

Curriculum Vitae

11/04/2022

Huang-Ge Zhang, DVM., PhD

1. Personal Information

Mailing Address: 505 S. Hancock Street
CTRB309
University of Louisville
Louisville, KY, 40202
E-mail: H0zhan17@louisville.edu
Phone: (502) 5003993
Fax (502) 852-2123

2. EDUCATION

Institution	Degree	Field	Year
Veterinary College of Inner Mongolia University Huhhet, PRC	DVM	Medicine	1982
Veterinary College of Inner Mongolia University Huhhet, PRC	M.S.	Virology	1985
Mississippi State University	PhD	Viral Immunology	1994

POSTDOCTORAL TRAINING

Year	Institution
1995 -1998	Postdoctoral Fellow, University of Alabama at Birmingham, supported by National Institutes of Health; National Institute of Arthritis, Musculoskeletal and Skin Diseases.

3. APPOINTMENTS:

Year	Rank/Title	Institution
2009-present	Research Career Scientist (5/8, GS14)	Robley Rex VA Medical Center VAMC
2008- 2009	Research Career Scientist (5/8, GS14)	Birmingham VAMC
2000- 2007	Research Scientist (5/8, GS13)	Birmingham VAMC

University Appointments

2009-Present	Professor with tenure	University of Louisville
2008- 2009	Professor with tenure	University of Alabama at Birmingham (UAB)

2005- 2008	Associate Professor with tenure	UAB
2003- 2005	Assistant Professor	UAB
2000- 2002	Research Assistant Professor	UAB
1998- 1999	Research Instructor	UAB

Other Appointments

2010-2019	Director of Chemoprevention Program, James Brown Cancer, University of Louisville
-----------	---

4. PROFESSIONAL AFFILIATIONS and MEMBERSHIP

1997-Present	American Society of Gene Therapy (ASGT)
1997-Present	American College of Rheumatology (ACR)
1998-Present	American Association of Immunology (AAI)
2005-Present	American Association for Cancer Research (AACR)
2011-Present	International Society Extracellular Vesicles

5. SERVICE

2012 – Present	The James Brown Cancer Center Executive Committee
2010 – Present	A voting member Robley Rex VA Medical Center Research Biosafety Studies Subcommittee
2010 – Present	A voting member Robley Rex VA Medical Center Research Animal Subcommittee for Research Safety
2009 – 2019	Director of Chemoprevention Program, James Brown Cancer Center
2010-2012	University of Louisville Promotion, Appointment, and Tenure Committee
2000 - 2002	Birmingham Veterans Administration Animal Use Committee
1999 - 2009	Birmingham Biosafety Committee

6. Editorial Board

2014-Present	American Journal of Clinical and Experimental Immunology
2013-Present	American Society for Exosomes and Microvesicles

7. SERVICE TO PROFESSIONAL ORGANIZATIONS: REVIEW COMMITTEES:

Journal of Immunology, Nanomedicine, International Journal of Biochemistry & Cell Biology, International Journal of Cancer, Arthritis & Rheumatism, Journal of Rheumatology, Molecular Therapy, Nature Communications, PNAS, Cancer Research, Blood, and Nature Immunology

Multiple NIH and NCI Study Sections including Special Emphasis Panels; Ad Hoc reviewer, VA Merit review, Immunology Study Section, 2004, 2009, 2010

Ad Hoc reviewer, National Heart, Lung, and Blood Institute (NHLBI), Immune Tolerance to Hemophilia Gene Therapy, 2005

Ad Hoc Reviewer, National Hemophilia Foundation, 2005

Ad Hoc Reviewer, NCI, from 2006 to present

Ad Hoc Reviewer, Alzheimer's foundation, 2009 to present

8. PROFESSIONAL AWARDS AND HONORS:

- 2019 EPIC INVENTOR AWARDS
- 2018 VA Research Career Scientist Award renewed
- 2013 Alumni Fellow, Mississippi State University
- 2013 VA Research Career Scientist Award
- 2010 The Founders Chair in Cancer Research at the James Graham Brown Cancer Center, University of Louisville
- 2008 VA Research Career Scientist Award
- 2007 Basic, Clinical and Translational Research Award, Susan G. Komen Breast Cancer Foundation
- 2004 Career Development Award, National Hemophilia Foundation
- 2001 Experimental Genetics of the Laboratory Mouse in Cancer Research Scholar Award
- 2001 Young Faculty Award, American Association of Immunology
- 2001 Outstanding Junior Faculty Award, American Federation of Medical Clinical Research
- 2000 Investigator Award, Arthritis Foundation
- 2000 Outstanding Investigator Award, American Federation of Medical Research
- 1999 Young Investigator Award, American Gene Therapy Association
- 1997 Excellent Senior Research Scholar Award, American College of Rheumatology

