

CURRICULUM VITAE

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EDUCATION/TRAINING

B. S.	1991	Ranchi University, Ranchi, India.	Zoology (Honors)
M. S.	1993	Banaras Hindu University, Varanasi, India.	Zoology (Biochemistry)
Ph. D.	1997	Banaras Hindu University, Varanasi, India.	Biotechnology
PDF	2001-05	UT MD Anderson Cancer Center, Houston, TX	Cytokine Research

FIELDS OF INTEREST

- 1) Teaching: Cell Biology, Histology, Biochemistry, Experimental Biology
- 2) Research: Signal Transduction, Cancer Biology, Transcription Factors, Inflammation, Chemoprevention, Natural Products, Microgravity and Radiation Exposure

EMPLOYMENT

Interim Associate Dean for Academic Affairs, College of Science, Engineering and Technology, TSU, Sep 2012-onwards

Interim Chair, Environmental and Interdisciplinary Sciences

College of Science, Engineering and Technology, TSU, Sep 2015-onwards

Associate Professor, Department of Biology, Texas Southern University, Sep 2011-onwards

Asst. Professor (Tenure-Track), Department of Biology, Texas Southern University, Houston, Texas, USA, Sep 2005- Aug 2011

Postdoctoral Fellow, Cytokine Research Section, Dept. of Bio-immunotherapy/ Experimental Therapeutics, The University of Texas MD Anderson Cancer Center, Houston, Texas, USA, Jul 2001 to Aug 2005

Lecturer (Tenured), Department of Zoology, Patna University, Patna, India, Nov 1996 to Jun 2001

Senior Research Fellow (CSIR-NET), School of Biotechnology, Banaras Hindu University, Varanasi, India, Sep 1996 to Nov 1996

Junior Research Fellow (CSIR-NET), School of Biotechnology, Banaras Hindu University, Varanasi, India, Sep 1994 to Aug 1996

ORGANIZATIONS: MEMBERSHIPS AND OFFICES HELD, DATES

American Association of Cancer Research, Associate Member, 2004

Texas Academy of Science, Member, 2009

Texas Association of Advisors of Health Professions, 2011

FELLOWSHIPS AND HONORS: DATES

2007 - Summer Research Fellowship, Texas Southern University and University of Texas Graduate School of Biomedical Sciences Undergraduate Collaborative Training Program in Prostate Cancer Research sponsored by the Department of Defense, USA.

2005 - The University of Texas M.D. Anderson Cancer Center Odyssey Special Fellow Award sponsored by the Theodore N. Law Award for Scientific Achievement.

1996 - Senior Research Fellowship Award, Joint University Grants Commission and the Council of Scientific and Industrial Research, New Delhi, India.

1994 - Junior Research Fellowship Award, Joint University Grants Commission and the Council of Scientific and Industrial Research, New Delhi, India.

AWARDS AND PRIZES: DATES

2014 – Distinguished Advisement Award, College of Science and Technology, Texas Southern University

2014 – Dean’s Leadership Award for Outstanding Contribution to the College of Science and Technology, Texas Southern University

2012 – Distinguished Service Award, College of Science and Technology, Texas Southern University

2011 – Dean’s Leadership Award for Developing the College of Science and Technology Annual Report, Texas Southern University

2010 – Certificate of Exceptional Merit in recognition of being awarded the Scholarly Research/Creative Activities Award, Texas Southern University

2010 – Distinguished Research Award, College of Science and Technology, Texas Southern University

2010 – Dean’s Leadership Award for Developing the College of Science and Technology Newsletter, Texas Southern University

2008 - 1st place in Faculty Oral Presentation, Texas Southern University Research Week.

1993 - BHU Medal for highest grades in M.S. (Zoology) program, Banaras Hindu University, Varanasi, India.

1993 - Ramakrishna Reddy Award for highest grade in Biochemistry special paper in the M. S. (Zoology) program, Banaras Hindu University, Varanasi, India.

1993 - AB Mishra Memorial Endowment Award, first in the order of merit in the M.S. (Zoology) program, Banaras Hindu University, Varanasi, India.

1993 - Book Award from Jawaharlal Nehru Memorial Fund for Academic Distinction in M.S. (Zoology) program at Banaras Hindu University, Varanasi, India.

GRANTS: DATES, AMOUNTS, WHETHER APPROVED AND/OR FUNDED, NOMINEE’S LEVEL OF PARTICIPATION, AND WHETHER OR NOT PRINCIPAL INVESTIGATOR

Active Support:

1. National Science Foundation Research Infrastructure in Science and Engineering (HRD 1345173)

Title: Characterization of Bio-molecular Response to Environmental Stress

Role in project: PI

Dates and costs of entire project: 03/15/14-02/28/17, \$1M (Total)

Major goals: Conduct basic science research that leads to improved understanding of the general biological principles guiding eukaryotic and prokaryotic cellular responses to environmental stress.

2. HCOP Grant (Sub-Award from UTMB, Galveston)(HCOP/MSMP; 1DH18HP23032-01-00)

Title: TSU and UTMB Medical School Matriculation Program

Role in project: TSU Project Director (PI: Dr. Lisa Cain)-since 2011 renewable every year.

Major goals: Provide academic enrichment, motivation, and clinical exposure to rising undergraduate pre-medical students

3. Joint Admissions Medical Program (TMDAS, TX)

Role in project: TSU JAMP Faculty Director (2010-2019)

Major goals: Assist with recruitment and provide mentorship to JAMP students

Completed:

1. NASA Group 4 URC - NNX10AQ16A (Old: NNX08BA47A)

Title: Center for Bio-nanotechnology and Environmental Research

Role in project: Project Principal investigator (PI/PD: Dr. Olufisayo Jejelowo)

Percent Effort: 25%

Dates and costs of entire project: 10/01/08-09/30/14, \$5M (Total)

Major goals: To identify the effect of microgravity and radiation on carcinogenesis and develop countermeasures. Training and development of students in STEM area

2. DOD-CDMRP PCRP – W81XWH-09-1-0271 01 Sub Award 24712/98040255

Title: Texas Southern University (TSU) and the Graduate School of Biomedical Sciences (GSBS) Undergraduate Collaborative Training Program in Prostate Cancer

Role in project: TSU Project Director (PI: Dr. Timothy J McDonnell)

Percent Effort: 25%

Dates and costs of entire project: 2008-2011, \$173,217 (Total)

Major goals: Provide comprehensive training in prostate cancer to aspiring young scientists from Texas Southern University

3. TSU Seed Grant

Title: Role of TNF Signaling in Proliferation, Invasion and Metastasis of Melanoma

Role in project: Principal investigator

Dates and costs of entire project: 01/09-08/31/08, \$15,000 (Total)

Dates and costs of current year: \$15,000 (Total)

Major goals: The major goals of these studies are to identify the role of TNF signaling in melanoma

4. TSU Seed Grant

Title: Targeting FOXO Transcription Factors by Natural Dietary Agents.

Role in project: Principal investigator

Dates and costs of entire project: 01/14/08-08/31/08, \$30,000 (Total)

Dates and costs of current year: \$30,000 (Total)

Major goals: The major goals of these studies are to identify distinct roles for dietary agents on FOXO signaling.

5. TSU Graduate School Supplemental Grant

Title: Curcumin inhibits the proliferation of SPEC-2 cells, a uterine papillary serous carcinoma cell line.

Role in project: Principal Investigator

Dates and costs of entire project: 01/14/08-08/31/08, \$2,000 (Total)

Dates and costs of current year: \$2,000 (Total)

6. TSU Seed Grant

Title: Suppression of Cigarette Smoke-Induced Carcinogenesis by Dietary Phytochemicals

Role in project: Principal Investigator

Dates and costs of entire project: 01/26/06-08/31/06, \$9,000 (Total)

Dates and costs of current year: \$9,000 (Total)

Major goals: The major goals of these studies are to identify distinct and/or synergistic roles for dietary agents on cigarette smoke-induced activation of NF- κ B.

