Xin-Qiao Zhang MD, MS, Ph.D

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EDUCATION

M.D. | 1982 | Shanxi Medical College, Taiyuan, China
M.S. | 1987 | Guiyang Medical College, Guiyang, China
Ph.D. | 1996 | Chinese Academy of Preventive Medicine (CAPM), Beijing, China
Continue Education| Houston Community College, Houston TX

EXPERIENCE

2019-Present: Research Manager, AssisiCare LLC, Missouri City TX

2017-Present: Online Courses

- Coursera: Genomic Data Science https://www.coursera.org/specializations/genomic-data-science
- DataCamp: RNA-seq Differential Expression Analysis, scRNA-seq Workflows in R

2018-2018: Houston Community College (HCC) continuing education

CompTIA A+; CompTIA Network+; SAP Logistics with Materials Management & Production Planning

2014-2017: Research Scientist UT MD Anderson Cancer Center, Houston TX

2006-2014: Assistant Professor UT MD Anderson Cancer Center, Houston TX

2003-2006: Instructor UT MD Anderson Cancer Center, Houston TX

1997-2003: Postdoc, UT MD Anderson Cancer Center, Houston TX

Research Work

- Intravesical Ad-IFN/Syn3 for Superficial Bladder Cancer Examined the Mechanisms of Ad-IFNa Cancer Cell Kill and Preclinical Studies of Intravesical Ad-IFN/Syn3 for Superficial Bladder Cancer.
- Isolation of a Potent Cancer Specific Cytotoxic Factor(s) Produced by Ad-IFNα Funded initial work on the by-stander protein.
- Systemic RB94 Gene Therapy for Bladder Cancer and Mechanisms of Cell Kill Examined the mechanisms of RB94 cancer specific cell kill and undertook preclinical studies on RB94.
- By-stand protein (a unique protein induced by AdIFNα) projects with 5 publications and 7 AACR poster presentations

Project result in Pemetrexed clinical trial on bladder cancer in MD Anderson

- MTAP gene and Pemetrexed (anti-folate drug) response

Major Work

- Cancer Gene Therapy/viral vector development and liposome gene delivery
- Cancer Gene Therapy/looking for by-stand protein induced by AdIFNα
- Pharmacogenetics/MTAP gene and Pemetrexed (anti-folate drug) response).

1992-1997: Ph D Student and Postdoc, The Virology Institute CAPM, Beijing, China

- Gene Vaccine/adenoviral type 4 vector development
- Gene vaccine/β-gal and Hantan virus gene expression with adenoviral type 4 vector
- Molecular virology/adenovirus gene sequencing

1987-1992: Doctor in Chief, Deputy Director of Viruses Dept, CDC of Shanxi Province, Taiyuan, China

- Viral diseases laboratory diagnosis: HBV, HCV,
- Epidemiology research

1984-1987: Graduate Student and Research Assistant, Guiyang Medical college, Guiyang, China

- Viral disease diagnosis/IHC method for patient's respiratory diseases
- Herb extracts antiviral effects
- Identification of New virus

1982-1984: Doctor, CDC of Shanxi Province, Taiyuan, China

- Viral diseases diagnosis, epidemiology research

1977-1982: Student, Shanxi Medical College, Taiyuan, China

LEARNING AND SKILLS ON COMPUTER AND DATA ANALYSIS

- CompTIA A+, Certificate (ID COMP001021316057 https://www.comptia.org/faq/a/what-is-comptia-a-certification)
- R and RStudio, Bioconductor
- Set up my AWS server account and using AWS EC2 and S3 to analysis RNAseq and scRNAseq

