

## **KM WAHIDUR RAHMAN**

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### **WORK**

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### **Experience Summary:**

Scientist, program, project and contract management professional with more than 10 years of experience, excellent oral and written communication skills, demonstrated interpersonal skills, and proven oversight expertise. Dr. Rahman is an integral member of any staff, able to serve organizational needs in leading and directing projects, delegating and completing work in a timely manner. Dr. Rahman developed and implemented cancer research and therapies, drafted grant proposals and scientific manuscripts, evaluated research results and interacted with a variety of diverse clients, professional, a panel of other scientists or peer audience to define products/ conclusions and secured funding.

- **Extensive research, experimentation and documentation experience**
- **Training and supervisory expertise**
- **Self starter who can work individually or with a team**
- **Proven ability to analyze programs and make recommendations for improvement of productivity and effectiveness**

### **Education:**

Post-doc, Molecular Biology of Cancer Chemoprevention, Wayne State University, USA, 1999-2002  
Ph.D., Pathology (Cancer Chemoprevention), Gifu University, Japan, 1999  
M.Sc., Biochemistry, Dhaka University, Bangladesh, 1991  
B.Sc., (Hon's), Biochemistry, Dhaka University, Bangladesh, 1989

## **Employment History and Professional Experience:**

2003 to present	Assistant Professor, Wayne State University School of Medicine, USA
2002-2003	Research Associate, Wayne State University School of Medicine, USA
1993-1995	Bacteriologist, Vaccine Lab, Institute Public Health, Bangladesh
1992-1993	Quality Control Officer, Former Pfizer Laboratories, Bangladesh

## **Research Interests:**

### **Current Research:**

Failure in the regulatory mechanisms that control cellular growth and proliferation is a key step in cancer progression. Thus, understanding the mechanisms by which cancer develops, and designing drug strategies that may significantly benefit cancer patients is an important objective. Our primary research objective is to characterize the efficacy and mode of action of naturally occurring cancer protective agents in food. We have focused our attention on dietary vegetables of the *Brassica* genus, including cabbage, broccoli, and Brussels sprouts. It is now well established that diets rich in these vegetables are protective against hormone-dependent and independent cancers, especially cancers of the breast and prostate. A group of indole-containing photochemical present in these plants is thought to contribute to their protective effects. Therefore, our ongoing investigations apply state-of-the-art molecular techniques to examine the suppressive effects and mechanisms of action of diet-derived agents on cancer cells. At present, our major research also involves the chemoprevention of breast and prostate cancer using different dietary chemopreventive agents. In order to identify specific dietary factors that may be associated with a decreased cancer risk we are focusing on the mechanistic relationships between dietary factors and carcinogenesis using molecular, cellular, or animal models. We seek to understand the molecular mechanisms of action of these dietary substances with the aim of establishing the safety and efficacy of their use, and in so doing, to uncover new cellular regulatory pathways that may be exploited in the control of cancer. The results from our work are also providing us the necessary first experimental evidence for eventual validation of dietary agents alone or in combination with therapeutic agents for the prevention and/or treatment of cancer including breast and prostate. We have extended our *in vitro* investigation to *in vivo* animal model of breast and prostate cancer bone metastasis.

### **Future Research Goals:**

Disease prevention is a complex endeavor, and outcomes models integrating multiple cancer and other clinical ends are needed to comprehensively assess promising cancer preventive agents, such as I3C/DIM etc., which can beneficially and adversely affect different diseases, including cancers. Therefore, cancer prevention study must overcome substantial obstacles and challenges unique to this field. My long-term career goal is to pursue research to further understand the development, progression and treatment of various cancers. My past scientific histories as well as my publications are related to these goals and objectives; receiving an NIH grant would greatly facilitate in achieving my future goals. My future research goal is to validate the role of I3C/DIM or any dietary agent in the prevention and/or treatment of various cancers. Therefore, in our continued studies, we seek to identify specific genes and regulatory pathways that are responsible for the cancer protective effects of the indole compounds. For this research goal, I will focus on the following four research areas. First, I will carry out research on metastatic cancer, including breast and prostate, and its intervention using non-toxic dietary chemopreventive agents. This will be critical research in future areas of research. Second, I will extend my specialization in chemo-sensitization of cancer including breast and prostate using natural compound, and conventional chemotherapeutic agents. The longer-range