7. The University of Texas M.D. Anderson Cancer Center Odyssey Special Fellow Award.

Title: Mechanism of cigarette smoke-induced carcinogenesis and its suppression by celecoxib and phytochemicals.

Role in project: Odyssey Special Fellow (Mentor: Bharat B. Aggarwal, Ph.D.)

Dates and costs of completed project: 01/01/05-08/31/05, \$20,000

Major goals: The major objective of this project was to investigate the effects of celecoxib in combination with dietary agents on smoking-induced carcinogenesis.

SCHOLARSHIP

1) Publications and Presentations with complete citations (MLA or Chicago Manual of Style, etc.): by category, most recent first.

(a) Books and Monographs

Books

1. Aggarwal BB, Surh Y-J, **Shishodia S (Editors)** The Molecular Targets and Therapeutic Uses of Curcumin in Health and Disease, Springer Science, New York. 2007
2. Aggarwal BB and **Shishodia S (Editors)** Resveratrol in Health and Disease. CRC Press, New York. 2005

Book chapters

1. Aggarwal BB, Bharti AC and **Shishodia S.** (2009) Tumor Necrosis Factor and its Family Members. In Protein Discovery. (Eds. Wadih Arap, Ph.D., Renata Pasqualini, Ph.D., Guy Salvesen, Ph.D and Vishwa Mohan Dixit, Ph. D.) Marcel Dekker. Pp 15-54.
2. **Shishodia S**, Misra K, and Aggarwal BB. (2008) Turmeric as Cure(cumin): Promises, Problems, and Solutions, In Dietary Modulation of Cell Signaling, (Eds. Young-Joon Surh, Ph. D. and Lester Packer Ph. D.) CRC Press, USA.
3. **Shishodia S**, Singh T, Chaturvedi MM. (2007) Modulation of Transcription Factors by Curcumin, In The Molecular Targets and Therapeutic Uses of Curcumin in Health and Disease (Eds. BB Aggarwal, Y-J Surh, S Shishodia (Editors), Springer Publishing Company, New York. (Adv Exp Med Biol. 2007; 595:127-48).
4. **Shishodia S**, Chaturvedi MM, and Aggarwal BB. (2007) Curcumin in Cancer Therapy, In Current Problems in Cancer (Ed. Peter AS Johnstone), Elsevier, USA.
5. Aggarwal BB, Bhatt ID, Ichikawa H, Ahn KS, Sethi G, Sandur SK, Natarajan C, Navindra Seeram N, and **Shishodia S.** (2007) Curcumin: Biological and Medicinal Properties, In Turmeric (Ed. P.N. Ravindran), CRC Press, New York, USA

6. **Shishodia S**, Adams L, Bhatt ID, and Aggarwal BB (2006) Anticancer Potential of the Pomegranate and Its Components. In Pomegranate (Ed: Seeram N, Schulman R), CRC Press, New York, USA
7. **Shishodia S** and Aggarwal BB (2005) Resveratrol: a polyphenol for all seasons. In Resveratrol in Health and Disease. (Ed. Bharat B. Aggarwal and Shishir Shishodia), CRC Press, New York, USA.
8. Aggarwal BB, **Shishodia S**, Takada Y, Jackson-Bernitsas D, Ahn KS, Sethi G, and Ichikawa H (2005) TNF-Blockade: An Inflammatory Issue (Eds. Numerof R., Asadullah K., and Dinorello CA. Proceedings of the “Cytokines as Potential Therapeutic Targets for Inflammatory Skin Diseases”
9. Seeram NP, Ichikawa H, **Shishodia S**, Aggarwal BB. (2005) Preventive and therapeutic effects of plant polyphenols through suppression of Nuclear Factor-Kappa B. In Proceedings of the International Symposium on Free Radicals and Health: Molecular Intervention and Protection of Lifestyle-Related Diseases (ed. By Midori Hiramatsu, Ph.D); Marcel-Dekker Publication
10. Aggarwal BB, Kumar A, Aggarwal MS and **Shishodia S**. (2004) Curcumin Derived From Turmeric (*Curcuma longa*): A Spice for All Seasons. In Phytochemicals in Cancer Chemoprevention.(Eds. Debasis Bagchi, Ph.D., and Harry G. Preuss, M.D.) CRC Press.

(b) Articles (Peer-reviewed full-length research articles)

1. **Shishodia S**. Molecular mechanisms of curcumin action: Gene expression. *Biofactors*. 2013 Jan; 39(1):37-55.
2. Tariq MA, Soedipe A, Ramesh G, Wu H, Zhang Y, **Shishodia S**, Pourmand N, Jejelowo O. (2011) The effect of acute dose charge particle radiation on expression of DNA repair genes in mice. *Mol Cell Biochem*. 349(1-2):213-8.
3. **Shishodia S**, Harikumar KB, Dass S, Ramawat KG, Aggarwal BB (2008). The guggul for chronic diseases: ancient medicine, modern targets. *Anticancer Res*. 28:3647-64.
4. Aggarwal BB, Sethi G, Baladandayuthapani V, Krishnan S, **Shishodia S**. (2007) Targeting cell signaling pathways for drug discovery: An old lock needs a new key. *Journal of Cellular Biochemistry*. 102(3):580-92
5. **Shishodia S**, Chaturvedi MM, Aggarwal BB. (2007) Role of curcumin in cancer therapy. *Current Problems in Cancer*. 31(4):243-305.
6. **Shishodia S**, Singh T, Chaturvedi MM. 2007. Modulation of transcription factors by curcumin. *Adv Exp Med Biol*. 595:127-48.
7. Sandur SK, Ahn KS, Ichikawa H, Sethi G, Shishodia S, Newman RA, Aggarwal BB. (2007) Zylamend, a polyherbal preparation, inhibits invasion, suppresses osteoclastogenesis, and potentiates apoptosis through down-regulation of NF-kappa B activation and NF-kappa B-regulated gene products. *Nutrition and Cancer*. 57(1):78-87.
8. **Shishodia S**, Sethi G, Ahn KS, and Aggarwal BB. (2007) Guggulsterone Inhibits Tumor Cell Proliferation, Induces S-Phase Arrest, and Promotes Apoptosis Through Activation of c-Jun N-Terminal Kinase, Suppression of Akt, and Downregulation of Antiapoptotic Gene Products in Human Leukemia Cells. *Biochemical Pharmacology* 2007 Jun 30;74(1):118-30. Epub 2007 Mar 30.
9. Shirisha K, Patole J, Padhye S, Sinn E, **Shishodia S**, Aggarwal BB. (2007) Copper complexes of Henna-sulforaphane conjugates as potent antiproliferative agents against human myeloma KBM-5 cells through blockade of transcription factor NF-κB. *Letters in Drug Design & Discovery* . 4(4): 257-262.

