

Nihal Ahmad

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Education:

Ph.D. (Chemistry) 1989; Lucknow University, Lucknow, India
MS (Chemistry) 1984; Lucknow University, Lucknow, India.
BS (Chemistry, Botany and Zoology) 1982; University of Lucknow, Lucknow, India.
Certificate of Proficiency (French language) 1991; Lucknow University, Lucknow, India.

Appointments/Positions:

July 2011- : **Professor (With Tenure)** in the Department of Dermatology, University of Wisconsin, Madison, Wisconsin.

July 2007-June 2011: **Associate Professor (With Tenure)** in the Department of Dermatology, University of Wisconsin, Madison, Wisconsin.

Jan 2002-Jun 2007: **Assistant Professor** in the Department of Dermatology, University of Wisconsin, Madison, Wisconsin.

Jul 2000-Dec 2001: **Assistant Professor** in the Department of Dermatology, Case Western Reserve University, Cleveland, Ohio.

July 1998-Jun 2000: **Instructor** at the Department in Dermatology, Case Western Reserve University, Cleveland, Ohio.

1997-1998: **Senior Research Associate** in the Department of Dermatology, Case Western Reserve University, Cleveland, Ohio-44106, USA.

1996-1997: **Research Associate** in the Department of Dermatology, Case Western Reserve University, Cleveland, Ohio-44106, USA.

1994-1995: **Research Associate** at the Industrial Toxicology Research Center, Lucknow, India.

1993-1994: **Senior Research Fellow** at the Industrial Toxicology Research Center, Lucknow, India.

1990-1993: **Lecturer** in the Department of Chemistry at Lucknow University, Lucknow, India.

Honors and Awards:

Junior Research Fellowship from the Council of Scientific and Industrial Research, (India) to work at Lucknow University (Lucknow, India), to carry out research for obtaining the degree of Ph.D.

Senior Research Fellowship from Rockefeller Foundation, USA to work at Industrial Toxicology Research Centre/King George's Medical College, Lucknow, India.

Research Associateship from the Indian Council of Medical Research, India, to work at Industrial Toxicology Research Centre, Lucknow, India.

M. Raman Nayar Gold Medal for securing first position in Master of Science in Chemistry, Lucknow University, Lucknow, India.

Research Career Development Award 1998-2000 from Dermatology Foundation USA to carry out research work at Case Western Reserve University, Cleveland, Ohio, USA.

European Society for Dermatological Research Fellowship to present my research work at the 1998 meeting of International Investigative Dermatology held in Cologne, Germany (May 1998).

American Society for Photobiology Grants to present my research work at the 1998 (Snowbird, UT), 1999 (Washington, D.C.) and 2000 (San Francisco, CA) annual meetings of American Society for Photobiology.

Albert M. Kligman Fellowship 1999 from Society for Investigative Dermatology, USA, to present my research work in 1999 annual meeting of Society for Investigative Dermatology held at Sheraton Chicago Hotel, Chicago, Illinois (May 5–9, 1999).

Professional Society Memberships (Current):

The Society for Investigative Dermatology, USA
American Association for Cancer Research, USA
American Society for Photobiology, USA
American Association for the Advancement of Science, USA
Society of Toxicology, USA

Research Activities:

Funding Support

Current Support (as Principal Investigator)

NIH 1R01AR059130-01A1 **Ahmad N, PI** 25% Efforts 07/01/10–06/30/15

Role of Polo-like Kinase-1 in Melanocytic Transformation Annual Direct Cost. \$225,000

The goal of this project is to define the downstream effectors of polo-like kinase during melanocytic transformation. We will determine the downstream targets of Plk1 including the ability of Plk1 to phosphorylate the potential target sites via site directed mutagenesis approaches.

NIH 1R21CA149560-01 **Ahmad N, PI** 15% Efforts 03/01/10–02/28/12
Enhancing Bioavailability of Resveratrol Annual Direct Cost: \$207,500

The goal of this project is to determine if piperine enhances the bioavailability of resveratrol *in vivo* in animal model and human subjects.

NIH 1R01CA114060-01A1 **Ahmad N, PI** 25% Efforts 02/07/06–12/31/11
SELECT Pre-Clinical Trial of Prostate Cancer Annual Direct Cost: \$177,500

The major goal of this project is to define the chemopreventive potential of vitamin E and selenium (alone and in combination) against prostate cancer in TRAMP mice.

Current Support (as Co-Investigator)

DOD W81XWH-10-1-0245 Mukhtar H, PI; **Ahmad N, Co-I** 3% Efforts 04/15/10- 04/14/13
Sustained Release Oral Nanoformulated Green Tea for Prostate Cancer Prevention
Annual Direct Cost: \$125,000

The major goal of this proposal to establish the usefulness of nanoencapsulated green tea polyphenol EGCG for treatment and prevention of cancer

NIH 1T32AR055893-01A1 Mukhtar H, PI; **Ahmad N, Trainer** 05/01/09–04/30/14
Investigative Dermatology Training Program at University of Wisconsin-Madison

The goal of this program is the training/mentoring of young MDs and PhDs towards an independent career in investigative dermatology.

NIH 5T32ES007015 Elfarra A, PI; **Ahmad N, Trainer** 07/01/08–06/30/13
Molecular & Environmental Toxicology Pre- & Postdoctoral Training Program

The goal of this program is the training/mentoring of PhD students and post-doctoral fellows in cellular and molecular mechanisms of toxicity.

Past Support (As Principal Investigator)

NIH R21 CA104495 **Ahmad N, PI** 06/01/05-05/31/07

Melatonin in Prostate Cancer Management Annual Direct Cost: \$100,000

The major goal of this proposal was to study the chemopreventive potential of melatonin against prostate cancer in culture system and animal models.

DOD W81XWH-04-1-0220 **Ahmad N, PI** 01/16/04-01/15/08

Sanguinarine: A Novel Agent against Prostate Cancer Annual Direct Cost: \$125,000

The major goal of this project was to define the chemopreventive potential of sanguinarine against prostate cancer, and its mechanisms, in cell culture and animal models.

NIH/NCI RO3 CA099076-01 **Ahmad N, PI** 07/01/03-06/30/06

Skin Cancer Chemoprevention by Sanguinarine Annual Direct Cost: \$50,000

The major goal of this proposal was to study the chemopreventive potential of sanguinarine against skin cancer in animal model.

Pardee Foundation Grant **Ahmad N, PI** 01/01/03-06/30/04

Chemoprevention of Prostate Cancer Resveratrol Annual Direct Cost: \$50,000

The goal of this project was to define the chemopreventive potential of resveratrol for prostate cancer in cell culture and animal models.

NIH/NCI RO3 CA98368 **Ahmad N, PI** 07/01/02-06/30/05

Chemoprevention of Photocarcinogenesis by Resveratrol Annual Direct Cost: \$50,000

The major goal of this proposal was to define the chemopreventive effects of resveratrol against UV exposure-mediated damages relevant for skin carcinogenesis in a mouse model.

Ohio Cancer Research Associates **Ahmad N, PI** 07/01/01-06/30/03

Role of Ornithine Decarboxylase in Photocarcinogenesis Annual Direct Cost: \$25,000

The goal of this proposal was to investigate the exact mechanism by which UV exposure mediated induction of ODC imparts tumor promontory effects in ODC-transgenic mice.

NIH/NCI RO3 CA89723 **Ahmad N, PI** 02/01/01-01/31/04

Chemoprevention of Prostate Cancer by Sanguinarine Annual Direct Cost: \$50,000

The goal of this project was to investigate the potential and mechanism by which Sanguinarine imparts chemopreventive effects against prostate cancer in in vitro and in vivo situations.

NIH 5P30AR039750-120033 Cooper KD, PI; **Ahmad N, PI Pilot Grant** 04/01/01-12/31/01

ODC/MAPK cell cycle regulation in photocarcinogenesis Annual Direct Cost: \$25,000

The goal of this proposal was to evaluate the effect of UVB exposure on i) MAPK cascade (Erk1/Erk2, SAPK/JNK and p38 MAPK), and ii) cki-cyclin-cdk machinery using ODC-transgenic mice.

Cancer Research Foundation of America Grant **Ahmad N, PI** 01/15/00-1/14/02
Chemoprevention of Prostate Cancer and its Metastasis by Green Tea Polyphenols: How it works? Annual Direct Cost: \$25,000

The goal of this project was to investigate the involvement of matrix metalloproteases, urokinase, and angiogenesis during the inhibition of prostate cancer development and its metastasis by green tea polyphenols in transgenic TRAMP mice.

Ohio Cancer Research Associates Grant **Ahmad N, PI** 07/01/99-12/31/01
Resveratrol in Prevention of Cancer Annual Direct Cost: \$25,000

The goal of this project was to investigate the mechanism by which resveratrol imparts chemopreventive effects against cancer cells.

Research Career Development Award (**Ahmad N, P.I.**) 07/01/98-06/30/01
Dermatology Foundation Annual Direct Cost: \$55,000 (Salary support only)
Mechanisms of Skin Cancer Chemoprevention by Green Tea

The goal of this project was to investigate the molecular mechanisms of green tea polyphenol, epigallocatechin-3-gallate-mediated chemopreventive effects in skin cancer.