LABORATORY EXPERIENCE, over 35 yeaars

- Routine cell culture of primary cells and cell lines, for biomarker analyses, in vitro anticancer activity testing
- Molecular biology and Biochemistry: basic molecular biology and biochemistry techniques (RNA, DNA and protein) Western blotting and PCR; Plasmid preparation. Spectrophotometric protein, DNA determination, microRNA inhibition assay.
- Plasmid construct, subclone, preparation and purification, transfection
- DNA and RNA extraction, purification and analysis by PCR, RT-PCR , Realtime PCR and RNAseq
- Protein sample preparation, purification and analysis by Gel-stain, western blot and proteomics
- Knock in and shRNA knock down, basic Crisper molecular and cellular biology techniques/experience: be able to accurately pipet, follow protocols and perform accurate calculations as needed for the conduct of the work.
- Drug test, MTT, Trypanblue assay,
- Adenoviral vectors construction for vaccines and cancer gene therapy
- Flow cytometry for cell cycle analysis
- Sample preparation for Mass spectrum for small molecular
- Traditional virology experiments, virus isolation from clinical samples, neutralization assay, CsCl density-gradient centrifugation, ELISA, haemagglutination assay, radioimmunoassay.
- trains lab personnel in performing genotyping experiment and using instrument, communicates with vendors whenever the equipment needs to be serviced or repaired
- basic and original immunology experiments, immunofluorescence staining and fluorescence microscopy.
- limited animal work experience in MD Anderson

MANAGEMENT AND ADMINISTRATIVE EXPERIENCE

- Department Flowcytometry Core facility management and user training
- Experiment data analysis and troubleshooting, maintain accurate, detailed records and experimental data and protocols, development and revision of technical protocols. Supervises the use and maintain of laboratory equipment and implements safety procedures
- Lab routine maintenance: laboratory supply orders; keeps laboratory well stocked and operational. Organized and keeps good documentation of all ordering forms, experiment record as well as research results**.** Lab safety monitoring.

INTEREST

Predict patient treatment response based on tumor gene changes (available from public resource)