10. Sawhney M, Rohatgi N, Kaur J, **Shishodia S**, Sethi G, Gupta SD, Deo SV, Shukla, NK, Aggarwal BB, Ralhan R.(2007) Expression of NF-kappaB parallels COX-2 expression in oral precancer and cancer: Association with smokeless tobacco. **International Journal of Cancer**. 120(12):2545-56.
11. Aggarwal BB, Banerjee S, Bharadwaj U, Sung B, **Shishodia S**, Sethi G. (2007) Curcumin induces the degradation of cyclin E expression through ubiquitin-dependent pathway and up-regulates cyclin-dependent kinase inhibitors p21 and p27 in multiple human tumor cell lines. **Biochemical Pharmacology**. 73(7):1024-32.
12. Koul D, Shen R, **Shishodia S**, Takada Y, Bhat KP, Reddy SA, Aggarwal BB, Yung WK. (2007) PTEN down regulates AP-1 and targets c-fos in human glioma cells Via PI3-kinase/Akt pathway. **Molecular Cellular Biochemistry**. 300(1-2):77-87.
13. Bhardwaj A, Sethi G, Vadhan-Raj S, Bueso-Ramos C, Takada Y, Gaur U, Nair AS, **Shishodia S**, Aggarwal BB. (2007) Resveratrol inhibits proliferation, induces apoptosis, and overcomes chemoresistance through down-regulation of STAT3 and nuclear factor-kappaB-regulated antiapoptotic and cell survival gene products in human multiple myeloma cells. **Blood**. 109(6):2293-302.
14. Tang X, Liu D, **Shishodia S**, Ozburn N, Behrens C, Lee JJ, Hong WK, Aggarwal BB, Wistuba II. (2006) Nuclear factor-kappaB (NF-kappaB) is frequently expressed in lung cancer and preneoplastic lesions. **Cancer**. 107(11):2637-46.
15. Nair AS, **Shishodia S**, Ahn KS, Kunnumakkara AB, Sethi G, Aggarwal BB.(2006) Deguelin, an Akt Inhibitor, Suppresses I{kappa}B{alpha} Kinase Activation Leading to Suppression of NF-{kappa}B-Regulated Gene Expression, Potentiation of Apoptosis, and Inhibition of Cellular Invasion. **Journal of Immunology**. 177(8):5612-22.
16. Sharma C, Kaur J, **Shishodia S**, Aggarwal BB, Ralhan R.(2006) Curcumin down regulates smokeless tobacco-induced NF-kappaB activation and COX-2 expression in human oral premalignant and cancer cells. **Toxicology**. 228(1):1-15.
17. Ahn KS, Sethi G, **Shishodia S**, Sung B, Arbiser JL, Aggarwal BB.(2006) Honokiol potentiates apoptosis, suppresses osteoclastogenesis, and inhibits invasion through modulation of nuclear factor-kappaB activation pathway. **Molecular Cancer Research**. 4(9):621-33.
18. Aggarwal BB, **Shishodia S**, Sandur SK, Pandey MK, Sethi G.(2006) Inflammation and cancer: How hot is the link? **Biochemical Pharmacology**. 72(11):1605-21.
19. Ichikawa H, Takada Y, **Shishodia S**, Bolleddula Jayaprakasam B, Nair MG, and Aggarwal BB (2006) Diacetylwitaferin A Potentiates Apoptosis, Inhibits Invasion, and Abolishes Osteoclastogenesis through Suppression of Nuclear Factor NF-κB Activation and NF-κB-Regulated Gene Expression. **Molecular Cancer Therapeutics**. 5(6):1434-45.
20. Manna SK, Rangasamy T, Wise K, Sarkar S, **Shishodia S**, Biswal S, Ramesh GT (2005) Long Term Cigarette Smoke Activates Nuclear Transcription Factor kappa B, Activator Protein-1, and Stress Responsive Kinases in Mouse Brain. **Biochemical Pharmacology**. 71(11):1602-9
21. Aggarwal BB, **Shishodia S**. Molecular targets of dietary agents for prevention and therapy of cancer. **Biochemical Pharmacology**. 71(10):1397-421.
22. Koul D, Shen R, Bergh S, Sheng X, **Shishodia S**, Lafortune TA, Lu Y, de GrootJF, Mills GB, Yung WK. (2006) Inhibition of Akt survival pathway by a small-molecule inhibitor in human glioblastoma. **Molecular Cancer Therapeutics**. 5(3):637-44.
23. **Shishodia S**, Konopleva M, Andreeff M, and Aggarwal BB. (2006)A Synthetic Triterpenoid Methyl-2-cyano-3,12-dioxooleana-1,9-dien-28-oate (CDDO-Me) Inhibits IκBα Kinase And Enhances Apoptosis Induced by TNF and Chemotherapeutic Agents Through Downregulation of Expression of NF-κB-Regulated Gene Products in Human Leukemic Cells. **Clinical Cancer Research**. 12(6):1828-1838.
24. Aggarwal BB, Ichikawa H, Garodia P, Weerasinghe P, Sethi G, Bhatt I, Pandey MK, **Shishodia S**, and Nair MG (2006) From Traditional Ayurvedic Medicine to Modern

- Medicine: Identification of Therapeutic Targets For Suppression of Inflammation and Cancer. *Expert Opinions on Therapeutic Targets*. 10(1):87-118.
25. **Shishodia S** and Aggarwal BB (2006) Diosgenin Inhibits Osteoclastogenesis, Invasion, And Proliferation Through The Downregulation of Akt, I κ B Kinase Activation And NF- κ B-Regulated Gene Expression. *Oncogene*. 25(10):1463-73.
 26. Aggarwal S, Ichikawa H, Takada Y, Sandur SK, **Shishodia S**, and Aggarwal BB (2006) Curcumin (Diferuloylmethane) Downregulates Expression of Cell Proliferation, Antiapoptotic and Metastatic Gene Products Through Suppression of I κ B α Kinase and AKT Activation. *Molecular Pharmacology*. 69(1):195-206.
 27. **Shishodia S**, Sethi G, and Aggarwal BB (2005) Curcumin: getting back to the roots. Proceedings of the "First International Conference on Natural Products and Molecular Targets" to be published in *The Annals of the New York Academy of Sciences* 1056:206-17.
 28. **Shishodia S**, Gutierrez AM, Lotan R, and Aggarwal BB. (2005) Inhibition of I κ B α kinase by N-(4-hydroxyphenyl) retinamide downregulates NF- κ B-regulated angiogenic and antiapoptotic gene products; and enhances apoptosis. *Cancer Research*, 65:9555-65.
 29. Aggarwal BB, **Shishodia S**, Takada Y, Banerjee S, Newman R, Bueso-Ramos CE, and Price JE (2005) Curcumin Suppresses the Paclitaxel-induced NF- κ B Pathway in Breast Cancer Cells and Inhibits Lung Metastasis of Human Breast Cancer in Nude Mice. *Cinical Cancer Research*, 11(20):7490-8.
 30. **Shishodia S**, Amin HM, Lai R, and Aggarwal BB. (2005) Curcumin (Diferuloylmethane) Inhibits Constitutive NF- κ B Activation, Induces G1/S Arrest, Suppresses Proliferation and Induces Apoptosis in Mantle Cell Lymphoma. *Biochemical Pharmacology*. 70:700-713.
 31. Siwak DR, **Shishodia S**, Aggarwal BB, and Kurzrock R (2005) Curcumin-induced antiproliferative and proapoptotic effect in melanoma cells is associated with suppression of IKK and NF- κ B activity, and is independent of the B-Raf/MEK/ERK and Akt pathways. *Cancer*. 104:879-890.
 32. Amit-Vazina M, **Shishodia S**, Harris D, Van Q, Weber D, Alexanian R, Talpaz M, Aggarwal BB and Estrov Z. (2005) Atiprimod blocks STAT3 phosphorylation and induces apoptosis in multiple myeloma cells. *British Journal of Cancer*. 93:70-80.
 33. **Shishodia S**, Takada Y, and Aggarwal BB. (2005) Therapeutic Implications of Gene Deletion of Ligands and Receptors of Members of TNF Superfamily. *Medicinal Chemistry Reviews – Online*. 2(2):163-175.
 34. Aggarwal BB and **Shishodia S**. (2004) Suppression of Nuclear Factor- κ B activation pathway by spice-derived phytochemicals:reasoning for seasoning. *Annals of the New York Academy of Sciences*. 1030: 434-441.
 35. Aggarwal BB, Bhardwaj A, Aggarwal RS, Seeram NP, **Shishodia S**, and Takada Y (2004) Role of Resveratrol in Prevention and Therapy of Cancer: Preclinical and Clinical Studies. *Anticancer Research*. 24(5A):2783-840.
 36. Li L, Aggarwal BB, **Shishodia S**, Abbruzzese J, and Kurzrock R. (2004). Nuclear Factor- κ B and I κ B Kinase are Constitutively Active in Human Pancreatic Cells and their Down-regulation by Curcumin (diferuloyl methane) is Associated with Suppression of Proliferation and Induction of Apoptosis. *Cancer*. 101(10): 2351-62.
 37. **Shishodia S**, and Aggarwal BB. (2004) Guggulsterone Inhibits NF- κ B and I κ B α Kinase Activation, Suppresses Expression of Antiapoptotic Gene Products and Enhances Apoptosis. *Journal of Biological Chemistry*. 279(45): 47148-47158.
 38. **Shishodia S**, and Aggarwal BB. (2004). Cyclooxygenase (COX)-2 Inhibitor Celecoxib Abrogates Cigarette Smoke-Induced NF- κ B Activation Through Inhibition of Activation of I κ B α Kinase Human Non-small Cell Lung Carcinoma: Correlation with Suppression of Cyclin D1, COX-2, and Matrix Metalloproteinase-9. *Cancer Research* 64: 5004-5012.
 39. **Shishodia S**, Koul D and Aggarwal BB. (2004)) Cyclooxygenase (COX)-2 Inhibitor Celecoxib Abrogates Tumor Necrosis Factor-Induced NF- κ B Activation Through