Past Support (As Co-Investigator)

NIH 1 F31 AT005393-01 Jung-Hynes B PI; **Ahmad N, Trainer** 07/01/09-06/30/11
Melatonin as a novel Sirt1 inhibitor for the management of prostate cancer Annual Direct Cost: \$35,776.

The goal of this program was to determine if the pineal hormone melatonin imparts anti-proliferative effects against prostate cancer via modulating Sirt1.

NIH R21 CA116163 Nihal M, PI; **Ahmad N, Co-I** 06/01/05-05/31/07
Epigallocatechin-3-gallate in Melanoma Management Total Direct Cost: \$275,000

The major goal of this proposal was to define the chemopreventive effects of green tea polyphenol against melanoma in vitro and in vivo.

NIH P50 DK 65303-01 Bushman W, PI; **Ahmad N, Co-I of Project 5** 07/01/03-06/30/10
Novel Targets for Chemoprevention of Prostate Cancer Annual Direct Cost: \$112,947

The major goal of this project was to establish the relationship of tea consumption by TRAMP model in prostate cancer development and its regulation.

NIH/NCI RO1 CA101039 Mukhtar H, PI; **Ahmad N, Co-I** 04/02/03-04/01/10
Molecular Targets for Prevention of Prostate Cancer by Green Tea Annual Direct Cost: \$220,500

The major goal of this project was to establish molecular targets for chemoprevention of prostate cancer by EGCG, the major polyphenol in green tea.

DOD IIG DAMD 17-00-1-0527 Mukhtar H, PI; **Ahmad N, Co-I** 07/01/00-06/30/02
Green Tea in Prevention and Therapy of Prostate Cancer Annual Direct Cost: \$125,000

The major goal of this project was to define the effectiveness and mechanism of green tea against prostate cancer in transgenic mouse model of prostate cancer.

NIH RO1 CA51802 Mukhtar H, PI; **Ahmad N, Co-I** 07/01/99-04/30/01

Phthalocyanine Photodynamic Therapy of Skin Tumors Annual Direct Cost: \$125,000

The goal of this proposal was to establish the mechanism of photodynamic therapy-mediation ablation of skin tumors.

NIH/NCI RO1 CA78809 Mukhtar H, PI; **Ahmad N, Co-I** 04/01/99-06/30/10

Green Tea in Chemoprevention of Prostate Cancer Annual Direct Cost: \$147,000

The major goal of this project was to define the mechanisms by which green tea polyphenols afford prevention of cancer in cell culture and *in vivo* models of skin cancer.

DF Research Career Development Award **Ahmad N, PI** 07/1/98-06/30/01

Mechanisms of Skin Cancer Chemoprevention by Green Tea Annual Direct Cost: \$55,000

The goal of this project was to investigate the molecular mechanisms of green tea polyphenol, epigallocatechin-3-gallate-mediated chemopreventive effects in skin cancer.

Publications

Refereed Articles

1. Shukla PR, **Ahmad N**, Singh RB and Srivastava S: Copper(II) and nickel(II) complexes with N1, N3 Bis (2, 4-dinitrophenyl) diethylenetriamine; N¹,N⁴-Bis(2,4-dinitrophenyl) triethylenetriamine and the corresponding 2,4-diaminophenyl derivatives. *Journal of the Indian Chemical Society* 64: 722-724, 1987.
2. Shukla PR and **Ahmad N**: Coordination complexes of a tetradentate N4 macrocyclic ligand b, h-bis(dinitrobenzo) 1,4,7,10-cyclotetradecane with Cu(II), Ni(II) and Co(II). *Current Science* 57: 247-248, 1988.
3. Shukla PR, **Ahmad N**, Chandra S, Misra S and Rastogi R: Coordination complexes of Cr(III), Mn(II), Fe(III), Co(II) and Ni(II) with some tri-, tetra- and hexa-dentate schiff bases. *Journal of the Indian Chemical Society* 65: 214- 216, 1988.
4. Shukla PR, Rastogi R, **Ahmad N** and Narain G: Coordination template reactions, part-IV. Synthesis of some transition metal complexes derived from dibenzo(e,l) (2,3,9,10)tetraphenyl-1,4,8,11-tetraazacyclotetradeca 1,3,8,10-tetraene-N₄. *Journal of the Indian Chemical Society* 65: 663-665, 1988.
5. Shukla PR, Rashmi R, Srivastava S, **Ahmad N**, Sharma MC and Narain G: Coordination template reactions, Part III. Complexes of tetradentate 1,3,7,9- and 1,3,8,10-tetraenes with Cu(II) and Ni(II). *Asian Journal of Chemistry* 1: 352-355, 1989.
6. Shukla PR, **Ahmad N**, Awasthi BB and Srivastava S: Synthesis and characterization of some first row transition metal complexes with two new N₄ donor macrocycles. *Ind J Chem Sci* 3: 35-42, 1989.
7. Shukla PR, Bhatt M and **Ahmad N**: Coordination complexes of diorganotin. *Curr Sci* 58: 562-564, 1989.
8. Shukla PR, Srivastava S, **Ahmad N**, and Narain G: Coordination template reactions. Part-V. Complexes of macro cyclic ligand dibenzo(c,j) 1,6,9,14-tetraazacyclohexadeca-1,6,8,13-tetraene with Cu(II) and Ni(II) ions. *Journal of the Indian Chemical Society* 66: 406-408, 1989.
9. **Ahmad N** and Srivastava S: Synthesis, characterization and reactions of some coordination complexes of α , α' -bipyridyl involving organotin derivatives as lewis acids. *Asian Journal of Chemistry* 2: 460-463, 1990.
10. Shukla PR, Sharma MC, Bhatt M, **Ahmad N** and Srivastava SK: Synthesis and structural studies of some organotin(IV) complexes with macrocyclic ligands. *Ind J Chem* 29A: 186-188, 1990.
11. Shukla PR, **Ahmad N** and Awasthi BB: Studies on coordination polymers. Part-II. Polymeric complexes of di (o-aminophenyl) disulphide with Ni(II), Co(II), Mn(II) and Cr(III). *Journal of the Indian Chemical Society* 67: 418-420, 1990.
12. Srivastava S, **Ahmad N** and Shukla PR: Coordination complexes of tetradentate N₂O₂ donor macrocyclic ligand (b,i) dibenzo-*m*-(dinitrobenzo)5,8-diaza 1,12-dioxocyclotetradeca-4, 8-diene with Cu(II), Ni(II) and Co(II). *Asian Journal of Chemistry* 4: 184-187, 1992.
13. Shukla PR, **Ahmad N** and Pathak AK: Perchlorate and tetrafluoroborate complexes of Mn(II), Co(II) and Cu(II) with tetrabenzo(b,e,l,o) 4,14-dithia 1,7,11,17-tetraaza 8,10,18,20-tetramethylcyclododeca 7,10,17,20-tetraene. *Asian Journal of Chemistry* 4: 300-303, 1992.

14. Shukla PR, **Ahmad N**, Sharma MC and Narain G: Coordination polymers involving organotin derivatives as lewis acids. *Asian Journal of Chemistry* 4: 648-651, 1992.
15. Shukla PR, Pathak AK and **Ahmad N**: Synthesis, characterization and reactions of diorganotin(IV) complexes with some N₂S₂ donor ligands derived from 2-aminothiophenol. *Indian Journal of Chemistry* 31A: 205-209, 1992.
16. **Ahmad N**, Misra M and Shukla PR: Studies on Mn(II), Co(II), Ni(II) and Cu(II) complexes of a macrocyclic schiff base ligand viz. tribenzo(b,e,h) 1,4,7,10-tetraaza 11,13-dimethylcyclotrideca 1,10-diene. *Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry* 22: 1455-1470, 1992.
17. Shukla PR, Mittal AK and **Ahmad N**: Synthesis and characterization of some organotin complexes of *p*-nitrobenzoyl chloride. *Asian Journal of Chemistry* 6: 52-55, 1994.
18. Pathak AK, **Ahmad N**, Mittal AK and Shukla PR: Coordination complexes of dibenzyltin(IV) salts with N₂S₂ donor ligands and their reactions. *Journal of the Indian Chemical Society* 71: 239-243, 1994.
19. Mittal AK, Shukla A, Shukla PR, Pathak AK and **Ahmad N**. Some coordination complexes of dichlorobis(cyclopentadienyl)titanium(IV) and dichlorobis (cyclopentadienyl) zirconium(IV) with N₂S₂ and S₂O₂ ligands. *Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry* 25: 739-759, 1995.
20. Husain MM, **Ahmad N**, Gupta S, Behari JR, Hasan SK and Srivastava RC: Exacerbation of nickel induced oxidative stress by Vitamin E. *Industrial Health* 33:143-152, 1995.
21. Srivastava RC, Gupta S, **Ahmad N**, Hasan SK, Farookh A and Husain MM: Comparative evaluation of chelating agents on the mobilization of cadmium from intracellular deposits: A mechanistic approach. *Journal of Toxicology and Environmental Health* 42: 173-182, 1996.
22. Srivastava RC, Farookh A, **Ahmad N**, Misra M, Hasan SK and Husain MM: Reduction of cisplatin induced nephrotoxicity following administration of zinc-histidine complex: The possible implication of nitric oxide. *Biochemistry and Molecular Biology International* 36: 855-862, 1995.
23. Srivastava RC, Farookh A, **Ahmad N**, Misra M, Hasan SK and Husain MM: Evidence for the involvement of nitric oxide in cisplatin-induced toxicity in rats. *Biometals* 9:139-142, 1996.
24. **Ahmad N**, Misra M, Husain MM and Srivastava RC: Metal independent putative superoxide dismutase mimics in chemistry, biology and medicine. *Ecotoxicology and Environmental Safety* 34: 141-144, 1996.
25. **Ahmad N**, Agarwal R and Mukhtar H: Cytochrome P-450 dependent drug metabolism in skin. *Clinics in Dermatology* 14:407-415, 1996.
26. **Ahmad N**, Agarwal R and Mukhtar H: Cytochrome P-450 and drug development for skin diseases. *Skin Pharmacology* 9: 231-241, 1996.
27. Agarwal R, Mohan RR, **Ahmad N** and Mukhtar H: Protection against malignant conversion in sencar mouse skin by all trans retinoic acid: Inhibition of the *ras* p21-processing enzyme farnesyltransferase and Ha-*ras* p21 membrane localization. *Molecular Carcinogenesis* 17: 13-22, 1996.
28. Awasthi S, Glick HA, Fletcher RH and **Ahmad N**: Ambient air pollution and respiratory symptoms complex in preschool children. *Indian Journal of Medical Research* 104: 257-262, 1996.