PUBLICATION

1. Huang J, Tan J, **Zhang X**. Identification of the sac brood bee virus in Guiyang. J of Guiyang Medical College 12(4):341-343, 7/1987.
2. **Zhang X**, Huang J. Investigation for the early diagnosis of children adenovirus pneumonia by detection of the antibodies to human adenovirus early antigens. J of Guiyang Medical College 15(3):199-204, 7/1990.
3. Wang J, **Zhang X**, Yang X. Research on the connection between chronic hepatitis, hepatic cirrhosis, hepatoma and infection of HBV, HCV. Modern Preventive Medicine 21(1):14-17, 7/1994.
4. **Zhang X**. Construction of Adenovirus Type four vector and expression of foreign genes. Ph. D Thesis, Chinese Academy of Preventive Medicine, 1996.
5. Zhang H, Li Q, **Zhang X**. An approach to pneumoconiosis with liposome mediated transfection gene transfer technique. China Public Health 13(1):37-38, 7/1997.
6. Zhang Huifeng , Li Qiuying, **Zhang Xin-Qiao** , Yao Rulin. Influence of Foreign wild-type P53 gene on proliferation of fibroblasts under the effect of alveolar macrophage exposed to dust. Chinese Journal of Public Health 18(3):143-145, 7/1999.
7. Yamashita M, Rosser CJ , Zhou JH, **Zhang X**, Connor RJ , Engler H, Maneval DC, Karashima T, Czerniak BA, Dinney CPN , Benedict WF. Syn3 provides high levels of intravesical adenoviral-mediated gene transfer for gene therapy of genetically altered urothelium and superficial bladder cancer. Cancer Gene Ther 9:687-691, 7/2002.
8. **Zhang X**, Multani A, Zhou JH , Shay JW , McConkey D , Dong L, Kim CS, Rosser CJ , Pathak S, Benedict WF. Adenoviral-mediated retinoblastoma 94 produces Rapid telomere erosion, chromosomal crisis, and caspase-dependent apoptosis in bladder cancer and immortalized human urothelial cells but not in normal urothelial cells. Cancer Research 63:760-765, 7/2003.
9. Benedict WF, Tao Z, Kim CS , **Zhang X**, Zhou JH, Adam L, McConkey DJ, Papageorgiou A, Munsell M, Philopena J, Engler H, Demers W, Maneval DC, Dinney CPN, Connor RJ. Intravesical Ad-IFN Overcomes Tumor Cell Resistance to IFNa Protein and Causes Tumor Regression in an Orthotopic Mouse Model. J Mol Ther 10:525-535, 7/2004.
10. **Zhang X**, Yang Z, Dong L, Papageorgiou A, McConkey DJ, Benedict WF. Adenoviral-mediated interferon alpha overcomes resistance to the interferon protein in various cancer types and has marked bystander effects. Cancer Gene Ther 14(3):241-50, 3/2007.
11. Sterman DH, Recio A, Carroll RG, Gillespie CT, Haas A, Vachani A, Kapoor V, Sun J, Hodinka R, Brown JL, Corbley MJ, Parr M, Ho M, Pastan I, Machuzak M, Benedict W, **Zhang XQ**, Lord EM, Litzky LA, Heitjan DF, June CH, Kaiser LR, Vonderheide RH, Albelda SM, Kanther M. A phase I clinical trial of single-dose intrapleural IFN-beta gene transfer for malignant pleural mesothelioma and metastatic pleural effusions: high rate of antitumor immune responses. Clin Cancer Res 13(15 Pt 1):4456-66, 8/2007.
12. Pirollo KF, Rait A, Zhou Q, **Zhang XQ**, Zhou J, Kim CS, Benedict WF, Chang EH. Tumor-targeting nanocomplex delivery of novel tumor suppressor RB94 chemosensitizes bladder carcinoma cells in vitro and in vivo. Clin Cancer Res 14(7):2190-8, 4/2008.
13. Nakamizo A, Amano T, Zhang W, **Zhang XQ**, Ramdas L, Liu TJ, Bekele BN, Shono T, Sasaki T, Benedict WF, Sawaya R, Lang FF. Phosphorylation of Thr18 and Ser20 of p53 in Ad-p53-induced apoptosis. Neuro Oncol 10(3):275-91, 6/2008.
14. **Zhang X**, Dong L, Chapman E, Benedict WF. Conditioned medium from ad-IFN-alpha-infected bladder cancer and normal urothelial cells is cytotoxic to cancer cells but not normal cells: further evidence for a strong bystander effect. Cancer Gene Ther, 7/2008.
15. Zhou J, **Zhang XQ**, Ashoori F, McConkey DJ, Knowles MA, Dong L, Benedict WF. Early RB94-produced cytotoxicity in cancer cells is independent of caspase activation or 50 kb DNA fragmentation. Cancer Gene Ther 16(1):13-19, 01/2009, 1/2009.
16. Fisher MB, **Zhang XQ**, McConkey DJ, Benedict WF. Measuring soluble forms of extracellular cytokeratin 18 identifies both apoptotic and necrotic mechanisms of cell death produced by adenoviral-mediated interferon alpha: possible use as a surrogate marker. Cancer Gene Therapy 16(7):567-572. e-Pub 2/2009. PMCID: PMC2906639.
17. **Zhang XQ**, Dunner K, Benedict WF. Autophagy is induced by adenoviral-mediated interferon alpha treatment in interferon resistant bladder cancer and normal urothelial cells as a cell death protective mechanism but not by the bystander factors produced. Cancer Gene Ther 17(8):579-584, 8/2010. e-Pub 5/2010. PMCID: PMC2906639.
18. **Zhang XQ**, Yang Z, Benedict WF. Direct gene transfer of adenoviral-mediated interferon α into human bladder cancer cells but not the bystander factors produced induces endoplasmic reticulum stress-related cytotoxicity. Cancer Gene Ther 18(4):260-264, 4/2011. e-Pub 12/2010.
19. Yang Z, **Zhang XQ**, Dinney CN, Benedict WF. Direct cytotoxicity produced by adenoviral-mediated interferon α infection in interferon resistant cancer cells Involves ER stress and caspase 4 activation. Cancer Gene Therapy. Cancer Gene Ther 18(9):609-616, 9/2011. e-Pub 6/2011.
20. Akli S, **Zhang XQ**, Bondaruk J, Tucker SL, Czerniak PB, Benedict WF, Keyomarsi K. Low molecular weight cyclin E is associated with p27-resistant, high-grade, high-stage and invasive bladder cancer. Cell Cycle 11(7):1468-1476, 4/2012. e-Pub 4/2012. PMCID: PMC3350882.