9. FUNDED RESEARCH PROJECTS:

<i>Source of Funding</i>	<i>Grant Number</i>	<i>Title of Project</i>	<i>Role</i>
NIH/ NCCIH	R01 AT008617-06A	Mechanisms underlying edible exosome-like nanoparticles for prevention of brain inflammation	<i>P.I. (2022-2027)</i>
Biomedical Laboratory Research & Development	BX005254 (BLRD Merit Review Award)	RA synovial fibroblast exosomes(RA-EXo) mediated bone erosion via AhR/TRAF2 pathway	<i>P.I. (2022-2026)</i>
NIH/NCCIH	R01AT008617 S	Gender dependent anti-inflammatory effect of the grapefruit exosomes-like nanoparticles	<i>P.I. (2019-2020)</i>
NIH/NIGMS	1P20GM12550 4-01	Functional Microbiomics, Inflammation and Pathogenicity	<i>Co-P.I. (2018-2023)</i>

VA Merit Review Award Program	IK6BX004199	Research Career Scientist (RCS) Award	<i>P.I. (2018-2023)</i>
NIH/NIGMS	P20GM135004	Center for Cancer Immunology and Immunotherapy (CCII)	<i>2020- 2025 Role: -- --Co-Mentor of Dr. Kavitha Yaddanapud, parent PI: Jun Yan</i>
NIH/NIGMS	P20GM113226	Hepatobiology and Toxicology COBRE,	<i>2020- 2025 Role: -- --Mentor of Dr. Joshua Hood, parent PI: Craig McClain</i>
NIH/NIAAA	P50-AA024337	The University of Louisville Alcohol Research Center (ULARC)	<i>2020-2025, Role: Co-investigator, Parent PI: Craig McClain</i>
NIH/NCCIH	R01AT008617	Plant exosomes non-coding RNA-mediated anti-inflammatory mechanism	<i>P.I. (2015-2020)</i>
NIH/ NCATS	UH3TR000875	Fruit exosome-like particles for therapeutic delivery of extracellular miRNAs	<i>P.I. (2015-2019)</i>
NIH/NIGMS 1	P20GM113226	HEPATOBIOLOGY AND TOXICOLOGY COBRE	<i>(Role: ----Mentor of Dr. Zhong-Bin Deng, parent PI: Craig McClain) 06/10/2016-- 2021</i>
Takeda Pharmaceutical Company Limited	No numbered	Oral delivery of anti-obesity peptide with grapefruit exosomes	<i>P.I.(2015-2016)</i>
Merit Review	<i>No numbered</i>	Research Career Scientist	<i>P.I.(2013-2018)</i>
The Leona M. and Harry B. Helmsley Charitable	No numbered	Plant exosomes for delivery of chemodrug	<i>P.I. for project 2 under Dr. Donald Miller's Program project (2014-2019)</i>
NIH/ NCATS	UH2TR000875	Fruit exosome-like particles for therapeutic delivery of extracellular miRNAs	<i>P.I. (2015-2016)</i>

Merit Review	No numbered	Exosomal TRAF2-CSN5 complex mediated inflammation promotes	<i>P.I. (2011-2015)</i>
Merit Review	<i>No numbered</i>	Proteasome Mediated TNF- α Apoptosis of RA Synovial Fibroblasts	<i>P.I. (2006-2010)</i>
Merit Review	<i>No numbered</i>	T Cell Regulation of collagen II induced arthritis model in HLA	<i>P.I. (2001-2005)</i>

NIH/NCI	RO1CA116092-06	Breast Tumor Exosomes Jak3BP Mediated Immunosuppression	<i>P.I. (2006-2011)</i>
NIH/NCCAM/NCI	AT004294	Curcumin reverses tumor exosomes-mediated inhibition of myeloid differentiation	<i>P.I. (2008-2013)</i>
NIH/NCI	R01CA137037	lung tumor exosome-mediated inflammation promotes tumor progression and growth	<i>P.I. (2008-2011)</i>
NIH/NCI	RO1 CA107181	Age Related Ubiquitin Defect on T-Cell Response to Tumor	<i>P.I. (2006-2011)</i>
Susan G. Komen Breast Cancer Foundation	<i>No-numbered</i>	Breast tumor exosomal Jak3BP inhibits myeloid cell differentiation	<i>P.I. (2007-2010)</i>
Arthritis Foundation	<i>No-numbered</i>	APC-Fas-L Induction of Tolerance to Treat Arthritis	<i>P.I. (2003-2006)</i>
NIH / NIAMS	P30 AR48311	T-Cell AICD Defects in CII Induced Arthritis of DBA/1J Mice	Pilot project (Zhang, 2004-2005):
NIH / NIAMS	R21 AR49331	Roles of Ubiquitin Regulated F-Bx07 Protein in RA	<i>P.I. (2003-2006)</i>
National Hemophilia Foundation	<i>No-numbered</i>	Immune Depletion of host immune response to AAVF.IX.	<i>P.I. (2007-2010)</i>