29. **Ahmad N**, Srivastava RC, Agarwal R, and Mukhtar H: Nitric oxide synthase and skin tumor promotion. *Biochemical and Biophysical Research Communications* 232: 328-331, 1997.
30. **Ahmad N**, Feyes DK, Neiminen A-L, Agarwal R and Mukhtar H: Green tea constituent epigallocatechin-3-gallate and induction of apoptosis and cell cycle arrest in human carcinoma cells. *Journal of the National Cancer Institute* 89: 1881-1886, 1997.
31. Challa A, **Ahmad N** and Mukhtar H: Cancer prevention through sensible nutrition. *International Journal of Oncology* 11: 1387-1392, 1997.
32. Balasubramanian S, **Ahmad N**, Jeedigunta S and Mukhtar H: Alterations in cell cycle regulation in mouse skin tumors. *Biochemical and Biophysical Research Communications* 243: 744-748, 1998.
33. Gupta S, **Ahmad N** and Mukhtar H: Involvement of nitric oxide during phthalocyanine (Pc4)- photodynamic therapy-mediated apoptosis. *Cancer Research* 58: 1785-1788, 1998.
34. **Ahmad N**, Feyes DK, Agarwal R and Mukhtar H: Photodynamic therapy results in induction of WAF1/CIP1/p21 leading to cell cycle arrest and apoptosis. *The Proceedings of the National Academy of Sciences USA* 95: 6977-6982, 1998.
35. **Ahmad N**, Gali H, Javed S and Agarwal R: Skin cancer chemopreventive effects of a flavonoid antioxidant silymarin are mediated via impairment of receptor tyrosine kinase signaling and perturbation in cell cycle progression. *Biochemical and Biophysical Research Communications* 248: 294-301, 1998.
36. Mohan RR, Challa A, Gupta S, Bostwick DG, **Ahmad N**, Agarwal R, Marengo SR, Amini SB, MacLennan GT, Resnick MI and Mukhtar H: Overexpression of ornithine decarboxylase in prostate cancer and prostatic fluid in humans. *Clin Cancer Res* 5: 143-147, 1999.
37. Balasubramanian S, Kim KH, **Ahmad N**, and Mukhtar H: Activation of telomerase and its association with G1-phase of the cell cycle during UVB-induced skin tumorigenesis in SKH-1 hairless mouse. *Oncogene* 18: 1297-1302, 1999.
38. **Ahmad N**, Gupta S and Mukhtar H: Involvement of retinoblastoma (Rb) and E2F transcription factors during photodynamic therapy of human epidermoid carcinoma cells A431. *Oncogene* 18: 1891-1896, 1999.
39. Mukhtar H and **Ahmad N**: Mechanism of cancer chemopreventive activity of green tea. *Proceedings of the Society for Experimental Biology and Medicine* 220: 234-238, 1999.
40. Haqqi TM, Anthony DD, Gupta S, **Ahmad N**, Lee M-S, Kumar GK and Mukhtar H: Prevention of collagen-induced arthritis in mice by polyphenolic antioxidants from green tea. *The Proceedings of the National Academy of Sciences* 96: 4524-4529, 1999.
41. **Ahmad N** and Mukhtar H: Green tea polyphenols and cancer: Biological mechanisms and practical implications. *Nutrition Reviews* 57: 78-83, 1999.
42. Balasubramanian N, **Ahmad N**, and Mukhtar H: Upregulation of E2F transcription factors in chemically induced mouse skin tumors *International Journal of Oncology* 15: 387-390, 1999.
43. Gupta S, **Ahmad N**, Mohan RR, Husain MM and Mukhtar H: Prostate cancer chemoprevention by green tea: *In vitro* and *in vivo* inhibition of testosterone-mediated induction of ornithine decarboxylase. *Cancer Research* 59: 2115-2120, 1999.
44. Gupta S, **Ahmad N** and Mukhtar H: Prostate cancer chemoprevention by green tea. *Seminars in Urologic Oncology* 17: 70-76, 1999.

45. Mukhtar H and **Ahmad N**: Green tea in chemoprevention of cancer. *Toxicological Sciences* 52S: 111-117, 1999.
46. Gupta S, Srivastava M, **Ahmad N**, Bostwick DG and Mukhtar H: Over-expression of cyclooxygenase-2 in human prostate adenocarcinoma. *Prostate* 42: 73-78, 2000.
47. Chiu S-M, Davis TW, Meyers M, **Ahmad N**, Mukhtar H and Separovic D: Phthalocyanine 4- photodynamic therapy induces ceramide generation and apoptosis in acid sphigomyelinase-deficient mouse embryonic fibroblasts. *International Journal of Oncology* 16:423-427, 2000.
48. Gupta S, **Ahmad N**, Nieminen A-L and Mukhtar H: Growth Inhibition, cell cycle dysregulation and induction of apoptosis by green tea constituent (-)-epigallocatechin-3-gallate in androgen-sensitive and androgen-insensitive human prostate carcinoma cells. *Toxicology and Applied Pharmacology* 164: 82-90, 2000.
49. **Ahmad N**, Gupta S, Husain MM, Heiskanen KM and Mukhtar H: Differential anti-proliferative and apoptotic response of sanguinarine for cancer cells versus normal cells. *Clinical Cancer Research* 6: 1524-1528, 2000.
50. **Ahmad N**, Gupta S and Mukhtar H: Green tea polyphenol epigallocatechin-3-gallate (EGCG) differentially modulates nuclear factor kappa B (NF- κ B) in cancer cells vs. normal cells. *Archives of Biochemistry and Biophysics* 376:338-346, 2000.
51. Gupta S, **Ahmad N**, Husain MM and Srivastava RC: Involvement of nitric oxide in nickel-induced hyperglycemia in rats. *Nitric Oxide* 4: 129-138, 2000.
52. Mukhtar H and **Ahmad N**: Tea polyphenols: Prevention of cancer and optimizing health. *American Journal of Clinical Nutrition* 71: 1698S-1702S, 2000.
53. Katiyar SK, **Ahmad N** and Mukhtar H: Green Tea and Skin. *Archives of Dermatology* 136: 989-994, 2000.
54. **Ahmad N**, Cheng P and Mukhtar H: Cell cycle dysregulation by green tea polyphenol epigallocatechin-3-gallate. *Biochemical and Biophysical Research Communications* 275: 328-334, 2000.
55. Gupta S, **Ahmad N**, Marengo SR, MacLennan GT, Greenberg NM and Mukhtar H: Chemoprevention of prostate carcinogenesis by α -difluoromethylornithine in TRAMP mice. *Cancer Research* 60: 5125-5133, 2000.
56. Athar M, Kim AL, **Ahmad N**, Mukhtar H, Gautier J and Bickers DR: Mechanism of ultraviolet B- induced cell cycle arrest in G2/M phase in immortalized skin keratinocytes with defective p53. *Biochemical and Biophysical Research Communications* 277: 107-111, 2000.
57. Kalka K, **Ahmad N**, Criswell T, Boothman D and Mukhtar H: Upregulation of clusterin during Pc 4- photodynamic therapy-mediated apoptosis of tumor cells and ablation of mouse skin tumors. *Cancer Research* 60: 5984-5987, 2000.
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61. Srivastava M, **Ahmad N**, Gupta S, Mukhtar H: Involvement of Bcl-2 and Bax in photodynamic therapy-mediated apoptosis: Antisense Bcl-2 oligonucleotide sensitizes RIF1 cells to PDT-apoptosis. *The Journal of Biological Chemistry* 276: 15481-15488, 2001.
62. **Ahmad N**, Mukhtar H. Cutaneous photochemoprotection by green tea: A brief review. *Skin Pharmacology and Applied Skin Physiology* 14: 69-76, 2001.
63. **Ahmad N**, Adhami VM, Afaq F, Feyes DK, Mukhtar H: Resveratrol causes WAF-1/p21-mediated G1-phase arrest of cell cycle and induction of apoptosis in human epidermoid carcinoma A431 cells. *Clinical Cancer Research* 7: 1466-1473, 2001.
64. **Ahmad N**, Kalka K, Mukhtar H: *In Vitro* and *In Vivo* inhibition of epidermal growth factor receptor tyrosine kinase pathway by photodynamic therapy. *Oncogene* 20: 2314-2317, 2001.
65. Gupta S, Hastak K, **Ahmad N**, Lewin JS, Mukhtar H: Inhibition of prostate carcinogenesis in TRAMP mice by oral infusion of green tea polyphenols. *The Proceedings of the National Academy of Sciences* 98: 10350-10355, 2001.
66. **Ahmad N**, Gilliam AC, Katiyar SK, O'Brien TG and Mukhtar H. A definitive role of ornithine decarboxylase in photocarcinogenesis. *The American Journal of Pathology* 159: 885-892, 2001.
67. Adhami VM, Afaq F and **Ahmad N**: Involvement of retinoblastoma (pRb)-E2F/DP pathway during anti-proliferative effects of resveratrol in human epidermoid carcinoma (A431) cells. *Biochemical and Biophysical Research Communications* 288: 579-585, 2001.
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69. Afaq F, Adhami VM, **Ahmad N** and Mukhtar H: Botanical antioxidants for chemoprevention of photocarcinogenesis. *Frontiers in Biosciences* 7: d784-d792, 2002.
70. Afaq F, Adhami VM, **Ahmad N**: Prevention of short-term ultraviolet B radiation-mediated damages by resveratrol in SKH-1 hairless mice. *Toxicology and Applied Pharmacology* 186: 28-37, 2003.
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111. Schmit TL, Setaluri V, Spiegelman VS and **Ahmad N**: Human Numb regulates spindle pole maturation through localization of Plk1 in melanoma cells. *Journal of Investigative Dermatology* 130 (Suppl 1): S25, 2010.
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113. Schmit TL, Setaluri V, Spiegelman VS and **Ahmad N**: Human Numb is required for proper mitotic entry and progression in melanoma cells. *Journal of Investigative Dermatology* 130 (Suppl 1): S144, 2010.