goals of such work will be to explore the possibility to use indole compounds alone, or in combination with conventional therapeutic agents, as treatments to suppress cancer in reproductive organs with reduced side effects, and eventually to develop the indole-regulated genes as therapeutic targets to control these cancers. Third, I will investigate the molecular pathways altered by I3C/DIM using different cell signaling pathways in cancer including breast and prostate cancer. Finally, we will continue our research interest based on an interesting phenomenon, which is increasingly being realized to be associated with tumor progression, and aggressiveness is that of Epithelial-Mesenchymal Transition (EMT) and, in many tumors, progression towards malignancy is accompanied by a loss of epithelial differentiation and a shift toward mesenchymal phenotype. EMT is now believed to play a role in conferring drug resistance to cancer cells against conventional therapeutics. Since indole compounds have been found useful in overcoming drug-resistance to conventional chemotherapeutic drugs, it would be interesting to evaluate the effect of I3C/DIM on the process of EMT. We believe that indole compounds can reverse EMT i.e. it can reverse the phenotype from mesenchymal to epithelial in drug-resistant cancer cells through its modulation of microRNAs (miRNAs) that influence the process of EMT. miRNA profiling is a rapidly emerging field that holds a lot of promise in cancer research. Through its effects on miRNA and EMT, indole compounds have once again been brought into the limelight. This is an exciting area of cancer research and I plan to continue my research toward accomplishing my long-term goals and ambitions.

### **Memberships of Scientific Organizations:**

1983	Membership in Bangladesh Biochemical Society
1996	Membership in Biochemist Association of Bangladesh
1996	Membership in Japanese Cancer association
2005	Active Membership in American Association for Cancer Research (AACR)
2003	Scientific Member of Breast Cancer Program, Karmanos Cancer Institute, Detroit, MI

### **Honors/Awards:**

1995	Japanese Monbusho (Government) Scholarship for Ph.D. candidate
2002	Scholar-in-Training Award (AACR)

### **Reviewer of Journals:**

1. International Journal of Cancer
2. Pharmaceutical Research
3. Biochemical Pharmacology
4. Nutrition and Cancer
5. Clinical Cancer Research
6. International Journal of Cancer
7. Molecular Cancer Therapeutics
8. Carcinogenesis
9. Chemico-Biological Interactions
10. Journal of Experimental Clinical Cancer Research
11. Molecular Carcinogenesis
12. Molecular Pharmaceutics
13. Breast Cancer Research
14. Cancer Prevention Research

15. BMC

16. International Journal of Molecular Sciences

### **Member/Reviewer of Study Sections:**

2008 California Breast Cancer Research Program (CBCRP)

### **Past Research Funding:**

- 1. Grant:** Rahman (PI) 03/15/07-07/14/09  
Department of Defense (DOD) \$ 75,000 direct cost  
Targeting survivin by 3, 3'-diindolylmethane (DIM) for prostate cancer therapy.  
Role: Principal Investigator.  
The purpose of this application is to establish the mechanistic and scientific role of a non-toxic dietary agent such as DIM for the treatment as well as enhancement of the therapeutic efficacy of Taxotere for prostate cancer and more particularly for the treatment of HRPC and bone metastatic disease.
- 2. Grant:** Rahman (PI) 07/25/05-08/24/07  
Department of Defense (DOD) \$ 75,000 direct cost  
Chemosensitization of breast cancer cells to chemotherapeutic agents by 3, 3'-diindolylmethane (DIM)  
Role: Principal Investigator.  
The major goal of this project is to sensitize breast cancer cells (*in vitro* and *in vivo*) to the most common chemotherapeutic agents such as Taxotere and Adriamycin by 3,3'-diindolylmethane (DIM) will be a novel breakthrough for devising optimal therapies for breast cancer.
- 3. Grant:** Rahman (PI) 09/01/04-08/31/06  
Department of Defense (DOD) \$ 113,250.00 including indirect cost.  
The role of SDF-1alpha and CXCR4 in metastatic breast cancer.  
Role: Principal Investigator.  
The major goal of this project is to investigate the molecular biology of breast cancer metastasis, and thus we believe that Hu-SCID model could be a suitable model to fill this void in our understanding of breast cancer bone metastasis, and how cancer metastasis can be prevented and/or successfully treated by using indole-3-carbinol (I3C).
- 4. Grant:** Rahman (PI) 09/01/03- 06/30/05  
Elsa U. Pardee Foundation \$90,000.00 including indirect cost.  
The Role of X-Chromosome in Breast Cancer.  
Role: Principal Investigator.  
This research project aims to identify the possible genetic alterations that may contribute to the formation and progression of breast cancer in women.