- Inhibition of Activation of I κ B Kinase and Akt in Human Non-small Cell Lung Carcinoma: Correlation with suppression of COX2 synthesis *Journal of Immunology*. 173(3):2011-22.
40. **Shishodia S**, and Aggarwal BB (2004) Nuclear Factor- κ B: A Friend or a Foe in Cancer? *Biochemical Pharmacology*. 68(6), 1071-1080.
 41. **Shishodia S**, and Aggarwal BB. (2004) Nuclear factor-kappaB activation mediates cellular transformation, proliferation, invasion angiogenesis and metastasis of cancer. *Cancer Treat. Res.* 119:139-73.
 42. Bharti AC, **Shishodia S**, Reuben JM, Weber D, Alexanian R, Raj-Vadhan S, Estrov Z, Talpaz M, and Aggarwal BB. (2004) Nuclear Factor- κ B and STAT3 are Constitutively Active in CD138+ Cells Derived from Multiple Myeloma Patients and Their Suppression Leads to Apoptosis. *Blood* 103(8): 3175-3184.
 43. Bueso-Ramos CE, Rocha FC, **Shishodia S**, Kantarjian HM, Medeiros LJ, Vadhan-Raj S, Estrov Z, Smith TL, Nguyen MH, and Aggarwal BB. (2004) High Expression of Constitutively Active Nuclear- κ B relA Transcription Factor is Present in Blasts of Acute Myeloid Leukemia. *Human Pathology*, 35(2): 246-53
 44. Bharti AC, Takada Y, **Shishodia S**, and Aggarwal BB. (2004) Evidence that RANK Ligand can suppress cell proliferation and induce apoptosis through activation of a Nuclear Factor- κ B-independent and TRAF6-dependent mechanism. *Journal of Biological Chemistry*. 279, 6065-6076.
 45. Donato NJ, Wu JY, Stapley J, Lin H, Arlinghaus R, Aggarwal BB, **Shishodia S**, Albitar M, Hayes K, Kantarjian H, and Talpaz M. (2004) Imatinib Mesylate Resistance Through BCR-ABL Independence in Chronic Myelogenous Leukemia. *Cancer Research*, 64(2): 672-7.
 46. Ashikawa K, **Shishodia S**, Fokt I, Priebe W, and Aggarwal BB. (2004) Evidence That Activation of Nuclear Factor- κ B Is Essential for Doxorubicin-Induced Cell Death in Myeloid and Lymphoid Cells. *Biochemical Pharmacology*, 67, 353-364.
 47. Aggarwal BB, Takada Y, **Shishodia S**, Gutierrez AM, Oommen OV, Ichikawa H, Baba Y, and Kumar A. (2004) Nuclear transcription Factor NF- κ B: Role in Biology and Medicine. *Indian Journal of Experimental Biology*. 42, 341-353.
 48. Thompson MP, Aggarwal BB, **Shishodia S**, Estrov Z, and Kurzrock R. (2003) Autocrine lymphotoxin production in Epstein-Barr Virus (EBV)-immortalized B-cells: induction via NF- κ B activation mediated by EBV-derived Latent Membrane Protein 1. *Leukemia*, 17:2196-2201.
 49. **Shishodia S**, Majumdar S and Aggarwal BB. (2003) Ursolic Acid Inhibits Nuclear Factor- κ B Activation Induced by Carcinogenic Agents Through Suppression of I κ B Kinase and p65 Phosphorylation: Correlation with Downregulation of COX2, MMP-9 and CyclinD1. *Cancer Research* 63, 4375-4383.
 50. **Shishodia S**, Potdar P, Gairola GC and Aggarwal BB (2003) Curcumin downregulates cigarette smoke condensate-induced NF-kappa B activation through inhibition of I κ B kinase in human lung cancer cells: correlation with suppression of COX2 and MMP-9. *Carcinogenesis* 24(7), 1269-1279.
 51. Estrov Z, **Shishodia S**, Faderl S, Harris D, Van Q, Kantarjian HM, Talpaz M. and Aggarwal BB (2003) Resveratrol blocks interleukin-1 β -induced activation of the nuclear transcription factor NF- κ B, inhibits proliferation, causes S-phase arrest, and induces apoptosis of acute myeloid leukemia cells. *Blood*, 102(3), 987-995.
 52. Ashikawa K, Majumdar S, Banerjee S, Bharti AC, **Shishodia S** and Aggarwal BB. (2002). Trans-3,4,3',5'-tetrahydroxystilbene (piceatannol) inhibits TNF-induced nuclear Factor- κ B activation through suppression of I κ B kinase and p65 phosphorylation. *Journal of Immunology*. 169 (11) 6490-6497.
 53. Anto RJ, Mukhopadhyay A, **Shishodia S**, Gairola CG, and Aggarwal BB. (2002) Cigarette smoke condensate activates nuclear transcription factor-kappa B through

- phosphorylation and degradation of I κ B(α): correlation with induction of cyclooxygenase-2. *Carcinogenesis*.23(9):1511-1518.
54. Mukhopadhyay A, **Shishodia S**, Suttles J, Brittingham K, Lamothe B, Nimmanapalli R, Bhalla KN, Aggarwal BB. (2002) Ectopic expression of protein-tyrosine kinase Bcr-Abl suppresses tumor necrosis factor (TNF)-induced NF- κ B activation and I κ B α phosphorylation. Relationship with down-regulation of TNF receptors. *Journal of Biological Chemistry*. 277(34):30622-30628.
 55. Mukhopadhyay A, **Shishodia S**, Fu XY, Aggarwal BB. (2002) Lack of requirement of STAT1 for activation of nuclear factor- κ B, c-Jun NH₂-terminal protein kinase, and apoptosis by tumor necrosis factor- α . *Journal of Cellular Biochemistry*. 84(4): 803-815.
 56. Aggarwal BB, **Shishodia S**, Ashikawa K, and Bharti AC. (2002). The Role of TNF and its family members in inflammation and cancer: lessons from gene deletion. *Current Drug Targets: Inflammation and Allergy*, 1:327-341.
 57. **Shishodia S**, and Aggarwal BB. (2002) Nuclear factor- κ B activation: A question of life and death. *Journal of Biochemistry Molecular Biology*. 35: 28-40.
 58. Shrivastava A, **Shishodia S**, and Sodhi A. (1998) Expression of LFA-1 adhesion molecules on cisplatin treated macrophages. *Biochimica et Biophysica Acta*. 1402(3): 269-276.
 59. **Shishodia S**, Shrivastava A, and Sodhi A. (1998) Involvement of Ras and MAP kinase (ERK-1) in cisplatin-induced activation of bone marrow derived macrophages. *Biochemistry and Molecular Biology International*. 45(3): 527-534.
 60. **Shishodia S**, Shrivastava A, and Sodhi A. (1998) Protein Kinase C: a potential pathway of macrophage activation with cisplatin. *Immunology Letters*. 61:179-186.
 61. **Shishodia S**, Sodhi A, and Shrivastava A. (1998) Cisplatin stimulated murine bone marrow derived macrophages require Ca ions. *Journal of Clinical Biochemistry and Nutrition*. 24:1-12.
 62. **Shishodia S**, Shrivastava A, and Sodhi A. (1997) Cisplatin stimulated murine bone marrow-derived macrophages require protein tyrosine phosphorylation. *International Journal of Immunopharmacology*. 19: 683-690
 63. Sodhi A, **Shishodia S**, and Shrivastava A. (1997) Cisplatin - stimulated murine bone marrow-derived macrophages secrete oncostatin M. *Immunology and Cell Biology*. 75: 492-496.
 64. Shrivastava A, **Shishodia S**, and Sodhi A. (1997) Activation of murine peritoneal macrophages and macrophage cell lines P388D-1 and IC-21 with cisplatin. *International Journal of Immunopathology and Immunopharmacology*. 10: 13-21.