Invited Research Presentations

Local and Regional

1. **Polyphenols and Cancer: The Example of Green Tea**; Dietary Antioxidants and Human Health: Natural Polyphenols and Carotenoids, organized by The New England Free Radical/Oxygen Society and sponsored by Indena USA Inc. Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, Boston, Massachusetts; May 12, 1998.
2. **Mechanism of Photodynamic Oxidative Stress-Mediated Apoptosis**; Dermatology Grand Rounds & Lecture Series at Skin Disease Research Center, Case Western Reserve University, Cleveland, Ohio; October 22, 1998.
3. **Involvement of Cell Cycle- and Apoptosis- Regulation in Photodynamic Therapy-mediated Elimination of Cancer Cells**; Department of Human Oncology, University of Wisconsin; Madison, Wisconsin; June 08, 2002.
4. **Chemoprevention of Prostate Cancer: Targets and Agents**; Prostate Cancer Research Group, Clinical Science Center, University of Wisconsin, Madison, Wisconsin; September 5, 2003.
5. **Management of Skin Cancer: Novel Targets and Agents**; Department of Dermatology, University of Alabama, Birmingham, AL. This talk was attended by the residents, researchers and students from the Department of Dermatology and Medical School as well as by the scientists from Southern Research Institute. Birmingham, AL; December 28, 2004.
6. **Chemoprevention of Skin Cancer by Grape Antioxidant Resveratrol: Relevance to Human Disease**; Cancer Prevention Retreat sponsored by UW Comprehensive Cancer Center; Fluno Center, Madison, WI; September 30, 2004.
7. **Chemoprevention of Ultraviolet (UV) Radiation-mediated Skin Cancer by Resveratrol**; This talk was given to Residents and Medical Students, Department of Dermatology, University of Wisconsin; Madison, Wisconsin on June 07, 2004.
8. **Cancer Chemoprevention by Dietary Polyphenols**; Nutritional Sciences Department, University of Wisconsin, Madison, Wisconsin, This talk was attended by undergraduate and graduate students, faculty and other researchers from across campus. November 3, 2005.
9. **Tumor Specific Mitosis Catastrophe: A Target for Prevention and Treatment of Cancer**; Department of Human Biological Chemistry & Genetic, University of Texas Medical Branch (UTMB), Galveston, TX. This talk was attended by graduate students, post-doctoral fellows, faculty and other researchers and students from the UTMB, May 19, 2005.
10. **Targets of Cancer Chemoprevention**; Department of Human Biological Chemistry & Genetics, University of Texas Medical Branch, Galveston TX. This talk was attended by graduate students, post-doctoral fellows, faculty and other researchers and students from the UTMB. July 6, 2006
11. **Cancer Chemoprevention by Apple Peel Extract**; invited lecture and discussion Department of Chemistry, Western Illinois University, Macomb, IL. This talk was attended by undergraduate students, faculty and other researchers. December 28, 2006

12. **Chemoprevention of Photodamage and Photocarcinogenesis: Targets and Agents;** Spring Colloquium, Department of Chemistry and Biochemistry at Ohio University, Athens, OH: April 21, 2008.

National/International

13. **Chemoprevention of Multiple Ultraviolet B-Mediated Damages in SKH-1 Hairless Mouse Skin by Grape Polyphenol Resveratrol: The Underlying Mechanism;** Second Annual International Conference on Frontiers in Cancer Prevention Research; Phoenix, AZ October 26-30, 2003. This presentation was chosen for a press release and press conference held on October 30, 2003. This work was also highlighted by several newspapers and magazines and on many web-sites.
14. **Resveratrol Protects Against Multiple Ultraviolet B-Mediated Cutaneous Damages in SKH-1 Hairless Mouse Skin via Modulating Cell Cycle Regulatory Events;** in a special symposium entitled, "Photocarcinogenesis" at the 14th International Congress on Photobiology; Jungmun, Jeju Island, Korea; June 10-15, 2004.
15. **Enhancement of Ultraviolet Radiation-Mediated Apoptosis by Plant-Alkaloid Sanguinarine in Human HaCaT Keratinocytes: Possible Implication for Skin Cancer Chemoprevention;** Third Annual International Conference on Frontiers in Cancer Prevention Research; Seattle, Washington; October 16-20, 2004. This presentation was chosen for a press release and press conference held on October 19, 2004. This work was also highlighted by several newspapers and magazines and on many web-sites.
16. **Tumor Specific Mitosis Catastrophe as a Novel Tool for Cancer Prevention and Treatment;** International Symposium on Diet in Causation and Prevention of Cancer and XXX Annual Conference of Environmental Mutagen Society of India; Industrial Toxicology Research Centre (ITRC); Lucknow, India; March 17-19, 2005.
17. **Cancer Chemoprevention by Grape Antioxidant Resveratrol;** invited lecture; Industrial Toxicology Research Centre (ITRC), Lucknow, India). This talk was attended by the researchers from ITRC and other institutes in Lucknow, India, June 07, 2006.
18. **Human Numb is required for proper mitotic entry and progression in melanoma cells;** 70th Annual Meeting of the Society for Investigative Dermatology (May 5 – 8, 2010) - *Concurrent Minisymposium: Pigmentation and Melanoma*, Atlanta, GA, Thursday, May 6, 2010.
19. **Resveratrol in Cancer Management: *Where are we and where we go from here?*** First International Conference on Resveratrol – Resveratrol 2010, Elsinore, Copenhagen, September 13-16, 2010.
20. **Prostate Cancer Management by Resveratrol: *Experimental Evidence and Rational Arguments*;** 2nd International Conference on "Nutrition and Physical Activity (NAPA) on Aging, Obesity and Cancer", to be held at the Hilton Hotel, Gyeong-ju, South Korea; February 16 - 19, 2011.

****Several of these invited Lectures and Talks were also CME activities***

Educational Activities & Presentations

Classroom Teaching

A summary of my classroom teaching is provided below. This is followed by a brief description of the courses I have taught.