### **Teaching Experience:**

**Medical/Ph.D. Students Teaching** – Basic Science Curriculum

**Published Abstracts:**

1. Shigeyuki, Sugie, Natsuko Ino, Masami Ohnishi, **KM Wahidur Rahman**, Takuji Tanaka, Keiji Wakabayashi and Hideki Mori (1996). Modifying effects of diallyl disulfide, aspirin and  $\beta$ -naphthoflavone on rat mammary carcinogenesis induced by 2-Amino-1-methyl-6-phenylimidazo [4,5-b] pyridine (PhiP). Proceedings of the fifty-five Annual Meeting of the Japanese Cancer Association, 94:PP. 38.
2. **KM Wahidur Rahman**, Kiyohisa OKAMOTO, Shigeyuki, SUGIE, Takuji TANAKA and Hideki MORI (1996). Modifying effects of Plumbagin, Juglone and Hydragenol on azoxymetahne induced intestinal carcinogenesis rats. Proceedings of the fifty-five Annual Meeting of the Japanese Cancer Association, 1045:PP. 276.
3. **KM Wahidur Rahman**, Shigeyuki, Sugie, Kiyohisa Okamoto, Masami Ohnishi, Hiroki Makita, Tomoyuki Watanabe, Takuji Tanaka and Hideki Mori (1997). Modifying effect of dietary fat and fish oil on diethylnitrosamine (DEN) and Phenobarbital (PB)-induced hepatocarcinogenesis in male F344 rats. Proceedings of the fifty-sixth Annual Meeting of the Japanese Cancer Association, 042:PP. 91.
4. Shigeyuki Sugie, Kiyohisha Okamoto, **KM Wahidur Rahman**, Masami Ohnishi, Hiroki Makita, Tomoyuki Watanabe, Takuji Tanaka, and Hideki Mori (1997). Modifying effect of Scordinin on rat hepatocarcinogenesis induced by diethylnitrosamine (DEN) and promoted by phenobarbital (PB). Proceedings of the fifty-sixth Annual Meeting of the Japanese Cancer Association, 88, pp. 90.
5. Sugie, S, **KM Wahidur Rahman**, Okamoto, K., Ushida, J., Watanabe, T., Tanaka, T., Mori, H. and EL-Bayoumy K.(1998). Modifying effect of 1,4-phenylenebis (methylene) selenocyanate (p-xsc) on diethylnitrosamine (DEN) and phenobarbital (PB)-induced hepatocarcinogenesis in male F344 rats. Proceedings of the Eighty-nine Annual Meeting of American Association for Cancer Research, 39:390.
6. **KM Wahidur Rahman**, Shigeyuki SUGIE, Natsuko SUZUI, Jun USHIDA, Pham Quang VINH, Hideki MORI (1998). Modifying Effect of Indole-3-carbinol or  $\alpha$ -Naphthoflavone on 2-Amino-1-methyl-6-phenylimidazo[4,5-b]pyridine-induced Mammary Carcinogenesis in Rats. Proceedings of the fifty-seven Annual Meeting of the Japanese Cancer Association, 89:PP. 307.
7. Shigeyuki Sugie, Kiyohisha Okamoto, Jun Ushida, **KM Wahidur Rahman**, Pham Quang Vinh, Natsuko Suzui, Masami Ohnishi, Hiroki Makita, Tomoyuki Watanabe, Takuji Tanaka, and Hideki Mori (1998). Modifying effect of Melatonin on diethylnitrosamine (DEN)-phenobarbital (PB) induced rat hepatocarcinogenesis. Proceedings of the fifty-seven Annual Meeting of the Japanese Cancer Association, 912: PP. 306.
8. Jun Ushida, Shigeyuki Sugie, Sugie, **KM Wahidur Rahman**, Hideki Mori, and K.EL.Bayoumy K. (1998). Modifying effect of 1,4-phenylenebis (methylene) selenocyanate (p-xsc) on diethylnitrosamine (DEN) and Phenobarbital (PB)-induced hepatocarcinogenesis in male F344 rats. Proceedings of the Fifty-seven Annual Meeting of the Japanese Cancer Association, 896:302.
9. **KM Wahidur Rahman** and Fazlul H. Sarkar. "Molecular mechanism(s) of Indole-3-carbinol (I3C) in breast cancer cells (2000). Proceedings of the Ninety-One Annual Meeting of American Association for Cancer Research, 4198: PP660.
10. **KM Wahidur Rahman**, Olivia Aranha, Alexey Glazyrin, Sreenivasa R. Chinni and Fazlul H. Sarkar (2001). Translocation of Bax to mitochondria induces apoptotic cell death in Indole-3-Carbinol (I3C) treated breast cancer cells. Proceedings of the Ninety Second Annual Meeting of American Association for Cancer Research.