(c) Reviews of nominee's scholarly/creative works

1. Science & the City | Webzine of the New York Academy of Sciences (Signal Transduction Pathways, Chromatin Structure, and Gene Expression Mechanisms as Therapeutic Targets Annals Vol 1030 edited by M. Diederich published Jan 2005. 674 pages.)

The spice route:

Not all studies in Volume 1030 point towards developing new pharmaceuticals. In fact, the **most downloaded paper** of the volume—Bharat Aggarwal and Shishir Shishodia's paper, Suppression of the Nuclear Factor- κ B Activation Pathway by Spice-Derived Phytochemicals: Reasoning for Seasoning explores the signal inhibitory potential of several already-familiar substances: spices. In this paper the authors summarize research showing that phytochemicals from common spices such as ginger, fennel, anise, red chili, turmeric, clove, basil, garlic, and pomegranate can interrupt the pathway of nuclear transcription factor κ B (NF- κ B).

These findings are interesting because NF- κ B is associated with a host of inflammatory diseases: Aggarwala and Shishodia cite cancer, atherosclerosis, myocardial infarction, diabetes, allergy, asthma, arthritis, Crohn's disease, MS, Alzheimer's disease, osteoporosis, psoriasis, septic shock, and AIDS. Saying that "most diseases are caused by dysregulated inflammation," the authors go on to describe how activated NF- κ B triggers expression of more than 200 genes that inhibit cell death (not good in the case of tumors) or promote invasion, metastasis, further inflammation, and other negative effects. Aggarwala and Shishodia conclude that these spices, which "suppress NF- κ B activation, in principle, have the potential to prevent or delay the onset of or treat NF- κ B-linked diseases."

(d) Abstracts In Conference Proceedings

1. **Nkem Azu**, Selina Hernandez, Amrutha Immadi, Sachindra Sanamvenkata, **Shishir Shishodia**, Road Dust Containing Platinum Group Elements Activated, MAPK-JNK Pathway in Lung Epithelial Cells *in vitro*, 2015 AAAS Emerging Researchers Network Conference, Washington, DC, February 19-21, 2015. **(Nkem was place second for graduate students oral presentation)**
2. Toluwani Adebayo and **Shishir Shishodia**, Effect of Platinum Group Elements from Road Dust on P38 Protein Expression, 2014 Texas Southern University Summer Research Program Closing Ceremonies, Texas Southern University, Houston, Texas, August 1st, 2014.
3. Anita Ofori, Jelili Adebisi, and **Shishir Shishodia**, Platinum Group Metals found in Road Dust activate p42/44 MAP Kinase Pathway, 2014 Texas Southern University Summer Research Program Closing Ceremonies, Texas Southern University, Houston, Texas, August 1st, 2014.
4. Selina Hernandez and **Shishir Shishodia**, Road dust activated Nuclear Factor kappa B in Lung Epithelial Cells, 2014 Texas Southern University Summer Research Program Closing Ceremonies, Texas Southern University, Houston, Texas, August 1st, 2014.
5. Amrutha Immadi and **Shishir Shishodia**, JNK Expression in Lung Epithelial Cells after Exposure to Platinum Group Elements found in Road Dust, 2014 Texas Southern University Summer Research Program Closing Ceremonies, Texas Southern University, Houston, Texas, August 1st, 2014.
6. Nkem Azu, Noella Ibekwe, **Shishir Shishodia**, Simulated Microgravity Induces Epigenetic Changes by Depleting DNMT1 in Murine Monocytes, 65th International Astronautical Congress, Toronto, Canada, September 29-October 3, 2014.
7. Nkem Azu, Noella Ibekwe, **Shishir Shishodia**. Simulated Microgravity Induces Epigenetic Changes by Depleting DNMT1 in Mouse Monocytes. TSU Research Week, Texas Southern University, Houston, TX, March 31-April 4, 2014.
8. Nkem Azu, Noella Ibekwe, **Shishir Shishodia**. Simulated Microgravity Induces Epigenetic Changes. 117th Annual Meeting of the Texas Academy of Science, Galveston, Texas, March 7, 2014.
9. Noella Ibekwe, Melissa Greene, Nkem Azu, **Shishir Shishodia**. Simulated Microgravity Induces Epigenetic Changes, UNT Research Symposium, University of North Texas Health Science Center, Fort Worth, TX, November 2, 2013.
10. Linda Noukeu, Noella Ibekwe, **Shishir Shishodia**. Simulated Microgravity Induced Apoptosis In Human T- Lymphocytes. TSU Research Week, Texas Southern University, Houston, TX, April, 2013.
4. Linda Noukeu, Noella Ibekwe, **Shishir Shishodia**. Simulated Microgravity Induced Apoptosis In Human T- Lymphocytes. North Texas Research Symposium, University of North Texas Health Science Center, Fort Worth, TX, November 3, 2012.

5. Anita Lewis, Sarah Munyu, Olufisayo A. Jejelowo, Ayodotun Sodipe, and **Shishir Shishodia**. Activation of Pro-inflammatory Transcription Factor by Modeled Microgravity and High-Energy Particle Radiation, 114th Annual Meeting of the Texas Academy of Science, St. Edwards University, Austin, Texas, March 3-5, 2011.
6. Sarah Munyu, Anita Lewis, Emmanuel Obi, Tuan Phan, Olufisayo A. Jejelowo, and **Shishir Shishodia**. Structure, mechanism, and anticancer potential of the isothiocyanate diruthenium complex (3,1) Ru₂(F₃ap)₄(NCS) 1, 114th Annual Meeting of the Texas Academy of Science, St. Edwards University, Austin, Texas, March 3-5, 2011.
7. Jejelowo AO, Sodipe AO, Wu H, Zhang Y, Jejelowo OA, **Shishodia S**. High Energy Particle Radiation Activates Inflammatory Pathways, 18th IAA Humans in Space Symposium, Houston, TX, April 11-15, 2011.
8. Anita Lewis, Philys Johnson, Olufisayo A Jejelowo, Ayodotun Sodipe, and **Shishir Shishodia** “The Prospective Function of Curcumin Against the Negative Effects of Microgravity” Astrobiology Science Conference, Houston, Texas, April 26, 2010.
9. Georgette Rolle, Sarah Munyu, Olufisayo A Jejelowo, Ayodotun Sodipe, and **Shishir Shishodia** High Energy Radiation Induced Activation of COX-2 and MMP-9 is Mediated by NF-kappaB” Astrobiology Science Conference, Houston, Texas, April 26, 2010.
10. Muhammad Akram Tariq, **Shishir Shishodia**, Govindarajan Ramesh, Ayodotun Sodipe, Olufisayo Jejelowo, Nader Pourmand (2010). DNA Repair Genes Expression Analysis of Acute Dose charge Particle Radiation, Astrobiology Science Conference, Houston, Texas, April 26, 2010.
11. Anita Lewis, Philys Johnson, Olufisayo A Jejelowo, Ayodotun Sodipe, and **Shishir Shishodia** “Natural Products Against The Negative Effects Of Microgravity” 113th Annual Meeting of the Texas Academy of Science, Tarleton State University, Stephenville, Texas, March 4-6, 2010.
12. Rolle, Georgette, Jejelowo, Olufisayo A, Sodipe, Ayodotun and **Shishodia, Shishir**. “High Energy Radiation and Microgravity- Induced Epigenetic Changes : Reversal and Suppression By Natural Agents”. 112th Annual Meeting of the Texas Academy of Science, Texas Tech University, Junction, Texas, March 5-7, 2009.
13. Johnson, Philys, Jejelowo, Olufisayo A., Sodipe, Ayodotun and **Shishodia, Shishir**. “Potential role of natural products against High Energy Radiation”. 112th Annual Meeting of the Texas Academy of Science, Texas Tech University, Junction, Texas, March 5-7, 2009.
14. Olufisayo Jejelowo, Osiyemi T, **Shishodia S**. Identification Of Novel Phytochemical For Suppression Of Breast Cancer. Association of Minority Health Professions Schools, New Orleans, Louisiana. March 19-22, 2008 (presenter number 42)
15. Tang X, Soch E, **Shishodia S**, Ozburn N, Liu D, Lee JJ, Hong WK, Aggarwal BB, Wistuba II. Immunohistochemical Analysis Indicates that Nuclear Factor-κB (NF-κB) is Frequently Activated in Lung Cancer. American Association of Cancer Research Annual Meeting, Anaheim, California. April 16-20, 2005.
16. Siwak DR, **Shishodia S**, Aggarwal BB, and Kurzrock, R. Curcumin-Induced Antiproliferative and Proapoptotic Effect in Melanoma Cells is Associated with Suppression of IKK and NF-κB Activity, and is Independent of the B-Raf/MEK/ERK and Akt Pathways. American Association of Cancer Research Annual Meeting, Anaheim, California. April 16-20, 2005.
17. **Shishodia S**, Ichikawa H, Takada Y, Ahn KS, Wu TT, Izzo JJ, Ajani JA, and Aggarwal BB. Targeting Transcription Factor NF-κB for Treatment of Esophageal Cancer. American Association of Cancer Research Annual Meeting, Anaheim, California. April 16-20, 2005.

