Cartilage Biology and Orthopaedics Branch Research Fellow**
National Institutes of Arthritis and Musculoskeletal and Skin Diseases
National Institutes of Health
Bethesda, Maryland
- 2002-2003 **Kogod School of Business MBA Admission Committee Member**
Washington, D.C.
- 2001-2002 **Self-Study Committee on Medical Education (M.D. Program)**
Boston University School of Medicine
Appointed by Dean and Provost
Boston University School of Medicine
Boston, Massachusetts
- 2001-2002 **Planning Committee, New England Science Symposium**
Harvard Medical School & Biomedical Science Career Program
Boston, MA
- 2001-2005 **National Liaison to the National Institutes of Health (NIH) for AMSA**
American Medical Student Association (AMSA)
1st AMSA Liaison to the NIH in the history of AMSA
- 2000-2002 **Board of Directors, Student National Medical Association (SNMA)**
- 2001-2002 **National Corporate Affairs Coordinator**
Student National Medical Association
- 2000-2001 **National Chairman, Community Service Committee**
Student National Medical Association
- April 2001 **107th Congressional Black Caucus (2001 Health Braintrust) SNMA Delegate**
Capitol Hill, Washington, DC

APPOINTMENTS Cont'd

2000-2001 **National Institutes of Health Graduate Research Fellow**
Gwathmey, Inc.
Boston, Massachusetts

1996-1999 **Ronald E. McNair Research Fellow**
University of Massachusetts
Boston, Massachusetts

CONSULTING ACTIVITIES

2002-2005 Gwathmey, Inc. (A Pre-Clinical Research Company), Cambridge, MA –
Marketing Consultant

2002 Veteran Hospital Geriatric, Washington, D.C. -- Geriatric Clinic Patient Consult
and Referral System Consultant

2003 Revolent Technologies, Dulles, VA – Knowledge Management System
Consultant

2011-Present Life Spine, Inc. Product Development Consultant

GRANT AWARDS

\$31,000 National Institutes of Health (NIH) HL 49574 Supplement Grant (2001).

\$5,000 National Merck Pharmaceuticals Grant (2000)

AWARDS and HONORS

2009 Thomas Jefferson University Hospital Department of Orthopaedic Surgery Medical Student Education Award – Awarded by vote of all medical students who rotate on the Orthopaedic Surgery Service to the Resident who has made the greatest contribution to their education.

2009 Thomas Jefferson University Hospital Department of Orthopaedic Surgery Exceptional Chief Resident Award for Exceptional Administrative and Educational Program Establishment and Dedicated Leadership.

Nigerian National High School Champion in Chemistry and Mathematics (1994).

Rhodes Scholarship finalist, 1999

The 1999 John F. Kennedy Award recipient - *the highest Award, Honor and Recognition that the University of Massachusetts-Boston bestows on any undergraduate student (for Service, Great Leadership, and Academic Excellence) – award comes with a Bronze bust of JFK's head, and a \$1,000 cash prize.*

AWARDS and HONORS Cont'd

Dr. Benjamin S. Carson Full Undergraduate Academic Scholarship (1995-1999).

2001 American Association of Medical Colleges (AAMC) Herbert W. Nickens Award recipient: Award included a \$5,000 cash prize. The award was open to national competition – each medical school nominates ONE student to be considered for this award. The award is **given to an outstanding medical student who have demonstrated leadership in eliminating inequalities in medical education and health care.** Selection criteria includes academic accomplishments and commitment to the community.

National Institute of Health (up to \$20,000) Undergraduate Scholarship (1997- '98 & 1998-'99).

The 1999 Biochemistry Department Book Prize recipient - *an award given annually to the student with the **highest GPA** among the graduating biochemistry majors.*

Outstanding Youth Achievement Award from the Igbo Association of New England, Inc., for leadership, and contribution to the community, August 28 1999.

Nominated for and Awarded the **Hope Scholarship** by the Biomedical Science Career Program, Harvard Medical School. April 26, 2000 (a two-year scholarship.)

One of FIVE Nationally to receive the 2000 Merck/Association for Academic Minority Physicians Minority Medical Student Summer Research Fellowship – to the amount of \$5,000.

Nominated and Appointed a **Judge** for the **1st Annual American Business Awards – the Stevies (2003)**. An award equivalent to the Entertainment Industry's Emmy Awards, and Music Industry's Grammys.

National Institutes of Health-Minority Graduate Research Assistants Grant -- \$31,000 grant (2001).

Acres of Diamonds Award for being the Winner of the 1998 National Abstract Competition and for distinction in oral and poster presentation sessions in the Minority Trainee Research Forum.

Alexzandrina L. Young Book Award (1998) for being the Carson Scholar with the highest GPA.

University of Massachusetts Outstanding Leadership Award (1997).

Ronald E. McNair Research Scholarship Award (1996-1999).

Accepted for the Summer 1996 Research Experience for Undergraduates at UMass Medical School.

AWARDS and HONORS cont'd

Finalist, National Dean's List Scholarship Award - 1999.

Received a \$100 cash award for a poster presentation awarded **distinction** and **outstanding** at the Massachusetts Statewide 5th Annual Conference on Undergraduate Research, Scholarly, Creative, and Public Service Activities. April 30, 1999, Federal Reserve Bank of Boston.

Successfully completed the University of Massachusetts-Boston College of Arts and Science Honors Program (September 1996 - June 5, 1999)

Honors in Biochemistry (June 3, 1999), University of Massachusetts Boston

Lifetime member of the **Golden Key National Honors Society** (Inducted in March 1998).