Classroom Teaching: University of Wisconsin

Years	Course Title	Level	Role	Students	Time
2006-2009	Introductory Biology - Bio151/Bio153	Undergraduate	Taught Cell Biology Section	>360	Fall semester - 15 lectures
2006-2009	Introductory Biology Honors	Undergraduate	Discussion Based Teaching	~22	Fall semester - 2 lectures
2006-Present	Toxicology - MET626	Graduate & Professional	Taught Dermal Toxicity Section	>30	Every Spring - 2 or 3 lectures
2010	MET606	Graduate & Professional	Lecture on Prostate Cancer Biology		
2005, Spring	Pharmacy Practice 672	Graduate & Professional	Lecture on Chemoprevention	~ 30	2 lectures
2002	Basic Science Curriculum	Dermatology Residents & Medical Students	Taught Various Topics	5-10	1-2 lectures per year or when required

Classroom Teaching: Case Western Reserve University, Cleveland, Ohio

Years	Course Title	Level	Role	Students	Time
2000-2001	Basic Science Curriculum	Dermatology Residents & Medical Students	Taught Various Topics	5-10	1-2 lectures per year
2000-2001	Non-Melanoma Skin Cancer	Medical Students	Developed & Taught this course; Served as Director	6-20	Fall semester

Classroom Teaching: Lucknow University, Lucknow, India

Years	Course Title	Level	Role	Students	Time
1990-1993	Chemistry	Undergraduate	Taught Inorganic Chemistry	40-100	>3 lectures per week
1990-1993	Chemistry	Post-Graduate	Taught Bio-inorganic Chemistry, Coordination Chemistry	20-25	>2 lectures per week
1990-1993	Chemistry	Undergraduate	Practical (Laboratory)	40-100	6 days per week
1990-1993	Chemistry	Post-Graduate	Practical (Laboratory)	20-25	2 days per week

Classroom Teaching since joining the University of WisconsinIntroductory Biology – Bio151/Bio153

I am involved in teaching Introductory Biology (Bio 151/Bio153) to undergraduate students. Bio 151-153 is a two semester introductory sequence for majors in the biological sciences. Biology 151 addresses concepts in cellular and molecular biology, genetics, evolution and diversity of organisms. In this sequence emphasis is placed on learning, understanding and being able to use key biological concepts and the scientific method. Bio-151 is cross-listed with Botany and is a 5-credit course. I have taught this course in the Fall semesters (2006, 2007, 2008). Typically, the class has more than 350 students and I teach 'Cell Biology' part that is comprised of 15-17 lectures for Bio 151/Bio153 and 2 additional lectures for the honors students. In addition, I am involved in the planning of discussion and laboratory activities, writing and conducting the mid-term examination. Further, I devote considerable time meeting with the students and discussing their problems regarding this course. I skipped the teaching in the Fall of 2009 and 2010 because of a very schedule in research and service.

Toxicology – MET626

I have taught the Dermal Toxicity section of Molecular and Environmental Toxicology, MET-626, continuously since Spring of 2006. The MET-626 is a 3 credit course, cross-listed in Oncology, Pharmacology (Pharmacy), Pharmacology (Medical School), Pathology, Preventive Medicine, Medicine, and Animal Health & Biomedical Sciences. This course typically has approximately 30 students and I give 2-3 lectures each semester. In this course the students formulate and submit two questions and their answers for each lecture. These are then graded by the course director and instructor. I actively participate in this active learning approach and in discussing and solving the problems from individual students. I have also served as the Director/ Coordinator for this course in the Spring of 2008 and 2009.

Basic Science Curriculum - Medical Students and Dermatology Residents:

I have taught topics from the basic science curriculum to medical students and dermatology residents. My recent lectures focused on i) Mechanism of Skin Cancer Development and Strategies for Management, and ii) Statistics – Introduction. These classes are typically attended by 5-10 students and or residents.

Other Courses - Pharmacy Practice - 672/Colloquium in Environmental Toxicology - MET606:

I have given lectures/classes in other UW courses such as '672-Pharmacy Practice' and 'Colloquium in Environmental Toxicology - MET 606'.

672-Pharmacy Practice originates from School of Pharmacy and is cross-listed with Nutritional Sciences. The students (typically 20-30) include professional pharmacy students, graduate nutritional scientists and medical and veterinary students. The lectures are recorded, digitalized and made available by web-streaming to distance learning students. This is a 2-3 credit course that covers regulations and clinical science regarding the use of herbals, homeopathic remedies, and dietary supplements, focusing on peer-reviewed studies and integration with allopathic drugs. It also includes discussion of marketing issues.

MET 606 is 1 credit Colloquium series in Environmental Toxicology. This course originates from the School of Agricultural and Life Sciences and is widely cross-listed across the campus. In this course, lectures are given by faculty and visiting professors on toxicology and problems related to biologically active substances in the environment.

Prior Classroom Teaching

- 1998-2001: Instructor followed by Assistant Professor (Tenure Track), Department of Dermatology, Case Western Reserve University. I was involved in informal and formal teaching; taught basic science curriculum to the medical school students and dermatology residents in formal as well as informal settings. I developed and directed an elective course on Non-Melanoma Skin Cancer for the medical students. I also served as co-mentor and advisor of several undergraduate, summer and graduate students.
- 1996-2000: Research Associate and Instructor in the Department of Dermatology, Case Western Reserve University, Cleveland, Ohio. I taught and trained graduate students and trainees via informal and interactive literature review seminars on various topics. I also served as co-mentor to several undergraduate and graduate students in the department.
- 1993-1995: Research Associate at the Industrial Toxicology Research Centre (ITRC) and King Georges Medical College (KGMC), Lucknow, India. I taught and trained graduate students and trainees via informal and interactive literature review seminars on various topics. These topics included oxidative stress, metal toxicity, environmental toxicity, and other topics.
- 1990-1993: Lecturer in the Department of Chemistry, Lucknow University, Lucknow, India. I gave lectures on biological inorganic chemistry and coordination chemistry to postgraduate students and inorganic chemistry to undergraduate students. Typically, an undergraduate class was comprised of 40-100 students; whereas, a post-graduate class had 20-25 students. I was involved in teaching, preparing examination papers and the evaluation of the students.
- 1990-1993: Lecturer in the Department of Chemistry, Lucknow University, Lucknow, India. I conducted laboratory teaching of undergraduate and postgraduate students of chemistry. Typically, an undergraduate class was comprised of 40-100 students; whereas, a post-graduate class had 20-25 students. I also served as co-advisor/co-mentor to several graduate students and post-doctoral fellows.

Mentored Teaching

I have been involved in training students, post-doctoral fellows, and elective students from medical schools of UW and other universities. A summary of my mentored teaching is provided below. This is followed by a brief description of some students.

Mentor Teaching: Graduate & Undergraduate Programs:

Program	Graduate/ Undergrad	Years	Institution	Students & Role
Molecular and Environmental Toxicology	Graduate	Dec 2005-present	UW Madison	3 Students (Advisor)
Undergraduate Research Scholar (URS)	Undergraduate	2002-present	UW Madison	~7 Students (Advisor)
Independent/Directed Studies	Undergraduate	2002-present	UW Madison	~10 Students
Environmental Toxicology	Graduate	2000-2002	CWRU, Cleveland, OH	2 Students (Co-advisor)
Undergraduate Research Programs	Undergraduate	1998-2001	CWRU, Cleveland, OH	>10 Students (Co-advisor)
Chemistry	Graduate	1990-1993	Lucknow University, India	5 Students (Co-advisor)

Mentor Teaching: Post-Doctoral and Others:

Student Name	Predoc/ Postdoc	Training Period	Institution	Current Position
Vaqar Adhami	Post-doc	2000-2002	CWRU, Cleveland, Ohio	Associate Scientist, UW- Dermatology
Farrukh Afaq	Post-doc	2000-2001	CWRU, Cleveland, Ohio	Assistant Professor, University of Alabama, Birmingham, AL
Moammir Aziz	Post-doc	2002-2004	UW Madison	Instructor, Rush University, Chicago
Seema Javed	Visiting Researcher	2003-2004	UW Madison	Senior Media Officer and Scientific Editor, Greenpeace, India
Yogeshwer Shukla	Visiting Scientist	2004-2004	UW Madison	Scientist E-II, Indian Institute of Toxicology Research, Lucknow, India
Haseeb Ahsan	Post-doc	2003-2006	UW Madison	Associate Professor, Jamia University, India
Thomas Tan	Pre-doc (Medical Student)	2005	UW Madison	Physician
Ruifang Xu	Post-doc	2005	UW Madison	Practicing Physician in Jackson, MS
David Eggert	Pre-doc (Medical Student)	2005-2006	UW Madison	Physician
Veaceslav Boldescu	Pre-doc (CDRF/MRDA Fellowship)	3/2006- 5/2006	UW Madison	Lecturer, State University of Moldova, Republic of Maldova
Sunitha Kakarla	Pre-doc	2006-2008	UW Madison	Graduate Student, Baylor College of Medicine, Houston, TX
Stergios Moschos	Visiting Scientist	October 2009	UW Madison	Assistant Professor, Hillman Cancer Center, Pittsburgh, PA
Mark Ledesma	Pre-doc (Medical Student)	2009-2010	UW Madison	Resident in Psychiatry, University of Vermont College of Medicine.