10. TRAINING AND MENTORING RELATIONSHIPS:

a. List specific teaching assignments

2012-present

2009-2011

January-May 2008 - 08/30/2009

Advanced Immunology

Research Methods in Microbiology & Immunology

Director, Molecular Basis of Disease

January-May 2007 - 2009	Director, Molecular Basis of Disease
January-May 2004 - 2007	Module leader, Molecular Basis of Disease
January-May 2002 - 2005	Gene Therapy of Autoimmune diseases
January-May 2004	Molecular Basis of Disease-Cancer Immunology

b. List past and current undergraduate and graduate students, postdoctoral fellows and faculty mentored.

(PhD candidate, Graduate student, 2006-present)

Name	Trainee Status	Inclusive Dates	Role	Current Position
Xiuwu Zhang,	Postdoctoral Fellow	1998-1999	Supervisor	Associate Professor at Duke University
Xinwen Yang	Postdoctoral Fellow	2003-2004	Supervisor	Professor at Anhui University
Yasunori Matsuki	Postdoctoral Fellow	1999-2001	Supervisor	Associate Professor at Tokyo University
Sanjay Yadav	Research Fellow	2001-2002	Supervisor	Professor at Maulana Azad Medical College, India
Shuangyin Zhang,	Medical student	2006-2009	Supervisor	Medical fellow at University of Emory
Zhongyu Liu	Postdoctoral Fellow	2001-2004	Supervisor	Research Instructor at University of Alabama at Birmingham
Cunren Liu,	Postdoctoral Fellow	2003-2009	Supervisor	Research associate University of Alabama at Birmingham
Peter Liu	Postdoctoral Fellow	2003-2004	Supervisor	Research associate University of Alabama at Birmingham
Jianhua Wang	Postdoctoral Fellow	2003-2009	Supervisor	Research associate University of Alabama at Birmingham
Fang Xie	Postdoctoral Fellow	2005-2006	Supervisor	Assistant Professor at Shangdong Medical University
Yuelong Liu	Postdoctoral Fellow	2006-2009	Supervisor	Associate Director of China Poultry Associate Foundation
Xiaoyu Xiang	Postdoctoral Fellow	2006-2010	Supervisor	Instructor at University of Texas
Kelly Godby	M.D. Research Fellow	2006-2007	Supervisor	Physician and Assistant Professor of Hematology at University of Alabama at Birmingham
Dengmei Sun	Ph.D. Student	2006-2009	Supervisor	Research Associate at University of Alabama at Birmingham

Spandan V Shah	Ph.D. Student	2006-2009	Supervisor	Postdoctoral Fellow at New York University
ShuangQin Zhang,	M.D. Research Fellow	2008-2009	Supervisor	Medical Fellow at University of Chicago
Sabrin Albituni	Ph.D. Student	2009-2011	PhD committee	University of Louisville
Hampartsoum Barsoumian	Ph.D. Student	2011	PhD committee	University of Louisville
Jingyao Mu	Postdoctoral Fellow	2010-2011	Supervisor	University of Louisville
Hong Jiang	Ph.D. Student	2009-2014	Supervisor, and	Washington University
Lin Xu	Postdoctoral Fellow	2010-2012	Supervisor	Professor at Guilin Medical University, China
Safinur Atay	Ph.D. Student	2011	PhD Committee	University of Louisville
Lacey Gunn	M.D./Ph.D. Student	2010	PhD Committee	University of Louisville
Xiaowu Hong	Postdoctoral Fellow	2010-2012	Supervisor	Associate Professor at Fudan University, China
Songwen Ju	Postdoctoral Fellow	2009-2011	Supervisor	Assistant Professor at Suzhou University
Zhong-Bin Deng	Postdoctoral Fellow	2008-2009	Supervisor	Assistant Professor University of Louisville
Abhilash Samykutty	Postdoctoral Fellow	2014-2016	Supervisor	Not Known
Yun Teng	Senior Research Scientist	2014-2016	Supervisor	Assistant Professor University of Louisville
Qilong Wang	Postdoctoral Fellow	2010-2015	Supervisor	Associate Professor at Suzhou University
Baomei Wang	Postdoctoral Fellow	2012-2014	Supervisor	Instructor, University of Pennsylvania
Xiaoying Zhuang	Ph.D. Student	2009-2016	Supervisor	Associate Director, Genomic Analysis Center, Suzhou University
Ziqiang Cheng	Postdoctoral Fellow	2008-2009	Supervisor	Director and Chair of College of Animal Science and Veterinary Medicine, Shandong Agricultural University,
Zinal Chheda	Ph.D. Student	2008-2011	PhD Committee	University of Louisville
Shuvasree Sengupta	Ph.D. Student	2012-2017	PhD Committee	University of Louisville