Dean's List all semesters in college - eight semesters in a row (1995-1999).

Recipient of honorary award recognition by the 21st Annual Edition of the National Dean's List (1998).

Recipient of honorary award recognition by the 22nd Annual Edition of the National Dean's List (1999).

Nominated for and member of Sigma Xi, The Scientific Research Society – Nominated by Penelope J. Padgett, Ph.D., Chair, Committee on Qualifications and Membership (1998).

One of 3 students nominated by the University of Massachusetts-Boston for inclusion in the 1999 edition of WHO'S WHO AMONG STUDENTS IN AMERICAN UNIVERSITIES AND COLLEGES.

RESEARCH EXPERIENCES

National Institutes of Health

National Institutes of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
Cartilage Biology and Orthopaedics Branch
Bethesda, Maryland

Laboratory of Dr. Rocky S. Tuan
Chief, Cartilage Biology and Orthopaedics Branch, NIAMS
June 4, 2002 – July 1 2003

Investigating the contribution of orthopaedic wear debris (esp. titanium particle) on periprosthetic osteolysis, and the differential effect of various bioimplant debris on aseptic implant loosening. Experimenting ways to prevent the adverse effects of these wear debris, in order to prolong the lifespan of prosthetic implants. Also worked on characterization of the human mesenchymal stem cells expansion capacity and subsequent differentiation capacity on an electrospun non-woven nanofiber scaffold for tissue engineering applications.

Gwathmey Inc.

Cambridge, MA
NIH HL 49574 Supplement Grant Fellow
2001-2002

Conducted research on calcium sensitizing agents that may be used in the future as cardiotonic drugs for myocardial contractile activation in heart failure patients. Also studied the relationship of calcium activation to contractile dysfunction in failing myocardium.

Boston University School of Medicine

Laboratory of Thomas A. Einhorn, M.D.
Professor and Chairman Department of Orthopaedic Surgery
Chief of Orthopaedic Surgery, **Boston Medical Center**
Boston, MA Summer 2000 and Fall 2000

Analysis of mesenchymal stem cell origin in fracture repair, and cloning of several BMP variants in order to investigate their role in fracture healing.

RESEARCH EXPERIENCES Cont'd

National Institute of Health

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
Molecular Clinical Hematology Branch (MCHB)
Laboratory of Griffin Rodgers, M.D.,
Deputy Director of NIDDK
Branch Chief, NIDDK Molecular and Clinical Hematology Branch.
Bethesda, MD *June 7 - August 13 1999*

Functional analysis of the novel EKLF/GATA fusion protein engineered last summer, in the induction of delta globin gene.

Brigham and Women's Hospital

Laboratory of Kenneth R. Bridges, M.D., Director of the Joint Center for Sickle Cell and Thalassaemic Disorders, Brigham and Women's Hospital and Associate Professor of Medicine

Harvard Medical School

Boston, MA *January 1999 - May 1999*

Developing protocols as well as investigating the mechanism by which ascorbic acid inhibits the oxidative degradation of IRE-2, a key iron regulatory enzyme implicated in numerous iron overload and deficiency disorders.

National Institute of Health

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
Laboratory of Chemical Biology (LCB) &
Molecular Clinical Hematology Branch (MCHB)
Laboratory of Griffin Rodgers, M.D.,
Deputy Director of NIDDK
Branch Chief, NIDDK Molecular and Clinical Hematology Branch.
Bethesda, MD *June 1 - August 23 1998*

Sub-cloned EKLF genes and GATA genes, with aim of making a fusion EKLF/GATA protein that is postulated to enhance the delta hemoglobin expression. This will be very valuable to sickle cell patients since it will result to increased Hb-A2 production. It is known that the more the Hb-A2, or the fetal hemoglobin composition in sickle cell anemia patients, the more soluble the sickle red blood cells become. Since most of the symptoms of sickle cell anemia results from the insolubility and polymerization of the sickle cells, if this fusion protein acts as it is postulated to act, it will be a great gene therapy method to treat sickle cell anemia patients.

RESEARCH EXPERIENCES Cont'd

Harvard Medical School

Laboratory of Kenneth R. Bridges, M.D., Director of the Joint Center for Sickle Cell and Thalassemic Disorders, Brigham and Women's Hospital and Associate Professor of Medicine Harvard Medical School.

Boston, MA

June 9 - August 22 1997

Summer Honors Undergraduate Research Program [SHURP] Fellow

Investigated the sequence and mechanism by which Chloramphenicol cause Sideroblastic Anemia, a disorder that results to impaired heme synthesis and bone marrow hypoplasia. Investigated the severity of iron-mediated oxidant damage to mitochondria and to mitochondrial DNA (a postulated cause of the worsening of the anemic disorder).

Ronald E. McNair Research Fellow.

August 23 -December 1997

Identified a putative mitochondrial DNA heteroplasmic point mutation caused by iron overload in an oxidant-rich environment using a K562 cell model, and twenty different restriction enzymes.

Massachusetts Institute of Technology

Biotechnology Process Engineering Center (BPEC)

Laboratory of Daniel I. C. Wang, Ph.D., Institute Professor of Chemical Engineering and BPEC Director.

Cambridge, MA

June 13 - August 23 1996

Summer Research Fellow

Developed protocols for separation of total protein from *E. Coli* culture, and for HPLC amino acid analysis of fermentation samples. Investigated effects of acid hydrolysis on free amino acid.