In addition, as a part of extensive collaboration with other laboratories, Dr. Ahmad served as co-mentor of eight post-doctoral fellows while at Case Western Reserve University and continued the collaboration after moving to the University of Wisconsin. These fellows were:

Anjana Challa
Shanti Jeedigunta
Kedar Hastak
Imtiaz A. Siddiqui

Sivaprakasam Balasubramanian
Katrln Kalka
Mayank Srivastava
Mohammad Saleem Bhat

More specific details of my mentored training activities are provided below.

Undergraduate Research Scholar (URS) Program:

Since 2002, I have been serving as Mentor and Trainer in URS program that has been designed to include partnerships between students and mentors, seminars on research-relevant issues, and practice in artistic presentations of research. I teach students the basics of laboratory culture, concepts and laboratory techniques in molecular and cellular biology. I teach students to plan and conduct research, interpret data, and write research papers and abstracts. I also teach the students about the fundamentals of their research topics in a classroom setting. At the end of the semester students present their research orally or by poster at the campus-wide Undergraduate Symposium. This program allows students to earn academic credit while working on research and is cross-linked with the Interdisciplinary Department in the College of Agricultural and Life Sciences (Inter-LS 250).

Melanie Contrestan
Amaninderpal Ghotra
Stefanie Jones
Joseph Kuo

Jorien G Breur
Iulia Dorneanu
Namita Azad

Independent Studies & Directed Studies:

I serve as mentor of Independent Studies/Directed Studies in the School of Medicine and Public Health (Courses 681-682; 686; 691-692; 699). These courses are designed for students to pursue knowledge beyond the curriculum of the major through a special project. The project is designed in collaboration with a faculty member and can involve library research or a laboratory project under direct supervision of a faculty member. These are 2-4 credit courses and I have been involved with this course since 2004. I teach the students to design experiments to answer a research problem, laboratory techniques, data interpretation, and how to troubleshoot problems. I have been involved in a one-on-one setting in teaching, training and grading the following students:

Jorien G Breur
Julien DeFranko
Carol G Phillippe
Noah Daniel Kraft

Andrea Vlasak
Jason Walker
Alexa N Nippa
Stephanie Lakritz

Nurilign Ahmed
Jolene Paulus
Jeffrey Lurie

Undergraduate Molecular Biology Major:

I have served as an advisor in the Undergraduate Program in Molecular Biology since 2003. The molecular biology major has been designed for three groups of students: those who plan to enter a research career in molecular biology or related areas; pre-professional students who plan to enter either a research or clinical career in medicine or allied health fields; and students who plan to teach secondary-school science. In the last four years, I have served or am continuing to serve as the advisor of the following students.

Daniel Beardmore	Mandy Yadpeth Boontanrarat	Melisa Budde
Chen Li Chew	Stephanie Furrer	Ayesha Hasan
Ka Yi Ling	Jessica Lynn Mayer	Patrick Minges
Grace Mueller	Angela Riccio	Justin Schema
Carrie Schuetz	Christopher Stanke	Andrea Vlasak
Andrea Wahl	Lauren Banaszak	Pinak Sanjay Joshi
Bernadette Allison	Stephanie Fricke	Haijie Xiang
Phin Ying Ooi	Haijie Xiang	Soohyun Jane
Lauren Gabriele Banaszak	Stephanie Leigh Fricke	

The UW Ronald E. McNair Post-Baccalaureate Achievement Program:

The University of Wisconsin-Madison McNair Program is dedicated to preparing low-income, first-generation, and underrepresented undergraduate students for graduate education leading to a Ph.D. I have been associated with this program in the past to train students for a future career in academics. I have been involved in a one-on-one setting in teaching, training and grading one student - Nurilign Ahmed. I plan to continue with my involvement in this outstanding program.

Molecular and Environmental Toxicology (METC) Program:

I serve as a Trainer Faculty in METC program where the students earn their M.S. in two years and their Ph.D. in five to six years. I have been involved in the mentoring and advising of the following METC students:

Brittney Jung	Graduated with PhD May 2010
Travis Schmit	Graduated with PhD May 2010
Brian Cholewa	Graduate Student joined my lab in December 2010

Cellular and Molecular Pathology (CMP) Program:

I am a Trainer Faculty in the CMP program since May 2011. CMP Graduate Program provides graduate training in research areas focusing on the pathogenesis of human diseases. I am involved in the mentoring and advising of the following CMP student:

Melissa Wilking

Cellular and Molecular Biology (CMB) Program:

I have been Trainer Faculty in the Cancer Biology focus group of CMB program since November 2004. I plan to become an integral, continuing part of CMB program by increasing my teaching activities, training graduate students, and participating on program committees.

Comparative Biomedical Sciences (CBMS) Graduate Program:

In summer 2009, I joined the CBMS program as a Trainer Faculty. CBMS program provides exceptional graduate research training in core areas of animal and human health. I have served on the thesis committee of students from this program and plan to accept Ph. D. students from this program into my laboratory.

Visiting Medical Students & Other Research Trainees:

- 2003-2009 **Shannon Reagan-Shaw** joined my laboratory as an Associate Research Specialist in January 2003. She worked on several project in my laboratory. I also taught her details of animal experimentation. Shannon decided to pursue her Ph. D. degree and joined my lab as a graduate student from CMB graduate program in the Fall of 2008. Unfortunately, because of some family-related issues, she had to withdraw from the program in September 2009. She intends to rejoin the laboratory as UW allows to for this (within 5 years).
- Mar 2005-May 2005 **Veaceslav Boldescu** joined my laboratory to conduct studies on the anti-proliferative effects of new synthetic analogues of sanguinarine, a plant-based alkaloid. This work was a part of his Ph. D. thesis in Chemistry (State University of Moldova) and was funded by the Moldovan Research and Development Association (MRDA) and U.S. Civilian Research & Development Foundation (CRDF). He is currently a faculty at the State University of Moldova.
- Jun 2005-Aug 2005 **Stephanie JeSchonek** is a college student at Coe College, Cedar Rapids, IA. She worked as a summer student in my laboratory for three months. This was her first laboratory experience.
- Jun 2005-Sep 2005 **Lydia Tan** is a student at Lawrence University, Appleton, WI. She is working towards her B.A. in Biology. She worked as a summer student in my laboratory for four months. This was her first laboratory experience and she learned the basics and methods of cell biology and molecular biology.
- Oct 2005-Nov 2005 **Thomas Tan**, a 3rd year medical student at Ohio State University, Columbus, Ohio, joined my laboratory to obtain training in investigative dermatology. He was involved in a project studying the UV response in skin.
- Oct 2005-Nov 2005 **Dr Ruifang Xu** is an M.D., Ph. D. currently working at the Mayo Clinic, Rochester, Minnesota. She joined my laboratory for a two-week period on a rotation/observership. In my laboratory, she learned the concepts of chemoprevention research.
- Oct 2005- Oct 2006
& Jan-Jun 2007 **David Eggert** joined my laboratory after completing two years of medical school at Michigan State University College of Human Medicine, East Lansing, MI. He decided to postpone the commencement of clinical rotations to enhance his medical education with relevant research experience. He joined my laboratory in October 2005 for eight months until June 2006, left to complete his boards and came back again in January 2007 for another six months. He was involved in the ongoing projects in chemoprevention.
- 2006-2008 **Sunitha Kakarla** joined my laboratory as a Research Intern in 2006. She worked on a project to assess the role of mitotic regulators in

cancer development and progression. She is currently a graduate student Baylor College of Medicine, Houston, TX.

2009-2010

Mark Ledesma, a medical student at UW, came to my laboratory to learn scientific writing. In my laboratory, he learnt details of scientific writing and in a little more than a year time, he was able to publish two review articles, one as a first authors and other as a co-author. Mark is currently doing his residency in Vermont.

Jun 2010-Aug 2010

Aparajitha Srinivasan, a Master's student from the Cochin University of Science and Technology (India), joined my laboratory as a Khorana Program Scholar. Khorana Program is an exchange program at UW that was founded in 2007 to foster the exchange of students and scholars between India and the UW. The program's objectives are to provide U.S. and Indian students with a transformative international experience, to contribute to Indian rural development, and to increase interaction between scientific communities in academia and the private sector. The program is modeled on the NSF-REU (National Scientific Foundation-Research Experience for Undergraduates) programs. Aparajitha worked in my laboratory on a project to assess the role of Sirt1 in melanoma. She learned cell and molecular biology concepts and techniques during her stay.

Graduate Students:

Only the graduate students from my laboratory are listed below. This does not include the students for whom I served as a co-trainer/co-mentor in other laboratories.

Dec 2005-May 2010

Brittney Jung-Hynes joined my laboratory from the METC graduate program of UW. For her Ph. D., she worked on a project to determine the role of class III histone deacetylase SIRT1 in prostate cancer.

Dec 2005-May 2010

Travis L. Schmit joined my laboratory from the METC graduate program of UW. For his Ph. D. thesis, he worked on a project to define the role and functional significance of polo-like kinase Plk1 in melanoma.