18. **Shishodia S**, Potdar PD, and Aggarwal BB. Curcumin (diferuloylmethane) downregulates cigarette smoke condensate-induced NF- κ B activation through inhibition of I κ B α kinase in human bronchial epithelial cells. Trainee Recognition Day, The University of Texas MD Anderson Cancer Center, Houston, Texas. May 2003.
19. Aggarwal BB, Bharti AC, Banerjee S, Aggarwal S, Ashikawa K, **Shishodia S**. Nuclear Factor- κ B as a therapeutic target for chemoprevention and chemosensitization. 22nd Annual Convention of the IACR and International Symposium on Recent Advances in Cancer Causes and Control, Thiruvananthapuram, Kerala, India. January 10-12th, 2002
20. Shrivastava, A, **Shishodia, S.** and Sodhi, A. Activation of peritoneal macrophages with fMLP: Role of PKC and PTK. XXII Annual conference of Indian Immunology Society. Dec. 15-17, 1995 at JNU, New Delhi, pp113.
21. Singh, RAK., Sodhi, A., **Shishodia, S.** and Shrivastava, A. Tyrosine phosphatase are downstream to Serine/Threonine phosphatases in the signal transduction pathways of murine peritoneal macrophages. Indo-French Symposium on Immunomodulation. Dec. 10-13, 1995 at National Institute of Immunology, New Delhi, pp37.

(e) Artistic Exhibits (group, invited, one-person) and Performances (directed, written, performed)

Invited Lectures

- 06/17/2014:** Critical Issues in STEM Education: A Cache in the Brain or How to Study STEM, TSU Annual Conference on International Trends in Evidence Based Research on Teaching, Learning, and STEM Education, Marriott Westchase Hotel, 2900 Briarpark Drive, Houston, Texas, June 16-19, 2014.
- 04/07/2014:** Therapeutic Plants, TSU Research Week, Awards Function Lecture, Texas Southern University, Houston, Texas.
- 01/22/2014:** Medicinal Plants, Environmental and Interdisciplinary Sciences Seminar Series, Texas Southern University, Houston, Texas.
- 02/27/2012:** Natural Products Against Prevention and Therapy of Cancer, CBER Seminar Series, Texas Southern University, Houston, Texas.
- 04/13/2011:** High Energy Particle Radiation Activates Inflammatory Pathways, 18th IAA Humans in Space Symposium, Houston, Texas.
- 08/17/2010:** Round Table on the Professoriate: Strategies for Success in the Academy, 2010 Fall Opening Faculty Meetings, Texas Southern University, Houston, Texas.
- 03/05/2010:** Mechanism Of High Energy Radiation Induced Inflammation, 113th Annual Meeting of the Texas Academy of Science, Tarleton State University, Stephenville, Texas, March 4-6, 2010.
- 03/06/2009:** Natural products countermeasures against the adverse effects of radiation and microgravity. 112th Annual Meeting of the Texas Academy of Science, Texas Tech University, Junction, Texas, March 5-7, 2009.
- 08/10/2007:** FGF9 in Prostate Cancer Bone Metastases, Texas Southern University and University of Texas Graduate School of Biomedical Sciences Undergraduate Collaborative Training Program in Prostate Cancer Research, UTGSBS, Houston, Texas 77030.
- 11/13/2006:** Curcuminoids, Sabinsa on Wheels Trade Show, Frankfurt, Germany.
- 09/19/2006:** Curcuminoids in Health and Disease, Sabinsa on Wheels Trade Show, Sydney, Australia.
- 11/10/2005:** Curcumin: The Indian Solid Gold, Supply Side West Show, (Sabinsa Corporation), The Venetian, Las Vegas, NV.

- 06/17/2005:** Mechanism of cigarette smoke-induced carcinogenesis and its suppression, Odyssey Mini Symposium, The University of Texas MD Anderson Cancer Center, Houston, Texas 77030.
- 11/14/2004:** Curcumin derived from turmeric (*Curcuma longa*): a spice for all seasons. Third International Conference on Mechanisms of Action of Nutraceuticals, November 12-14, 2004, Haywood County, North Carolina.
- 01/16/2004:** Targeting Transcriptional Factors by Plant Polyphenols: Role in Prevention and Therapy of Cancer, Institutional Grand Rounds, The University of Texas MD Anderson Cancer Center, Houston, Texas 77030.
- 11/25/2003:** Identification of Novel Triterpenoids as Suppressor of Transcription Factor: Potential Role in Chemoprevention. Bioimmunotherapy Lecture Series, Department of Bioimmunotherapy, The University of Texas MD Anderson Cancer Center, Houston, Texas 77030.
- 03/25/2003:** NF- κ B as a Target for Cigarette Smoke-Induced Carcinogenesis of the Lung and Head and Neck Cancers, Bioimmunotherapy Lecture Series, Department of Bioimmunotherapy, The University of Texas MD Anderson Cancer Center, Houston, Texas 77030.

(f) Other – In case of multiple authorship, the nominee's level of participation should be indicated.

Aggarwal BB, **Shishodia S**, Takada Y, Jackson-Bernitsas D, Ahn KS, Sethi G, Ichikawa H. TNF blockade: an inflammatory issue. *Ernst Schering Res Found Workshop*. 2006, (56): 161-86.

2) Other achievements in the area of scholarship

(a) Patents

Guggulsterone: an inhibitor of nuclear factor - κ B and I κ B α kinase activation and uses thereof. (01/26/06; #20060019907)

The present invention provides an inhibitor of NF- κ B, guggulsterone and its analogs. Guggulsterone suppresses NF- κ B activation induced by TNF, phorbol ester, okadaic acid, cigarette smoke, H₂O₂ and IL-1 β , as well as constitutive NF- κ B activation expressed in most tumor cells. One mechanism by which guggulsterone inhibits activation of NF- κ B is through suppression of I κ B α phosphorylation and I κ B α degradation. NF- κ B-dependent gene transcription is modulated by guggulsterone and its analogs. In particular, induction by TNF, TNFR1, TRADD, TRAF2, NIK and IKK, is modulated by guggulsterone and its analogs. In addition, guggulsterone decreased the expression of genes involved in anti-apoptosis (IAP1, XIAP, Bfl-1/A1, bcl-2, cFLIP, survivin), proliferation (cyclin D1, c-myc) and metastasis (MMP-9, COX2 and VEGF).