Invited to work at the lab (BPEC) as a research fellow for the *Fall of 1996*, where I attempted to create a new restriction site on a plasmid.

Harvard Medical School

Cardiovascular Disease Laboratory (CVD Lab)

Laboratory of Judith Gwathmey, V.M.D., Ph.D., FACC, Director of the CVD Lab, & President of the Gwathmey Inc., Professor of Medicine Boston University Medical School

Biomedical Research Trainee

March 1996 - June 1996

Prepared buffer solutions, growth media, grew competent bacteria. Transformed cells for on-going research. Plated cells on petri dishes, inoculated cells. Researched journal on factors that may cause heart failure for a post-doctorate fellow and a MD/Ph.D. fellow.

PUBLICATIONS

Book Chapters:

Chukwuka C. Okafor, Edward M, James Harrop. Percutaneous Pedicle Screw Placement. In: Neurosurgery: Tricks of the Trade. (In Press)

Chukwuka C. Okafor, Eric Harris, Alexander Vaccaro. The Role of Spinal Fusion and the Aging Spine: Stenosis Without Deformity. In: The Comprehensive Treatment of the Aging Spine: Minimally Invasive and Advanced Techniques. Editors Yue, Guyer, Johnson, Khoo, Hochschuler. Elsevier Academic Press 2010.

Andrew Brown, Chukwuka C Okafor, Alexander Vaccaro. Spinal Arthroplasty-The Preservation of Motion. Mobidisk Arthroplasty. Saunders-Elsevier Press 2007. Lumbar Disk Arthroplasty Biomechanics and Design Consideration. In: Spinal Arthroplasty with DVD-The Preservation of Motion. Edited by Dr. Alexander Vaccaro et al.

Articles:

Okafor C., Thacker M. Juvenile Xanthogranuloma of the Proximal Femur. A Case-Report and Review of Literature.

Smith H, Okafor C. Albert T, Vaccaro C. et. al. Evaluation of neurologic deficit without apparent cause: the importance of a multidisciplinary approach. J Spinal Cord Med. 2007;30(5):509-17.

Brown A, Stock G, Patel AA, Okafor C, Vaccaro A. Osteogenic protein-1: a review of its utility in spinal applications. BioDrugs. 2006;20(4):243-51.

Vaccaro AR, Baron EM, Sanfilippo J, Jacoby S, Steuve J, Grossman E, DiPaola M, Ranier P, Austin L, Ropiak R, Ciminello M, Okafor C, Eichenbaum M, Rapuri V, Smith E, Orozco F, Ugolini P, Fletcher M, Minnich J, Goldberg G, Wilsey J, Lee JY, Lim MR, Burns A, Marino R, DiPaola C, Zeiller L, Zeiler SC, Harrop J, Anderson DG, Albert TJ, Hilibrand AS. Reliability of a novel classification system for thoracolumbar injuries: the Thoracolumbar Injury Severity Score. Spine. 2006 May 15;31(11 Suppl):S62-9; discussion S104.

Okafor CC, Haleem-Smith H, Laqueriere P, Manner PA, Tuan RS. Particulate endocytosis mediates biological responses of human mesenchymal stem cells to titanium wear debris. J Orthop Res. 2006 Mar;24(3):461-73.

Chukwuka C Okafor, Lin Song, Rocky S. Tuan. An Economical, and Efficient Approach to Culture and Expand Multipotential Human Mesenchymal Stem Cells. The Jefferson Orthopaedic Journal, Volume 33, 2005, Page 55-61.

PUBLICATIONS Cont'd:

Articles:

Chukwuka C. Okafor, M.D., M.B.A., Michael G. Ehrlich M.D., Julia A. Katarincic M.D. Septic Monoarthritis in a Pediatric Patient with Juvenile Rheumatoid Arthritis Treated with Etanercept: A Case Report and Literature Review. *The Jefferson Orthopaedic Journal*, Volume 33, 2005, Page 62-66.

Li WJ, Tuli R, Okafor C, Derfoul A, Danielson KG, Hall DJ, Tuan RS. A three-dimensional nanofibrous scaffold for cartilage tissue engineering using human mesenchymal stem cells. *Biomaterials*. 2005 Feb;26(6):599-609.

Hana Smith, Assia Derfoul, Chukwuka C. Okafor, Richard Tuli, Doug Olsen, David J. Hall, Rocky S. Tuan. Optimization of high-efficiency transfection of adult human mesenchymal stem cells in vitro. *Mol Biotechnol*. 2005 May;30(1):9-20.

Other PUBLICATIONS

Articles:

Chukwuka Okafor, Lori Saunders, Xioaping Li, Toshiro Ito, Meredith Dixon, Anna Stepanek, Roger J. Hajjar, June R. Wood, Angelia A. Doye, Judith K. Gwathmey. Myofibrillar Responsiveness to cAMP, PKA and Caffeine in an Animal Model of Heart Failure. *Biochemical and Biophysical Research Communications* 2003; 300: 592-599.

Chukwuka Okafor, Ronglih Liao, Cynthia Perreault-Micale, Xiaoping Li, Toshiro Ito, Anna Stepanek, Angelia Doye, Peter de Tomke, Judith K. Gwathmey. Mg-ATPase and Ca²⁺ Activated Myosin ATPase Activity in Ventricular Myofibrils from Non-failing and Diseased Human Hearts: Effects of Calcium Sensitizing Agents MCI-154, DPI 201-106, and Caffeine. *Molecular and Cellular Biochemistry* 2003; 245: 77-89.