11. Naveed Aslam, **KM Wahidur Rahman**, Olivia Aranha and Fazlul H. Sarkar (2001). Down-regulation of NF- $\kappa$ B in prostate cancer cells by ciprofloxacin. Proceedings of the American College of Physician meeting (Atlanta).
12. **KM Wahidur Rahman**, Olivia Aranha and Fazlul H. Sarkar (2002). Indole-3-carbinol (I3C) Induces Apoptosis in Breast Cancer Cells, but not in Normal Breast Epithelial Cells. Proceedings of the Ninety Three Annual Meeting of American Association for Cancer Research.
13. **KM Wahidur Rahman**, Yiwei Li and Fazlul H. Sarkar (2003). Inactivation of Akt and NF- $\kappa$ B play important roles during I3C-induced Apoptosis in Breast Cancer Cells. Ninety-Four Annual Meeting of American Association for Cancer Research.
14. **KM Wahidur Rahman** and Fazlul H. Sarkar (2004). Apoptosis Inducing Effect of DIM is Mediated by Inhibition of Nuclear Translocation of NF-kappaB in Breast Cancer Cells. Ninety Five Annual Meeting of American Association for Cancer Research.
15. **KM Wahidur Rahman**, Fazlul H. Sarkar, Dezhong J. Liao, Sanjeev Banerjee, Zhiwei Wang, Xin Hong (2006). Inhibition of experimental breast cancer bone metastasis by Indole-3-Carbinol. Proceedings of the Ninety-seven Annual Meeting of American Association for Cancer Research.
16. **KM Wahidur Rahman**, Yiwei Li, Zhiwei Wang, Sarah Sarkar, Fazlul H. Sarkar (2006). Gene expression profiling revealed survivin as a target of DIM-induced cell growth inhibition and apoptosis in breast cancer cells. Proceedings of the Ninety-seven Annual Meeting of American Association for Cancer Research.
17. **KM Wahidur Rahman**, Shadan Ali, Amro Aboukameel, Zhiwei Wang, Fakhara, Ahmed, David J. Grignon and Fazlul H. Sarkar (2007). Chemosensitization of breast cancer cells to chemotherapeutic agents by 3, 3'- diindolylmethane (DIM). Proceedings of the Ninety-eighth Annual Meeting of American Association for Cancer Research.
18. **KM Wahidur Rahman**, Shadan Ali, Amro Aboukameel, Sanila H. Sarkar, Zhiwei Wang, Philip A. Philip, Wael A. Sakr and Avraham Raz. Inactivation of NF- $\kappa$ B by 3, 3'- diindolylmethane (DIM) contributes to increased apoptosis induced by chemotherapeutic agent in breast cancer cells. DOD Breast cancer Research Program (BCRP) Era of Hope 2008 meeting.
19. Zhiwei Wang, Bennett W. Yu, **KM Wahidur Rahman**, et al. The induction of growth arrest and apoptosis in human breast cancer cells by 3,3'-diindolylmethane (DIM) is associated with induction and nuclear localization of p27<sup>kip</sup>. Proceedings of the 2008 Annual Meeting of American Association for Cancer Research.
20. **KM Wahidur Rahman**, Sanjeev Banerjee, Shadan Ali, Aamir Ahmad, Zhiwei Wang and Wael A. Sakr. DIM enhances Taxotere-induced apoptosis in hormone-refractory prostate cancer cells through survivin down-regulation. Proceedings of the 2009 Annual Meeting of American Association for Cancer Research.
21. **KM Wahidur Rahman**, Aamir Ahmad, Shadan Ali, Zhiwei Wang, Wael Sakr. 3,3-Diindolylmethane enhances Taxotere-induced apoptosis in breast cancer cells through FoXM1 down-regulation. Annual Meeting of American Association for Cancer Research (2010).
22. **KM Wahidur Rahman**, Sanjeev Banerjee, Shadan Ali, Aamir Ahmad, Zhiwei Wang, Dejuan Kong and Wael Sakr. DIM enhances Taxotere-induced apoptosis in prostate cancer cells through survivin down-regulation. The second Innovative Minds in Prostate Cancer Today (IMPACT) conference, Department of Defense (DoD), 2011.