December 2010

Brian Cholewa has joined my lab in the METC program after rotating in September 2010. For his Ph. D. thesis, he will work on defining the role and functional significance of polo-like kinase Plk1 in melanoma.

May 2011

Melissa Wilking has joined my lab in the CMP program after rotating in May 2011. For her Ph. D. thesis, she will work on the role and significance of circadian rhythm in melanoma development and progression.

Postdoctoral Fellows:

Only the postdoctoral fellows from my laboratory are listed below. This does not include the fellows for whom I served as a co-mentor.

- 2000-2001 **Dr. Vaqar Adhami** came to my laboratory at the Department of Dermatology, Case Western Reserve University, Cleveland, Ohio as a post-doctoral fellow after obtaining his PhD from Hamdard University, Delhi, India,. He was involved in studies to define the chemopreventive effects of resveratrol and sanguinarine against cancer. Vaqar is currently employed as an Associate Scientist in the Department of Dermatology at UW.
- 2000-2001 **Dr. Farrukh Afaq** joined the laboratory of Dr. Hasan Mukhtar in the Department of Dermatology, Case Western Reserve University, Cleveland, Ohio as a post-doctoral fellow after obtaining his PhD from India. He also worked in my laboratory for 50% time for a year. In my laboratory, he was involved in studies to define the photochemopreventive effects of resveratrol. He is currently an Assistant Professor in the Department of Dermatology, University of Alabama, Birmingham, AL.
- Nov 2003-Jan 2004 **Dr Seema Javed** joined my laboratory as a visiting scientist for a three month period to attain advance knowledge in chemoprevention research. She is currently a Senior Media Officer and Scientific Editor/Scientific Writer at Greenpeace, India, a non-profit organization involved in various issues related to the environment (climate change, sustainable agriculture, preserving the oceans and preventing another nuclear catastrophe).
- 2002-2004 **Dr Moammir H Aziz** came to my laboratory at UW as a Research Associate after obtaining his PhD from Avadh University, Faizabad, India. He was involved in studies to define the chemopreventive as well as therapeutic effects of resveratrol and sanguinarine against cancer. He was also involved in studies to define the molecular mechanism of ultraviolet (UV) response. Moammir is currently working as a Junior Faculty (Instructor) in the Department of Anatomy and Cell Biology at Rush University, Chicago, IL.
- Jul 2004-Sep 2004 **Dr. Yogeshwer Shukla** came to my laboratory as a visiting scientist for a three month period to learn advanced techniques in molecular biology. His current job position is Scientist E-II and Deputy Director of Indian Institute of Toxicology Research, Lucknow, India.
- 2004-2006 **Dr. Haseeb Ahsan** joined my laboratory in 2004 for post-doctoral training after obtaining his PhD from Aligarh University, Aligarh, India. He worked in my laboratory until the Fall of 2006 and was involved in studies to define the chemopreventive as well as therapeutic effects of resveratrol and sanguinarine against cancer, and to define the molecular mechanism of ultraviolet (UV) response. Haseeb has relocated to India and is currently working as an Associate Professor at Jamia University, Delhi, India.

- October 2009 **Stergios Moschos**, M.D. is an Assistant Professor and Physician Scientist at the Hillman Cancer Center, Pittsburgh. He came to my laboratory in October 2009 for a hands-on training in molecular biology techniques. He learnt lentiviral transfection/transduction technique in my laboratory.
- March 2011- **Dr. Chandra K. Singh** joined my laboratory in March 2011 for a post-doctoral training. He is studying i) the role of SIRT1 histone deacetylase in melanoma, and ii) cancer chemoprevention by grape antioxidant resveratrol.

Service Activities

Departmental

- 2002-present: **Member, Dermatology Resident Application Interview and Selection Committee.** I am involved in the interview and selection of the residents in the department.
- 2002-present: **Member, Department of Dermatology Faculty Committee.** I am involved in various departmental activities and decision making as a part my duties in Faculty Committee.
- 2002-present: **Member, Department of Dermatology Research Faculty Committee.** I am involved in various activities and decision making regarding a proper and effective functioning of the research wing of the Department of Dermatology.
- 2002-2010: **Coordinator, Journal Club/Seminar Series** at Department of Dermatology, University of Wisconsin. I have coordinated Journal Club/Seminar series in the department. I am in-charge of scheduling the journal club, seminars and talks of students, post doctoral fellows, faculty and outside speakers.
- 2009 **Department of Dermatology Comp Plan Work Group**
- 2010-present: **Co-coordinator, Journal Club/Seminar Series** at Department of Dermatology, University of Wisconsin. I am currently serving as the co-coordinator of departmental Journal Club/Seminar series and am responsible for scheduling the journal club, seminars and talks of students, post doctoral fellows, faculty and outside speakers, in absence of the current coordinator Dr. Vijay Setaluri.
- 2010-present **PubMed Central ID (PMCID) Captain** of the Department of Dermatology
- 2007-present: **Member, Department of Dermatology Executive Committee.**
- 2007-present: **Member, Departmental T32 Training Grant Executive Committee**

UWSMPH and University

- 2003-Jan 2007: **Member, Animal Cancer and Use Committee (ACUC) of the School of Medicine and Public Health.** As a part of my duties, I reviewed and recommended the animal protocols submitted for approval by the faculty and researchers. I also inspected the animal care facilities and laboratories in the school. I was also involved in making and implementing the policies and procedures for animal use in the school.
- 2004-2007: **Senator (Electoral District # 87; Dermatology),** Faculty Senate, University of Wisconsin. The senate, in general, holds regular meetings on the first Monday of each month during the academic year. As a senator, I have been involved in discussion and voting on important policies and procedures, etc.
- 2007-2008: **Alternate Senator (Electoral District # 87; Dermatology),** Faculty Senate, University of Wisconsin.
- 2005-present: **Member, Melanoma Disease Oriented Working Group, UW Carbone Cancer Center**
- 2008-present: **Member/Interviewer, MD Admissions, UW SMPH**
- 2010-present: **Member, UW CMB Graduate Program Admission Committee for International Student Screening**

Thesis Committee Member of Graduate and MS Students

Served on the thesis committee of the following students:

Past Students:

- 1997-1999: Sabah Farouk, PhD Student, Case Western Reserve University, Cleveland, Ohio (thesis submitted and awarded from the University of Monufia, Egypt)
- 1998-2003: Kedar Hastak, PhD Student, Environmental Health Sciences, Case Western Reserve University, Cleveland, Ohio
- 2005-2007: J. Lea W. Roberts, MS Student, UW METC Program
- 2005-2010: Jordan M Sand, PhD Student, UW METC Graduate Program
- 2005-2010: Rohinton Tarapore, PhD Student, UW METC Graduate Program
- 2006-2010: Jeremy Johnson, PhD student, UW CBMS Graduate Program
- 2005-2007: Ashley R. Valentine, MS Student, UW Nutritional Sciences Graduate Program

Current Students:

- 2006-present: Joshua Desotelle, PhD Student, UW METC Graduate Program
- 2008-present Erin Shanle, PhD Student, METC Graduate Program

2008-present: Deeba N Syed, PhD Student, METC Graduate Program
2009-present: Sung K Lee, PhD Student, METC Graduate Program
2011-present: Ashley Brinkmann, PhD Student, METC Graduate Program

Study Section Memberships

Regular Member:

2007 – Present: Member, Peer Review Committee on Carcinogenesis, Nutrition & the Environment, American Cancer Society.

Ad-hoc Member:

- 2000** Member, Small Grant Program (RO3 Awards) Study Section; National Cancer Institute, National Institutes of Health.
- Member, Cooperative Grants Study Section; U.S. Civilian Research and Development Foundation (CRDF).
- 2001** Member, Cooperative Grants Study Section; U.S. Civilian Research and Development Foundation (CRDF).
- 2002** Member, Cooperative Grants Study Section; U.S. Civilian Research and Development Foundation (CRDF).
- Reviewer, Investigator Award, Dutch Cancer Society.
- Reviewer, Georgian-U.S. Bilateral Grants Program, U.S. Civilian Research & Development Foundation.
- Reviewer, Pilot Grant Program, Ohio Cancer Research Associate.
- 2003** Member, Program Project Study Section ZAR1; National Institute of Arthritis and Musculoskeletal and Skin Diseases.
- Member, Clinical and Experimental Therapeutics Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).
- 2004** Member, Clinical and Experimental Therapeutics Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).
- Member, Centers of Excellence for Research on Complementary and Alternative Medicine Study Section 'NCCAM SEP ZAT1 CP(15)'; National Center for Complimentary and Alternative Medicine, National Institutes of Health.
- Member, Concept Award-Cell Biology Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).
- 2005** Member, Concept Award-Cell Biology Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).