Chukwuka C Okafor, Cynthia Perreault-Micale, Djamel Lebeche, Klara Skiroman, George Jabbour, Angelia A Doye, Roger J Hajjar, Michael X Lee, Nancy Laste and Judith K Gwathmey. Chronic Treatment with Carvedilol Improves Ventricular Function and Reduces Myocyte Apoptosis in an Animal Model of Heart Failure. *BMC Physiology* 2003, 3:6, pp. 1- 12.

Chukwuka C. Okafor. Opportunities Available at the National Institutes of Health. American Medical Student Association (AMSA) -- published online (www.amsa.org), June 2002.

Leiter LM, Thatte HS, Okafor C, Marks PW, Golan DE, Bridges KR. Chloramphenicol-induced mitochondrial dysfunction is associated with decreased transferrin receptor expression and ferritin synthesis in human K562 cells and is unrelated to IRE-IRP interactions. *Journal of Cellular Physiology*. Volume 180, p. 334-344, 1999.

Other PUBLICATIONS Cont'd

Articles:

Chukwuka Okafor. Cell model to understand Sideroblastic Anemia: PCR and RFLP mapping to detect point mutation. *The Commonwealth Undergraduate Review. The Journal of Undergraduate Research in Massachusetts Public Higher Education. Volume 3, p. 53-58, 1997-1998.*

Chukwuka Okafor. A Call to Service: Get Involved in Your Community. *Journal of the Student National Medical Association, Winter Issue, Volume 6, Number 2, Page 51-52.*

Chukwuka Okafor. Community Service of SNMA. *Journal of the Student National Medical Association, Summer Issue, Volume 7, Number 2, Page 51-56.*

Non-Peer Reviewed Papers:

Tuli, R., Tuli, S., Huang, X., Okafor, C.C., Hozack, W.J., Danielson, K.G., Hall, D.J., and Tuan, R.S., "TGF-beta1-STIMULATED MESENCHYMAL PROGENITOR CELL CHONDROGENESIS IS NEGATIVELY REGULATED BY ACTIVATOR PROTEIN-2."

Chukwuka C Okafor, Reza Khorramshahgol. Using Information Technology to Reduce Patient Wait Time and Improve Patient Experience in Health Care Facilities: A Look into the Future. (In process of being submitted to *Journal of Health Care Management*).

PUBLICATIONS:

Abstracts:

Chukwuka C. Okafor, Hana Smith, Patrice Lacquerre, Paul Manner, Rocky S. Tuan. Endocytosis of Titanium Particulates Mediate Biological Responses of Human Mesenchymal Stem Cells to Titanium Wear Debris: Suggests Therapeutic Inhibition of Endocytosis Enhance Long-Term Implant Prognosis. 50th Annual Meeting **Orthopaedic Research Society** (ORS) – Abstract Meeting at San Francisco, CA. March 7-10, 2004.

Li WJ, Tuli R, Okafor C, Derfoul A, Danielson KG, Hall DJ, Tuan RS. Human Mesenchymal Stem Cells Cultured in a Poly(ϵ -Caprolactone) Based Three-Dimensional Nanofibrous Scaffold for Cartilage Tissue Engineering.", 50th Annual Orthopaedic Research Society (ORS) Meeting . Meeting at San Francisco, CA. March 7-10, 2004.

Chukwuka C Okafor, Hana Smith, Rocky S. Tuan. 10th Annual Henry I Russek Student Achievement Day; Boston University School of Medicine. Endocytosis Inhibition and Proliferation Inducing Factors Reverses Titanium Mediated Biological Responses of Human Mesenchymal Stem Cells. July / 2003.

Chukwuka Okafor, Griffin Rodgers. National Institutes of Health, Annual Research Poster Day Bethesda, Maryland, Functional Analysis of an Engineered Erythroid-Specific Transcription Factor in the Induction of Delta-Globin Gene: Application to Gene Therapy of Sickle Cell Disease, 08 / 1999.

Chukwuka Okafor, Griffin Rodgers. 5th Annual Statewide Conference on Undergraduate Research, Scholarly, Creative, and Public Service Activities at Boston, Massachusetts., Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia, 04 / 1999.

PUBLICATIONS Abstracts Cont'd:

Chukwuka Okafor, Griffin Rodgers. National Conference on Undergraduate Research at the University of Rochester, Rochester, New York., Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia., 04 / 1999.

Chukwuka Okafor, Griffin Rodgers. 7th Annual National Ronald E. McNair Research conference, Delevan, Wisconsin, Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia, 11 / 1998.

Chukwuka Okafor, Griffin Rodgers. Pfizer Minority Trainee National Conference, San Diego, California, Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia, 11 / 1998.

Chukwuka Okafor, Griffin Rodgers. National Institutes of Health Research Festival and Poster Day, Bethesda, Maryland, Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia, 08 / 1998.

Chukwuka Okafor, Ildoko Toth, Kenneth Bridges. Leadership Alliance Annual Symposium; Washington Court Hotel, Washington, DC, Cell Model to Understand Sideroblastic Anemia, 07 / 1998.

Chukwuka Okafor, Ildiko Toth, Kenneth Bridges. 4th Massachusetts Statewide Annual Conference on Undergraduate Research, Scholarly, Creative, and Public Service Activities at Boston, Massachusetts., Cell Model to Understand Sideroblastic Anemia, 04 / 1998.