## **List of Research Publications:**

1. T. Tanaka, H. Makita, N. Ino, **KM Wahidur Rahman**, H. Mori, K. Satoh, A. Hara (1996). Modifying effects of the arotinoid mofarotene (Ro 408757) on azoxymethane-induced rat colon and liver carcinogenesis. *The Cancer Journal*, 9(5): 260-268.
2. Natsuko Suzui, Shigeyuki Sugie, **KM Wahidur Rahman**, Masami Ohnishi, Naoki Yoshimi, Keiji Wakabayashi and Hideki Mori (1997). Inhibitory effects of diallyl disulfide or aspirin on 2-amino-1-methyl-6-phenylimidazo [4,5-b] pyridine-induced mammary carcinogenesis in rats. *Japanese Journal of Cancer Research*, 88(8): 705-711.
3. Hideki Mori, Shigeyuki Sugie, Natsuko Suzui, **KM Wahidur Rahman**, Akira Hara, Yukio Morishita, Takuji Tanaka and Yasushi Nakamura (1997). Inhibitory effects of naturally occurring and related synthetic organosulfur compounds on genotoxicity in hepatocytes and carcinogenesis of the digestive organs. *Journal of Environmental Pathology, Toxicology and Oncology*, 16(4): 281-285.
4. Shigeyuki Sugie, Kiyohisa Okamoto, **KM Wahidur Rahman**, Takuji Tanaka, Kiyoshi Kawai, Johji Yamahara and Hideki Mori (1998). Inhibitory effects of plumbagin and juglone on azoxymethane-induced intestinal carcinogenesis in rats. *Cancer Letters*, 127 (1-2): 177-183.
5. **KM Wahidur Rahman**, Shigeyuki Sugie, Kiyohisa Okamoto, Tomoyuki Watanabe, Takuji Tanaka and Hideki Mori (1999). Modulating Effects of Diets High in  $\omega$ -3 and  $\omega$ -6 Fatty Acids in Initiation and Post-initiation Stages of Diethylnitrosamine-induced Hepatocarcinogenesis in Rats. *Jpn. J. Cancer Res.* 90(1): 31-39.
6. **KM Wahidur Rahman**, Shigeyuki Sugie, Takuji Tanaka, Hideki Mori and Bandaru S. Reddy (2001). Effect of types and amount of dietary fat during the initiation phase of hepatocarcinogenesis. *Nutrition and Cancer* 39(2): 220-225.
7. Hideki Mori, Shigeyuki Sugie, **KM Wahidur Rahman** and Natsuko Suzui (1999). Chemoprevention of 2-amino-1-methyl-6-phenylimidazo[4,5-b] pyridine (PhIP)-induced mammary carcinogenesis in rats. *Cancer Letts.* 143 (2): 195-8.
8. **KM Wahidur Rahman**, Olivia Aranha, Alexey Glazyrin, Sreenivasa R. Chinni and Fazlul H. Sarkar (2000) Translocation of Bax to mitochondria induces apoptotic cell death in Indole-3-Carbinol (I3C) treated breast cancer cells. *Oncogene*, 19, 5764-5771.
9. Tomoyuki Watanabe, Shigeyuki Sugie, Kiyohisa Okamoto, **KM Wahidur Rahman**, Jun Ushida and Hideki Mori (2001) Chemopreventive effects of scordinin on diethylnitrosamine and Phenobarbital-induced hepatocarcinogenesis in male F344 rats. *Jpn. J. Cancer Res.* 92, 603-609.
10. **KM Wahidur Rahman** and Fazlul H. Sarkar Steroid hormone mimics: Molecular mechanisms of cell growth and apoptosis in normal and malignant mammary epithelial cells. *J. of Steroid Biochem. & Mol. Biol.* 80 (2002) 191-201.
11. **KM Wahidur Rahman**, Olivia Aranha and Fazlul H. Sarkar (2002) Indole-3-Carbinol (I3C) induces apoptosis in Tumorigenic but not in non-tumorigenic breast epithelial cells. *Nutrition and Cancer* 45(1): 101-112.
12. Fazlul H. Sarkar, **KM Wahidur Rahman** and Yiwei Li (2003) Bax Translocation to Mitochondria Is an Important Event in Inducing Apoptotic Cell Death by Indole-3-Carbinol (I3C) Treatment of Breast Cancer Cells. *J Nutr.*, 133:243S-2439S.
13. **KM Wahidur Rahman**, Shigeyuki Sugie, Tomoyuki Watanabe, Takuji Tanaka, and Hideki Mori (2004). Chemopreventive Effects of Melatonin on diethylnitrosamine (DEN)-phenobarbital (PB) induced rat hepatocarcinogenesis. *Nutrition and Cancer*, 47(2), 148-155.
14. **KM Wahidur Rahman**, Yiwei Li and Fazlul H. Sarkar (2004) Inactivation of Akt and NF- $\kappa$ B plays important roles during I3C-induced Apoptosis in Breast Cancer Cells. *Nutrition and Cancer*, 48(1), 84-94.