(b) Reviewing of papers submitted for publication to professional journals

Cancer Gene Therapy, Chemical Biology and Drug Design, Carcinogenesis, Cancer Letters, Arthritis Research and Therapy, FEBS Letters, Cancer, European Journal of Cancer, Acta Biomaterialia, PLoS ONE, Environmental Toxicology and Pharmacology, International Wound Journal, Biochemical Pharmacology

(c) Reviewing of grants proposals

NASA EPSCoR
NASA MUREP
NASA EONS
Israel Science Foundation
National Science Foundation

Fanconi Anemia Foundation
Raine Medical Research Foundation, Australia

TEACHING (CLASSROOM, GRADUATE AND PROFESSIONAL):

1) Load and level by year since coming to Texas Southern University

2005: 12 credits (fall semester only)

Fall 2005: 12 credits, undergraduate

BIOL248: Experiments in Biology I (3 sections)	9 credits
BIO 241: Cell Biology (2 sections)	3 credits

2006: 21.5 credits (spring and fall semester only)

Spring 2006: 11 credits, undergraduate

BIOL348: Experiments in Biology II (3 sections)	6 credits
BIOL441: Histology Lecture and Lab	4 credits
BIOL401: Undergraduate Research	1 credit

Summer 2006: 3 credits, undergraduate

BIO 143: Biology for Non Majors	3 credits
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Fall 2006: 10.5 credits, undergraduate

BIOL248: Experiments in Biology I (3 sections)	9 credits
BIOL401: Undergraduate Research	1.5 credit

2007: 25.5 credits (spring and fall semester only)

Spring 2007: 11 credits, undergraduate

BIOL348: Experiments in Biology II (3 sections)	6 credits
BIOL441: Histology Lecture and Lab	4 credits
BIOL401: Undergraduate Research	1 credit

Fall 2007: 14.5 credits, graduate and undergraduate

BIOL211: Cell Biology Lab (3 sections)	9 credits
BIOL401: Undergraduate Research	1.5 credits
BIOL648: Experimental Biology Lecture and Lab	4 credits
BIOL861: Research Problems	

2008: 27 credits (spring and fall semester only)

Spring 2008: 17.5 credits, graduate and undergraduate

BIOL211: Cell Biology Lab (3 sections)	9 credits
BIOL441: Histology Lecture and Lab	5 credits
BIOL401: Undergraduate Research	1.5 credits
BIOL861: Research Problems	2 credits

Summer I 2008: 3 credits, undergraduate

BIOL131: Biological Science I	3 credits
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Summer II 2008: 3 credits, undergraduate

BIOL131: Biological Science I	3 credits
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Fall 2008: 9.5 credits, graduate and undergraduate

BIOL401: Undergraduate Research	0.5 credits
BIOL648: Experimental Biology Lecture and Lab	4 credits
BIOL725: Biochemical Ecology	3 credits

BIOL861: Research Problems	2 credits
2009: 16.5 credits (spring and fall semester only)	
Spring 2009: 7.5 credits, graduate and undergraduate	
BIOL441: Histology Lecture and Lab (2 sections)	5 credits
BIOL401: Undergraduate Research	0.5 credits
BIOL861: Research Problems	2 credits
Summer I 2009: 4 credits, undergraduate	
BIOL441: Histology Lecture and Lab	4 credits
Summer II 2009: 3 credits, graduate	
BIOL449: General Physiology	3 credits
Fall 2009: 9 credits, graduate	
BIOL648: Experimental Biology Lecture and Lab	4 credits
BIOL725: Biochemical Ecology	3 credits
BIOL861: Research Problems	2 credits
2010: 16 credits (spring and fall semester only)	
Spring 2010: 7 credits, graduate and undergraduate	
BIOL441: Histology Lecture and Lab (2 sections)	5 credits
BIOL861: Research Problems	2 credits
Fall 2010: 9 credits, graduate	
BIOL648: Experimental Biology Lecture and Lab	4 credits
BIOL725: Biochemical Ecology	3 credits
BIOL861: Research Problems	2 credits
2011: 17 credits (spring and fall semester only)	
Spring 2011: 7.5 credits, graduate	
BIO 441: Histology Lecture and Lab	5 credits
BIO 401: Undergraduate Research	1 credit
BIO 862: Research Problems	1.5 credits
Fall 2011: 9.5 credits, graduate and undergraduate	
BIO 401: Undergraduate Research	1 credit
BIO 648: Experimental Biology Lecture and Lab	4 credit
BIO 725: Biochemical Ecology	3 credit
BIO 861: Research Problems	1.5 credit
2012: 17 credits (spring and fall semester only)	
Spring 2012: 7.5 credits, graduate and undergraduate	
BIO 441: Histology Lecture and Lab	5 credits
BIO 401: Undergraduate Research	1 credit
BIO 862: Research Problems	1.5 credits
Fall 2012: 8.0 credits, graduate	
BIO 401: Undergraduate Research	1 credit
BIO 648: Experimental Biology Lecture and Lab	4 credit
BIO 861: Research Problems	3 credit
2013: 15 credits (spring and fall semester only)	

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|--------------|---|--------------|
| Spring 2013: | 8.5 credits, graduate and undergraduate | |
| | BIO 441: Histology Lecture and Lab | 6 credits |
| | BIO 401: Undergraduate Research | 1 credit |
| | BIO 862: Research Problems | 1.5 credits |
| Fall 2013: | 6.5 credits, graduate | |
| | BIO 401: Undergraduate Research | 1 credit |
| | BIO 648: Experimental Biology Lecture and Lab | 4 credit |
| | BIO 861: Research Problems | 1.5 credit |
| 2014: | 13.75 credits | |
| Spring 2014: | 7.5 credits, graduate and undergraduate | |
| | BIO 441: Histology Lecture and Lab | 6 credits |
| | BIO 401: Undergraduate Research | 1 credit |
| | BIO 862: Research Problems | 1.5 credits |
| Fall 2014: | 6.25 credits | |
| | BIO 401: Undergraduate Research | 1 credit |
| | BIO 725: Biochemical Ecology | 3 credits |
| | BIO 861: Research Problems | 1.5 credits |
| | ES 925: Research | 0.75 credits |
| 2015: | 14.5 credits | |
| Spring 2015: | 7.5 credits | |
| | BIO 401: Undergraduate Research | 1 credit |
| | BIO 862: Research Problems | 0.75 credit |
| | ES 925: Research | 1.5 credits |
| Fall 2015: | 7 credits | |
| | BIO 401: Undergraduate Research | 1 credit |
| | BIO 725: Biochemical Ecology | 3 credit |
| | BIO 861: Research Problems | 0.75 credit |
| | ES 925: Research | 2.25 credit |
- 2) Other contributions to the area of teaching
- (a) Revised the syllabus of the following courses
 - Biol441 – Histology
 - Biol648 – Experimental Biology Lecture and Lab
 - Biol725 – Biochemical Ecology
 - (b) **Organized several seminars** by eminent scientists for undergraduate students. Recruited summer students for paid summer internships at M D Anderson Cancer Center.
 - (c) Presenter, **College For A Day Building For The Next Generation Of Scientists And Community Leaders** to inspire Minority Students to Consider Careers in the STEM. Texas Southern University, March 2007, March 2008 and April 2009.
 - (d) **McNair Scholars Program:** hosted three students from Texas College and Wiley College in my lab during summer 2009 and 2011. The students received training in Animal Cell Culture and Cell and Molecular Biology.
 - (e) TSU Faculty Director: **Joint Admissions Medical Program** (Austin, TX) (2011-continuing)
 - (f) TSU Faculty Director: **Early Medical School Acceptance Program** (UTMB, Galveston, TX) (2011-Continuing)

- (g) TSU Faculty Director: HCOP Funded **Medical School Matriculation Program** (UTMB, Galveston, TX) (2011- Continuing)
- (f) TSU Faculty Director: DOD sponsored **TSU-UTGSBS Undergraduate Collaborative on Prostate Cancer Research** (2006-2012).