Chukwuka Okafor, Kenneth Bridges. 6th Annual National Ronald McNair Research Conference at Delevan, Wisconsin, Mechanism and sequence by which chloramphenicol causes sideroblastic anemia, 11 / 1997.

Chukwuka Okafor, Kenneth Bridges. Summer Honors Undergraduate Research Program (SHURP); Harvard Medical School, Boston, Massachusetts, Investigation of the Mechanism and Sequence by which Chloramphenicol Causes Sideroblastic Anemia, 08 / 1997.

Chukwuka Okafor, Daniel I.C. Wang, Ph.D. Massachusetts Institute of Technology (Biotechnology Process Engineering Center), Novel Protocol for Separation of Total Protein from E. Coli Culture, and for HPLC Amino Acid Analysis of Fermentation Samples, 08 / 1996.

GRAND ROUNDS LECTURES

Medical & Surgical Errors Prevention: Special Emphasis on Wrong Site Surgery Prevention. Department of Orthopaedic Surgery Grand Rounds. Thomas Jefferson University Hospital. Philadelphia, PA. April 16, 2009. By Chukwuka C. Okafor, MD, MBA.

Low Back Pain, Herniated Nucleus Pulposus, and Discogenic Pain. Who Needs Surgery? Review of Current Literature Evidence. Florida Orthopaedic Institute Spine Grand Rounds. Tampa, FL. November 17, 2009. By Chukwuka C. Okafor, MD, MBA.

Cervical Spine Trauma. Department of Orthopaedic Surgery Grand Rounds. University of South Florida. Tampa, FL. March 24, 2010. By Chukwuka C. Okafor, MD, MBA.

Evidence Based Treatments for Low Back Pain. Department of Orthopaedic Surgery Grand Rounds. University of South Florida. Tampa, FL. September 24, 2010. By Chukwuka C. Okafor, MD, MBA.

INVITED LECTURES and PRESENTATIONS

Techniques and Advances in Cervical and Lumbar Spine Surgery. Bartow Regional Hospital. Bartow, FL. July 22, 2010. By Chukwuka C. Okafor, MD, MBA.

Spine Infection and Epidural Spinal Abscesses. Florida Orthopaedic Institute Spine Lecture Series. Tampa, FL. February 9, 2010. By Chukwuka C. Okafor, MD, MBA.

Spine Tumors and Metastatic Epidural Spinal Cord Compression. Florida Orthopaedic Institute Spine Lecture Series. Tampa, FL. January 5, 2010. By Chukwuka C. Okafor, MD, MBA.

'Development of protocols for separation of total protein from *E. Coli* culture, and for HPLC amino acid analysis of fermentation samples' presented at the Massachusetts Institute of Technology, Cambridge, Massachusetts. August 1996..

'Investigation of the mechanism and sequence by which chloramphenicol causes sideroblastic anemia.' 1997 Summer Honors Undergraduate Research Program (SHURP) of the Division of Medical Sciences at Harvard Medical School. August 1998. Daniel C. Tosteson Medical Education Center, Harvard Medical School, Boston, Massachusetts.

'Mechanism and sequence by which chloramphenicol causes sideroblastic anemia' presented orally at the 6th Annual National Ronald McNair Student Research Conference at Delevan, Wisconsin. November 1997.

'Cell model to understand sideroblastic anemia' poster presentation at the 4th Annual Conference on Undergraduate Research, Scholarly, Creative, and Public Service Activities at Boston, Massachusetts. April 1998.

'Cell model to understand sideroblastic anemia' poster presentation at the 1998 Leadership Alliance Symposium. July 25, 1998, Washington Court Hotel, Washington, DC.

INVITED LECTURES and PRESENTATIONS Cont'd:

Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia' poster presentation at the 1998 National Institutes of Health research poster day, Bethesda, Maryland (August 1998).

'Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia' poster and oral presentation at the 1998 Minority Trainee National Conference, San Diego, California.

'Construction of novel erythroid-specific transcription factors: Application to gene therapy of sickle cell anemia' presented orally at the 7th Annual National Ronald McNair Student Research conference, Delevan, Wisconsin (1998).

Abstract accepted for an oral presentation at the National Conference on Undergraduate Research at the University of Rochester, Rochester, New York. April 7-10, 1999 (Presented).

Abstract accepted for a poster presentation at the 5th Annual Conference on Undergraduate Research, Scholarly, Creative, and Public Service Activities at Boston, Massachusetts. April 30, 1999 (Presented).

'Functional Analysis of an Engineered Erythroid-Specific Transcription Factor in the Induction of Delta Globin Gene: Application to Gene Therapy of Sickle Cell Disease.' Presented at the 1999 National Institutes of Health, Bethesda, MD (August 4, 1999).

OTHER INVITED SPEECHES

Valedictory speech, College graduation, June 5 1999, on behalf of the entire graduating class, and an audience of over 20,000.

Keynote speaker at the 1999 Annual Nigerian Ibo Day (Ibo = one of the 3 main tribes of Nigeria), August 28, 1999. Delivered a motivational speech to encourage the younger ones towards success. Organized by the Massachusetts Ibo Association.

Lead the discussion panel '*why do undergraduate research*' at the University of Massachusetts-Boston 1st Annual Conference on Undergraduate Research (May 19, 1999).