15. **KM Wahidur Rahman** and Fazlul H. Sarkar (2005) Inhibition of nuclear translocation of nuclear factor- $\kappa$ B contributes to 3,3'-diindolylmethane-induced apoptosis in breast cancer cells. *Cancer Research* 65(1), 364-71.
16. Shigeyuki Sugie, Pham Quang Vinh, **KM Wahidur Rahman**, Jun Ushida, Hiroyuki Kohno, Rikako Suzuki, Akira Hara, Le Bach Quang, Takuji Tanaka and Hideki Mori (2005) Suppressive effect of 1,4 phenylene diisothiocyanate on *N*-butyl-*N*-(4-hydroxybutyl)nitrosamine induced urinary bladder carcinogenesis in male ICR mice. *Intl. J Cancer*. 2005 Nov 20;117(4):524-30.
17. Zhiwei Wang, Sanjeev Banerjee, Yiwei Li, **KM Wahidur Rahman**, Yuxiang Zhang and Fazlul H. Sarkar (2006). Down-regulation of Notch-1 inhibits invasion by inactivation of nuclear factor- $\kappa$ B, vascular endothelial growth factor, and matrix metalloproteinase-9 in pancreatic cancer cells. *Cancer Research*, 66 : (5):1-7.
18. **KM Wahidur Rahman**, Li Y, Wang Z, Sarkar SH, Sarkar FH. Gene expression profiling revealed survivin as a target of DIM-induced cell growth inhibition and apoptosis in breast cancer cells. *Cancer Research*, 2006; 66(9), 4952-60.
19. **KM Wahidur Rahman**, Fazlul H. Sarkar, Sanjeev Banerjee, Zhiwei Wang, Dezhong Liao, Xin Hong and Nurul H. Sarkar (2006). Therapeutic intervention of experimental breast cancer bone metastasis by indole-3-carbinol in SCID-hu mouse model. *Molecular Cancer Therapeutics*, 5(11) 2747-56.
20. Zhiwei Wang, Radha Sengupta, Sanjeev Banerjee, Yiwei Li, Yuxiang Zhang, **KM Wahidur Rahman**, Amro Aboukameel, Ramzi Mohammad, Adip P.N. Majumdar, James L. Abbruzzese and Fazlul H. Sarkar. Epidermal growth factor-related protein inhibits cell growth and invasion in pancreatic cancer. *Cancer Research*, 2006; 66(15), 7653-7660.
21. **KM Wahidur Rahman**, Archana Thakur, Jack Wu, Aliccia Bolling, Hector Biliran, Xiukun Lin, Hind Nassar, Fazlul H. Sarkar, David J. Grignon and Joshua D. Liao. Aberrant expression of X-linked genes RbAp46, RSK4 and Cldn2 in breast cancer. *Molecular Cancer Research Mol Cancer Res* 2007 ; ( 2):171-81.