- Member, Center for Scientific Review (National Institutes of Health) - Special Emphasis Panel Study Section ZRG1 ONC-N 02 S (04/12/2005).
- Member, Review Panel - Philip Morris External Research Program.
- 2006** Reviewer, Research Grant Application, Israel Science Foundation, Jerusalem, Israel.
- Member, Cooperative Grants Study Section; U.S. Civilian Research and Development Foundation (CRDF).
- Member, Cell Biology Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).
- Reviewer, Research Grants for Genesis Oncology Trust, New Zealand.
- Reviewer, Research Grants for Cancer Research UK, London, UK.
- Reviewer, Clinical Research Fellowship Award Proposal, Cancer Research UK, London, UK.
- 2007** Member, National Institutes of Health - Scientific Review Group Arthritis, Connective Tissue and Skin (ACTS) Study Section, 02/06/2007-02/07/2007.
- Member, National Institutes of Health - Special Emphasis Panel/Scientific Study Sections; Chondroprotection and Chondrocyte Biology - ZRG1 MOSS-D (02) – Teleconference; 02/26/2007.
- Member, National Institutes of Health - Special Emphasis Panel/Scientific Study Sections; Chondroprotection and Chondrocyte Biology - ZRG1 MOSS-C (02) M and ZRG1 MOSS-C (12) B; 07/23/2007.
- Reviewer, Research Grants for Cottrell College Science Awards for Science Advancement Programs of Research Corporation, Tucson, AZ.
- Member, Concept Award-Molecular Biology & Genetics Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).
- 2008** Member, Concept Award-Molecular Biology & Genetics Study Section; Breast Cancer Research Program (BCRP) of the US Army Medical Research and Materiel Command (USAMRMC).
- Member, National Institutes of Health Loan Repayment Program for Health Disparities Research – Special Emphasis Panel ZMD1 LW 05 1; 05/08/2008.
- Member, National Institutes of Health Loan Repayment Program for Health Disparities Research – Special Emphasis Panel ZMD1 LW 06 1; 06/02/2008.
- 2009** Member, National Institutes of Health Loan Repayment Program for Health Disparities Research – Special Emphasis Panel ZMD1 PA L1; 04/07/2009.
- Member, National Institutes of Health Loan Repayment Program for Health Disparities Research – Special Emphasis Panel ZMD1 PA L2; 04/30/2009.
- Member, National Institutes of Health Loan Repayment Program for Minority Health and Health Disparities Research – Special Emphasis Panel ZMD1 PA L3; 05/04/2009.
- Member, National Institutes of Health Loan Repayment Program for Minority Health and Health Disparities Research – Special Emphasis Panel ZMD1 PA L4; 05/18/2009.

Member, National Institutes of Health Challenge Grant Panel – ZRG1 OTC-K (58); 07/20/2009.

Member, National Institutes of Health Challenge Grant Panel – ZRG1 OBT-A (58); 07/20/2009.

Member, National Institutes of Health Challenge Grant Panel – ZRG1 ETTN-A (58); 07/20/2009.

Member, National Institutes of Health Challenge Grant Panel – ZRG1 RPHB-E (58); 07/20/2009.

Member, Prostate Cancer Research Program, Clinical and Experimental Therapeutics PRE-CET-A Panel of the US Army Medical Research and Materiel Command (USAMRMC).

Member, Prostate Cancer Research Program, Prostate Cancer Training #4, PCT-4 Panel of the US Army Medical Research and Materiel Command (USAMRMC); 07/29/2009 – 07/31/2009.

Member, Concept Award-2009 Peer Reviewed Cancer Research Program, Concepts-Genetic Cancer #1, Con-GC-1 Panel of the US Army Medical Research and Materiel Command (USAMRMC).

2010 Member, 2009 Peer Reviewed Cancer Research Program (PRCRP) - Melanoma (MEL) Panel of the US Army Medical Research and Materiel Command (USAMRMC); 01/27/2010 – 01/29/2010.

Member, National Institutes of Health Loan Repayment Program for Health Disparities Research – Special Emphasis Panel ZMD1 PA L1 1; 03/18/2010.

Member, Prostate Cancer Research Program, Clinical and Experimental Therapeutics PRE-CET-A Panel of the US Army Medical Research and Materiel Command (USAMRMC).

Member, National Institutes of Health - Scientific Review Group Arthritis, Connective Tissue and Skin (ACTS) Study Section, 06/01/2010-06/02/2010.

Member, National Institutes of Health - Scientific Review Group Arthritis, Connective Tissue and Skin (ACTS) Study Section, 10/04/2010-10/05/2010.

Member, Review for Italian Ministry of Health Competition for Targeted Research Funding in Public Health – 2009.

Member, 2010 Peer Reviewed Cancer Research Program (PRCRP) - Concept-Skin Cancers, CON-SC Panel of the US Army Medical Research and Materiel Command (USAMRMC); December, 2010.

2011 Member, National Institutes of Health - Scientific Review Group Cancer Etiology (CE) Study Section, to be held on 01/18/2011-01/19/2011.

Member, National Institutes of Health - Scientific Review Group NIH SBIR Rheumatology/Dermatology Study Section, to be held on 02/28/2011.

Editorial Boards Membership:

Associate Editor

- 2003-present: Associate Editor of *Photochemistry and Photobiology*, the official journal of the 'American Society for Photobiology', published by the Wiley-Blackwell Press.
- 2010-present: Associate Editor of *Toxicology and Applied Pharmacology*, a premier journal addressing a wide range of topics in toxicological sciences, published by the Elsevier Press.

Member Editorial Board

- 2005-present: Member of Editorial Board of *Skin Pharmacology and Physiology*.
- 2006-present: Member of Editorial Board of *Life Sciences*.
- 2007-present: Member of Editorial Board of *Clinical Medicine: Urology*
- 2009-present: Member of Editorial Board of *International Journal of Photoenergy*
- 2009-present: Member of Editorial Board of *World Journal of Biological Chemistry*
- 2011-present: Member of Editorial Board of *World Journal of Pharmacology*

Guest Editor

- 2004 Guest Editor, *Toxicology and Applied Pharmacology*, Volume 195 (3), March 15, 2004; Special Issue on 'Toxicology of the Skin'.
- 2004 Guest Editor, *Photochemistry and Photobiology*, Volume 84, March/April, 2008; Special Issue on 'Photobiology, Photomedicine and Photocarcinogenesis'.

Reviewer of Journals

Served in the past and/or serving as a reviewer of many journals including the following (only selected recent journals are listed):

Apoptosis, Archives of the Biochemistry and Biophysics, Cancer Biology and Therapy, Current Medicinal Chemistry, Cancer Letters, Cancer Research, Carcinogenesis, Clinical Cancer Research, Current Medicinal Chemistry, European Journal of Nutrition, Experimental Dermatology, FEBS Letters, Free Radical Biology and Medicine, Free Radical Research, Journal of Clinical Investigation, Journal of Investigative Dermatology, Journal of Photochemistry and Photobiology, Journal of Toxicology and Environmental Health, Life Sciences, Molecular Cancer Research, Molecular Cancer Therapeutics, Molecular Medicine, Molecular Nutrition and Food Research, Molecular Pharmacology, Mutagenesis, Mutation Research, Neoplasia, Nutrition and Cancer, Oncogene, Photochemistry and Photobiology, Radiation Research, Skin Pharmacology and Applied Skin Physiology, The Journal of Nutritional Biochemistry, Toxicology and Applied Pharmacology, Yonsei Medical Journal

Organizer/Chair of Symposium

- 2005: Session co-chair, International Symposium on Diet in Causation and Prevention of Cancer (March 17-19, 2005), Lucknow, India.
- 2005: Co-organizing secretary, International Symposium on Diet in Causation and Prevention of Cancer and XXX Annual Conference of Environmental Mutagen Society of India (March 17-19, 2005), Lucknow, India.
- 2006: Member Advisory Committee, XXXII Annual Meeting and International Conference on Biomarkers in Health and Environmental Management (January 10-12, 2007), Coimbatore, Tamilnadu, India.
- 2010 Member Scientific Committee/Organizing Committee and Working Group, First International Conference on Resveratrol (Resveratrol 2010), Elsinore, Copenhagen (September 1-16, 2010).
- 2010 Session Chair, First International Conference on Resveratrol (Resveratrol 2010), Elsinore, Copenhagen (September 1-16, 2010).

Other Activities

- Spring 2007: **UW DELTA Course - Instruction Material Development (IMD).** I took IMD course in the Spring of 2007 to develop innovative and effective means to teach undergraduate class (Bio151). Together with two graduate students, I developed a case study to teach 'Respiration' more effectively in my Bio151 class. I implemented the case study in my class and found it to be very effective, especially for struggling students.
- Spring 2008 **Reviewer of Delta Certificate in Research, Teaching, and Learning Program.** I served as a committee member to review Teaching and Learning Portfolio of Catherine Britt Carlson in Spring of 2008. This program is aimed at training future faculty to more effectively integrate their research, teaching, and learning. This also provides us with fresh insight into the work to improve

undergraduate education being done by the University of Wisconsin-Madison's own students.

2009

Reviewer of Textbook, Teaching, and Learning Program. I served as a reviewer of several chapters of undergraduate biology text book – *Biology (Brooker, Widmaier, Graham, Stiling); 2nd Edition, McGraw-Hill, New York, NY*. This book is used by students and faculty as a reference at UW and many other Colleges across the nation and around the world.