"Reflection on the positive Impact of the Biomedical Career Project," at the Evening of Hope Fundraiser, -- speech delivered in front of hundreds of physicians, Nobel laureates, biotech CEOs, and other entrepreneurs. Westin Hotel, Boston MA. April 26, 2000.

Speaker at the "Milestones, Memories and Mirth" – a Gala event to commemorate the conclusion of a highly successful University of Massachusetts-Boston \$50 million campaign, and the 12½ years of leadership provided by UMass-Boston's departing Chancellor Sherry H. Penny. (Represented the entire student body of the University of Massachusetts-Boston in expressing accolades and appreciation to the Chancellor.) John F. Kennedy Library, Boston MA. *November 30, 2000*. Other speaker included Boston Mayor Menino, Massachusetts Senate President, and President William Bulger.

WORK EXPERIENCES

Kogod School of Business

01 / 2003 - 05 / 2003

MBA Admission Committee Member

Served on the Masters of Business Administration (MBA) Admission Committee for the Kogod School of Business. and Reviewed applications of applicants, interviewed applicants for the MBA program, and sent my recommendations to the Director of Admissions, and discussed applicants with Admission Committee.

Veteran Administration Hospital Geriatric Clinic

Washington, DC Summer 2002

Patient Consult and Referral System Consultant

Served as a Consultant for the VA hospital geriatric clinic. Lead a 4-member MBA team in developing and implementing a new Patient Consult processing system, decreasing average wait time for new patients.

The American Business Awards Judge

Preliminary-Round Award Judge 2003

The American Business AwardsSM - "The SteviesTM" (equivalent to the Entertainment Industry's Emmy Awards), are presented to the companies and individuals who best exemplify all that's right about business in the U.S.A. The American Business Awards is their way to becoming the standard by which all other business awards are judged.

The competition is structured so that each firm competes only against other firms in the same industry of similar size. The mission of the American Business Awards is to focus a national spotlight on the efforts and outstanding accomplishments of companies and individuals across the country. At the same time, the Award program looks to provide companies of every size, in every industry, with a cost-effective way to motivate, thank, and recognize their valued employees. The program will culminate with a star-studded, *nationally broadcast* awards show in New York City in April 2003, where the first Stevies will be presented to the companies and individuals who best exemplify all that's right about business in the U.S.A.

American Medical Students Association

National Liaison to the National Institutes of Health (NIH) April 2001 - Present

Acquire information on opportunities available at the NIH and relaying it to the medical student members of AMSA. Also responsible for providing answers to questions about the NIH, its programs, etc. when posed by AMSA members.

WORK EXPERIENCES Cont'd

Student National Medical Association (SNMA)

Member, SNMA Board of Directors
National Coordinator, Corporate Affairs.

April 2001 – April 2002

Developing a Corporate Package, with the goal of raising \$100,000 during this school year. Reviewing, editing, and updating SNMA's Fundraising package. Duties also includes development of policies, procedures and regulation for the operation of SNMA to monitor finances of the organization, its programs and performances. Some adequate funds, and maintain and update long-range plans aimed at the continued success of the organization. (Attend 4 National Board Meetings per year.)

Member, SNMA Board of Directors

National Co-Chair, Community Service Committee.

May 2000 – June 2001

Serve on the SNMA Board of Directors (BOD), and oversee all community service activities carried out by all 142 United States Medical School SNMA chapters through Regional Community Service Liaisons. Oversee the protocol chairs of the 9 SNMA Community Service National Protocols (Health Professions Recruitment & Exposure Program, NWATAOMA Health Team Program, Youth Science Enrichment Program, Violence Prevention, Minority Association of Pre-Health Students, Smoking Prevention and Cessation, Tissue and Organ Donation Education Recruitment Program, Healthy People 2010 Health Fairs, and Sexual Health Awareness.) Put together quarterly reports on events and activities of the National Community Service Committee for SNMA Board of Directors Meetings. Attended the 4 quarterly BOD meetings: June 23-25, 2000: Baltimore, MD; September 8-10, 2000: St. Louis, MO; January 5-7, 2001: Atlanta, GA; April 11-15, 2001: Atlanta, GA (2001 National Convention).

Congressional Black Caucus

Hart Senate Building, Capitol Hill
Washington, DC

April 5, 2001

SNMA delegate to the Congressional Black Caucus Spring 2001 Health Braintrust. Participated in working Group 7 -- "Strengthening the Health Care Enterprise." Issues: training of health care providers, increasing the number of health care providers of color, and improving the health care infrastructure within disadvantaged communities. I was one of 2 medical school participants of this working group. Our task was to make recommendations and policy statements that will be used in developing the Congressional Black Caucus health agenda for the 107th Congress.

Blessed Pharmacy

Enugu State, Nigeria

January 1991-November 1994

Pharmacy Technician

Assisted pharmacists, medical doctors, and patients. Filled prescribed drugs for customers and patients. Provided customer service, labeled drugs containers, and performed clerical work as needed.

WORK EXPERIENCES Cont'd

University of Massachusetts Boston

Boston, MA Fall 1998, and Spring 1999 Semesters
Middle School Science/Mathematics Teacher

Urban Scholars Program at UMass-Boston. Taught urban middle school students (class size of 17) both science and mathematics, providing them with the academic skills and motivation necessary for scientific achievement. Developed the curriculum, and designed experiments that were both fun and educative.