22. **KM Wahidur Rahman**, Shadan Ali, Amro Aboukameel, Sanila H. Sarkar, Zhiwei Wang, Philip A. Philip, Wael A. Sakr and Avraham Raz. Inactivation of NF- $\kappa$ B by 3, 3'-diindolylmethane (DIM) contributes to increased apoptosis induced by chemotherapeutic agent in breast cancer cells. *Molecular Cancer Therapeutics*, 2007; 6(10):2757-65.
23. Zhiwei Wang, Bennett W. Yu, **KM Wahidur Rahman**, et al. The induction of growth arrest and apoptosis in human breast cancer cells by 3, 3'-diindolylmethane (DIM) is associated with induction and nuclear localization of p27<sup>KIP</sup>. *Molecular Cancer Therapeutics*, 2008; 7(2):341-9.
24. T. Tanaka, Y. Yasui, M. Tanaka, T. Tanaka, T. Oyama and **KM Wahidur Rahman**. Melatonin suppresses AOM/DSS-induced large bowel oncogenesis in rats. *Chem Biol Interact*. 2009; 27; 177(2):128-36.
25. **KM Wahidur Rahman**, Sanjeev Banerjee, Shadan Ali, Aamir Ahmad, Zhiwei Wang and Wael A. Sakr. 3,3'-Diindolylmethane enhances taxotere-induced apoptosis in hormone-refractory prostate cancer cells through survivin down-regulation. *Cancer Res* 2009; 69: 4468-75.
26. Ahmad A, Sakr WA, **KM Wahidur Rahman**. Anticancer Properties of Indole Compounds: Mechanism of Apoptosis Induction and Role in Chemotherapy. *Curr Drug Targets*. 2010;11(6):652-66.
27. Ahmad A, Ali S, Wang Z, Ali AS, Sethi S, Sakr WA, Raz A, **KM Wahidur Rahman**. 3, 3'-diindolylmethane enhances taxotere-induced growth inhibition of breast cancer cells through down-regulation of FoxM1. *Int J Cancer*. 2010 (in press).
28. Ahmad A, Sakr WA, **KM Wahidur Rahman**. Novel targets for detection of cancer and their modulation by chemopreventive natural compounds. *Frontiers in Bioscience*. 2011 (in press).



**Book Chapter:**

**KM Wahidur Rahman** (2007) Mechanistic role of indole-3-carbinol in cancer prevention and therapy. *Cancer: Disease Progression and Chemoprevention*, ISBN: 81-308-0150-7.