**GRADUATE CONTRIBUTIONS AS SUPERVISOR/ADVISOR-THESES AND DISSERTATIONS:
NAMES OF STUDENTS, TITLES OF PROJECTS, AND DATES**

1. Shari Galvin (Supervisor: Ayodotun Sodipe) Radiation Tolerance in the Tardigrade *Milnesium tardigradum*, 03/27/2015
2. Sandeel Ahmad (Supervisor: Dr. Jason Rosenzweig) The Role of Ribonucleases in Various *Yersinia* Shear Response, 03/26/2015
3. Mohammed Suraju (Supervisor: Dr. Jason Rosenzweig) Evaluation Of The Impact Of Dust Containing Platinum Group Elements On Bacterial Growth, Oxidative Stress Sensitivity And Biofilm Formation.03/27/2015
4. Kimberly Gilkes (**Supervisor: Dr. Shishir Shishodia**), **Apoptotic Effects Of A Novel Diruthenium Compound** 04/12/2014
5. Nkem Azu (**Supervisor: Dr. Shishir Shishodia**) Simulated Microgravity Induces Epigenetic Changes, 03/03/2014
6. Jing Fang (Supervisor: Dr. Yuanjian Deng) Syntheses And Characterization Of Advanced Nano-Composites And Platinum Complexes, 09/26/2013.
7. Melissa Greene (**Supervisor: Dr. Shishir Shishodia**) Curcumin Suppresses Simulated Microgravity-Induced Epigenetic Changes, 06/25/2013.
8. Amanda Henry (Supervisor: Dr. Jason A. Rosenzweig) Characterization Of *Yersinia Pseudotuberculosis* Abiotic Stress Responses. 05/05/2013
9. Linda Noukeu (**Supervisor: Dr. Shishir Shishodia**) Simulated Microgravity Induces Apoptosis In Human T-Lymphocytes, 04/23/2013.
10. Abidat Lawal (Supervisor: Dr. Jason A. Rosenzweig) The Impact Of Low-Shear Modelled Microgravity On Proliferation And Virulence Potential Of *Yersinia Pestis*, 10/16/2012.
11. Sharika S. Lewis (Supervisor: Dr. Barbara Hayes) The Effects Of PPAR alpha ligands on inflammatory pathways in cellular models of endometrial and prostate cancer, 10/08/2012.
12. Jyothi Mallepally (Supervisor: Dr. Yuanjian Deng) Synthetic and Chemical Studies on Platinum(II) Complexes with 4-Aminomethyl Benzene Sulphonamide, 03/29/2012.
13. Tashaineya Merrell (Supervisor: Dr. Olufisayo Jejelowo) Comparison Of *Aspergillus Nidulans* Following Exposure To Microgravity, 12/06/2011.
14. Nellen Nwaobasi (Supervisor: Dr. Olufisayo Jejelowo) The Effect of Simultaneous Exposure of both Microgravity and Radiation to the *Candida albicans* Fungi: Cytoskeleton and Membrane Proteins,12/03/2011.
15. Anu Mathew (Supervisor: Dr. Olufisayo Jejelowo) Effects of radiation on *Candida albicans*, 12/03/2011.
16. Sharlene Law (Supervisor: Dr. Olufisayo Jejelowo) Comparative Study of *Aspergillus nidulans* Growth Under Normal Gravity and Simulated Gravity Using High Aspect to Ratio Vessel and Slow Turning Lateral Vessel, 12/1/2011
17. Nene Abogunde (Supervisor: Dr. Jason Rosenzweig), Evaluation of *Escherichia coli* and *Bacillus Subtilis* after Space Flight On Board Atlantis STS-129, 11/17/2011.
18. Yasmeen Rizwi (Supervisor: Dr. Adebayo Oyekan) Interaction of PPAR α and adenosine receptors in hypoxia-induced angiogenesis, 10/24/2011.
19. Anita Lewis, (**Supervisor: Shishir Shishodia**) Modulation of Transcription Factors in Space Related Stress. 03/23/2011.
20. Tiarra Spencer (Supervisor: Dr. Hector Miranda) Molecular Phylogeny Of *Aspergillus* Species Based On The Internal Transcribed Spacer Region, 03/25/2011.
21. Ayodeji Jejelowo (**Supervisor: Shishir Shishodia**) The Effects of High Energy Particles on Protein Expression in Mice Intestinal Tissue, 12/17/2010

22. Stephen Hayes (Supervisor: Dr. Hector Miranda), Phylogenetics of Asian Hornbill Based on Mitochondrial Cytochrome b DNA Sequences, 08/01/2010.
23. Philys Johnson (**Supervisor: Dr. Shishir Shishodia**), Countermeasures against the negative effects of microgravity, 04/06/2010.
24. Georgette Rolle (**Supervisor: Dr. Shishir Shishodia**), High Energy Radiation Activates Nuclear Factor-Kappa B In Mice, 11/24/2009.
25. Leighann Pollard (Supervisor: Dr. Hector Miranda), Molecular Phylogeny of Asian Passerine Birds (Order Passeriformes) using Mitochondrial Cytochrome Oxidase (CO1) DNA sequences, 11/13/2009.
26. Lyndon Lyons (Supervisor: Dr. Olufisayo Jejelowo), Molecular Targets of Dietary Agents in Prostate Cancer, 04/30/08.
27. Gloria Wade (Supervisor: Dr. James W DuMond), Increased Mutation Rates As a model For Sporadic Fluxes in Evolution, 02/22/2008.

SERVICE TO THE UNIVERSITY, THE PROFESSION AND THE COMMUNITY: ACTIVITY, DATES

1) Memberships in University and College Committees

University Committees (Active):

- Animal Care and Use Committee (continuing)
- Faculty Workload Committee (continuing)
- Faculty Evaluation Survey Instrument and Faculty Performance Evaluations (till 2012)
- Faculty Manual Revision Committee (till 2012)

College Committees:

2015-2017

- Newsletter and Annual Reports Committee (Chair)
- Grievance Committee (Ex-Officio)
- Research Committee (Ex-Officio)
- Recognition and Scholarship
- Open House and Events

2013-2015

- Newsletter and Annual Reports Committee (Chair)
- Grievance Committee
- Research Committee
- Recognition and Scholarship
- Open House and Events

2011-2013

- Newsletter and Annual Reports Committee (Chair)
- Grievance Committee
- FETPC Committee (Chair)
- Research Committee
- Recognition and Scholarship
- Open House and Events

2009-2011

- Newsletter Committee
- Research Committee
- Grievance Committee (Faculty and Students)

2007-2009

- Research Committee

2005-2007

- Faculty Development
- Facilities Planning and Enhancement

Department Committees:

2014-2016

Pre-Medicine/Pre Health Professions Committee (Chair)
Curriculum Committee
Committee for Research and Graduate Studies
Budget, Facilities, and Planning Committee

2012-2014

Pre-Medicine/Pre Health Professions Committee (Chair)
Curriculum Committee
Committee for Research and Graduate Studies
Budget, Facilities, and Planning Committee

2010-2012

Pre-Medicine/Pre Health Professions Committee (Chair)
Curriculum Committee
Committee for Research and Graduate Studies
Budget, Facilities, and Planning Committee

2009-2010

Executive Advisory Committee
Curriculum Committee
Committee for Research and Graduate Studies
Student Development Committee
Budget, Facilities and Planning Committee
Recruitment Committee (Students and Faculty)
Scholarships and Fellowships Committee
Library/Acquisitions Committee

2007-2009

Research and Graduate Studies
Curriculum Development

2005-2007

Scholarships and Fellowship Committee
Library (acquisitions) Committee
Research and Graduate Studies
Faculty Development Committee

- 2) Editor and Graphic Designer of the Explorer, newsletter of the College of Science and Technology.
- 3) Editor and Graphic Designer, COST Annual Report
- 4) College of Science and Technology Partnership Luncheon and Open house – Spring 2010, member of the organizing committee.
- 5) Coordinator of the Graduate Seminar, Department of Biology, 2009 – 2011.
- 6) Editor of Biology Newsletter, a monthly publication of the Department of Biology, 2008.
- 7) College of Science and Technology Career Planning Day – Fall 2007, Spring 2008, Member of the organizing committee.
- 8) Organizer of Tour for Diversity in Medicine Symposium and Workshop – February 16, 2013.