University of Massachusetts Boston

Boston, MA February 17, 1999
Biochemistry Guest Lecturer

Delivered a lecture on reactive oxygen species, with highlights on some disorders that implicate these species to a Biochemistry 384 class of 25 students.

University of Massachusetts, Boston

Boston, MA Spring 1997-Spring 1998
Tutor

Tutored general chemistry, general biology, organic chemistry, and cell biology.

STOP & SHOP Supermarket, Hyde Park, MA

Custodian/Janitor February 1995 – February 1996

Responsibilities included cleaning management offices, bathrooms, rest areas, stock rooms, and loading docks. Also assisted at times in loading goods on trucks for delivery to various stores.

VOLUNTEER EXPERIENCES

Mentor and Panelist, Biomedical Science Career Program (BSCP) Student Conference, Boston, MA. March 7, 2006.

Panelist, Getting into Medical School and Succeeding. A session comprising of 265 college students interested in getting into medical school -- occurring at the *Biomedical Science Career Program (BSCP) Conference*. March 2, 2002, Boston Park Plaza Hotel, Boston, Massachusetts.

Served as a mentor and laboratory teaching assistant to high school students during the science career week at the University of MA - Boston, and gave talks to encourage inner city kids to seek higher education (January 1998 and January 1999).

Judged the 39th Annual Stoughton High School Science fair, March 5, 1997, Stoughton, Massachusetts.

Judged the Urban Scholars Middle School Science Fair held at the University of Massachusetts, Boston (February 1999).

VOLUNTEER EXPERIENCES Cont'd

Served as a mentor to high school students in the 1998 National Hispanic Youth Initiative in Health, Biomedical Research, and Policy Development (NHYI) in Washington DC. Also on a panel that advised the 50 student participants on how to be successful and how to get into college. (Summer 1998).

Solely completed and submitted a \$20,000 proposal for a Science Club in an inner city high school (Dorchester High School, Massachusetts) – the club was founded and directed by me during its first year. (1999).

Panelist and Co-advisor/Mentor, Getting into Graduate and Medical School, New England Board of Higher Education Conference, Massachusetts Institute of Technology, Oct. 23, 1999.

Panelist, Getting into Medical School, at the Student National Medical Association Region VII Regional Research Forum Conference, University of Connecticut School of Medicine, November 13, 1999.

Panelist, Graduate School Fair, organized by the AHANA society at Boston College, MA. November, 1999.

A Few of the CONFERENCES ATTENDED

American Academy of *Orthopaedic* Surgeons Annual Meeting – February 2010. Las Vegas Nevada.

Biomedical Science Career Program (BSCP) Conference. February 3, 1996, Boston Park Plaza Hotel, Boston, Massachusetts.

Environmental and Public Health Conference sponsored by the *Biomedical Science Career Program*. October 26, 1996, Blue Cross Blue Shield of Massachusetts, Boston, Massachusetts.

Region VII of the Student National Medical Association (SNMA) 1996 Fall Education Conference, 21st Century Medicine: More than just Healing. November 15-16, 1996, Harvard Medical School, Boston, Massachusetts.

The 1997 Leadership Alliance Symposium. July 1997, New York University School of Medicine, Manhattan, New York.

Biomedical Science Career Program (BSCP) Conference. February 28, 1998, Boston Park Plaza Hotel, Boston, Massachusetts.

Biomedical Science Career Program 1st evening of HOPE (Horizons, Opportunity, Potential, and Excellence.) April 30, 1998, The Westin Copley Place, Boston, Massachusetts.

Bold New Era for Cardiovascular Research, Basic Science to Clinical Applications. May 8-10, 1998. Royal Sonesta Hotel, Cambridge, Massachusetts.

Biomedical Science Career Program 2nd evening of HOPE (Horizons, Opportunity, Potential, and Excellence.) May 5, 1999, The Westin Copley Place, Boston, Massachusetts.

CONFERENCES ATTENDED Cont'd

Biomedical Science Career Program (BSCP) Conference. March 4-5, 2000, Boston Park Plaza Hotel, Boston, Massachusetts.

36th Annual Student National Medical Association Convention, Atlanta, GA. April 12-15, 2001.

Biomedical Science Career Program (BSCP) Conference. March 2, 2002, Boston Park Plaza Hotel, Boston, Massachusetts.

Biomedical Science Career Program 3rd evening of HOPE (Horizons, Opportunity, Potential, and Excellence.) April 24, 2002, The Boston Park Plaza Hotel, Boston, Massachusetts.

Some Select PRESS RELEASES

Selected to be in TV Commercials, including a TV Commercial titled "Something to be Proud of," a Promotional and Awareness Commercial for the University of Massachusetts.

In Touch with Biomedical Science Careers Project (BSCP). Article title, "From the Mailbox: Student Letter." Spring 1997 Volume 3 Number 2, page 2.

The Year in Honors (1996-1997) UMass-Boston.

The University Reporter. News and Information about the University of Massachusetts Boston. Article title, "Student wins 20K scholarship from the National Institutes of Health." Volume 2 Number 1, September 1997, page 2.

The University Reporter. News and Information about the University of Massachusetts Boston. Article title, "Carson Scholar wins annual award for having the highest grade point average". Volume 2 Number 8, April 1998, page 12.

The University Reporter. News and Information about the University of Massachusetts Boston. Article title, "Sickle Cell Anemia Researcher at the NIH". Volume 3 Number 2, October 1998, page 12.

The Pasteur's Pipeline. The Newsletter of the UMass/Boston Pre-Med Society (Volume III, Issue 1, January 1998).

The Boston Globe. Article title, "Biomedical project offers mentors to minorities". Volume 253, Number 160. June 9, 1998, page C6.

21st Annual Edition of THE NATIONAL DEAN'S LIST, 1997-98. Biography published.

Some Select PRESS RELEASES Cont'd

Accomplishments recognized in the 65th Annual Edition of WHO'S WHO AMONG STUDENTS IN AMERICAN UNIVERSITIES AND COLLEGES

The DDIR's (Deputy Director for Intramural Research, National Institutes of Health) Web Board. Odds 'n' Ends section. "College Success Story."

UMass Boston Alumni Magazine, Vol.3, Number 2, Summer 1999 issue. *Page 1(Front page).*

Dorchester Reporter, Volume 17, Issue 26, July 8 1999, page 14.

University of Massachusetts Boston *Connecting Magazine – The Chancellor's Annual Report 1998-1999.* pp 4-5.

In Touch with Biomedical Science Careers Program (BSCP). Article title, "An Evening of Hope 2000." Fall 2000 Volume 5 Number 3, page 1-2.

MedCenter News. *Boston Medical Center, Boston University Schools of Medicine, Public Health and Dental Medicine Magazine.* September 2000 issue. Page 8.

BU Bridge. Boston University Community's Weekly Newspaper. Med Student Wins Minority Medical Scholarship. October 5, 2001.

<http://www.bu.edu/news/releases/2000/7-27-Okafor.htm> (News Release). Boston University School of Medicine Student Receives Prestigious Fellowship. July 27, 2000.

National Institutes of Arthritis and Musculoskeletal and Skin Diseases, NIH Scientific Personnel.

http://www.stevieawards.com/pubs/uploads/ABA03_awards_dinner_program.pdf

<http://www.bscp.org/Upload/Files/September%202000.pdf>

PROFESSIONAL MEMBERSHIPS

Member, American Academy of Orthopaedic Surgeons [AAOS] (Since 2004)

Member, Florida Medical Association – Since 2009

Member, North American Spine Society [NASS] (Since 2008)

Associate Member, Orthopaedic Research Society (2003)

Member, Sigma Xi, The Scientific Research Society (Since 1998)

Member, Massachusetts Medical Society (Since 1999)

PROFESSIONAL MEMBERSHIPS Cont'd

Member, Pennsylvania Medical Society (Since 2004)

Member, Student National Medical Association, Inc. [SNMA] (Since 1996).

Member, American Medical Student Association [AMSA] (Since 1996).

Member, American Medical Association [AMA] Since 2001

ACTIVITIES

Vice-president, Boston University School of Medicine chapter of the Student National Medical Association (September 1999 – June 2000).

Mentor, SquashBusters Youth Program (March 2000 – Present). Desmond Brown and Wendell Sullivan are my assigned Mentees.

Mentor, Ronald E. McNair Fellowship Program at UMass-Boston (January 2000 - Present).

President, Benjamin Carson Pre-medical society (Spring '97 & Fall '97).

Vice-president, Benjamin Carson Pre-medical society (Fall '96).

Vice-president, University of MA Chemistry Society (Fall 1996 & Fall 1997).

Co-founder and Vice-president of the University of Massachusetts-Boston Students National Medical Association - Minority Association for Pre-health Student (SNMA-MAPS) Chapter – in partnership with Harvard Medical School, Fall 1998 and Spring 1999 semesters.

Served as an advisor to younger college students and high school students during the 1998 *Skill Development Workshop* organized by the BSCP. Held at the Daniel C. Tosteson Medical Education Center, Harvard Medical School, Boston, Massachusetts.

Participated in the *2000 Boston Immunization Program* – role included helping in coordination and assisting in influenza and pneumococcal vaccination of Boston citizens.

Invited by the National Institutes of Health Undergraduate Scholarship Program to visit the poster presentations of their 2000 scholars and to share words of encouragement with them – also attended a congressional reception with the scholars (August 2000).

Member of the Planning Committee for the New England Science Symposium, co-sponsored by Harvard Medical School, and the Biomedical Science Careers Program, to be held on March 1-2, 2002, at the Boston Park Plaza Hotel.

ACTIVITIES Cont'd

One of 5 medical students selected from 3rd and 4th year students at the BU School of Medicine, to be on a panel that advised 2nd year BU Medical Students on ways to better deal with stress, study effectively, and prepare for the Step I Board Exam (USMLE I) – November 15, 2001. (*stress reduction strategies during the 2nd year at BUSM and studying tips for USMLE I*).

SKILLS

Computer experience: Very proficient in Macintosh and PC applications. Proficient Microsoft Excel, MacDraw, Adobe PhotoShop, Microsoft PowerPoint, Microsoft FrontPage, Microsoft Access, Database Management, Information Systems Management, etc.

Lab techniques: DNA minipreps, midi- and mega- preps, PCR, automated sequencing, Sanger method gel sequencing, transformation, ligation, enzyme assays, restriction fragment length polymorphism (RFLP) mapping, agarose gel preparation and use, SDS-PAGE, Gel retardation or band shift experiments, DNazol eukaryotic DNA extraction, HPLC, TLC, Reverse phase TLC, Southern blotting, Western blotting, Northern blotting, Immunoprecipitation, Cloning, Advanced Cardiac Life Support (ACLS) Certified, Advanced Trauma Life Support (ATLS) Certified, etc.