Joseph Kolb	Ph.D. Student	2012- 2016	PhD Committee	University of Louisville
Christopher Harding	Ph.D. Student	2015- Rotate student		University of Louisville
Sabrin Albeituni	Ph.D. Student	2012- 2016	PhD Committee	University of Louisville
Sellers,Zachariah Payne	Ph.D. Student Ph.D. Student	2013- 2018	PhD Committee	University of Louisville
Joseph Kolb	Ph.D. Student Ph.D. Student	2012- 2016	PhD Committee	University of Louisville
Ashley Wise	Ph.D. Student Ph.D. Student	2012- 2016	PhD Committee	University of Louisville
Bindu Hegde	Ph.D. Student	2013- 2018	PhD Committee	University of Louisville
Samantha Morrissey	M.D./Ph.D. Student	2014- 2020	Committee	University of Louisville
Mohammed Sayed	Ph.D. Student	2017- 2020	PhD Committee	University of Louisville
Zhong-Bin Deng	Res. Associate. Prof	2013- 2018	Mentor	University of Louisville
Yun Teng	Res. Assist. Prof	2016- Present	Mentor	University of Louisville
Kumaran Sundaram	Postdoctoral Fellow	2016- Present	Supervisor	University of Louisville
Anil Kumar	Postdoctoral Fellow	2016- 2021	Supervisor	University of Louisville

Trey Landers	Ph.D. Student	2019-Present	PhD Committee	University of Louisville
Sriwastva, Mukesh	Postdoctoral Fellow	2017-2022	Supervisor	University of Louisville
Lei, Chao	Postdoctoral Fellow	2017-2020	Supervisor	University of Louisville
Xu, Fangyi	Postdoctoral Fellow	2018-Present	Supervisor	University of Louisville
Zhang, Xiangcheng	Postdoctoral Fellow	2019-2022	Supervisor	University of Louisville
Kumar, Rajiv	Postdoctoral Fellow	2022-present	Supervisor	University of Louisville
Xu, Qingbo	Postdoctoral Fellow	2022-present	Supervisor	University of Louisville
Aljohani, Abdullah	PhD student	2022-present	Mentor	University of Louisville

11. EXTRAMURAL ACTIVITY SELECTED (17/78):

1. Invited speaker, 2018 Keystone Symposia on Exosomes/Microvesicles: Heterogeneity, Biogenesis, Function, and Therapeutic Developments, Beaver Run Resort in Breckenridge, Colorado
2. Invited speaker, Extracellular Vesicles — Biology, Translation and Clinical Application in GI Disorders, AGA JAMES W. FRESTON CONFERENCE, Sept. 9 & 10, 2017 • St. Paul, MN
3. Invited speaker. **“Gordon Research Conference: Extracellular Vesicles: Biologic Effects and Therapeutic Potential of Extracellular Vesicles”** the Sunday River Resort, Newry, Maine, during the week of August 21-26, 2016
4. Chairman “Symposium session - EVs in immune regulation” held at International Society for Extracellular Vesicles annual meeting at Washington DC, 23-26 April, 2015
5. Chairman “Biotechnology: sponsored sessions C” held at International Society for Extracellular Vesicles annual meeting at Washington DC, 23-26 April, 2015

6. Invited speaker. Nebraska Gateway to Nutrigenomics (NGN) Seminar Series University of Nebraska, March 25, 2015
7. Invited speaker. Mayo Clinic, Rochester, MN 55905, March 31, 2015
8. Invited speaker. “**Gordon Research Conference: RNA Nanotechnology**” Ventura, CA, USA; Feb. 1-6, 2015
9. Invited speaker. “Tumor exomes mediated immunosuppression” Georgia Regents University Cancer Center, February 3, 2014
10. Invited speaker. “Exosomes, an new intercellular and interspecies communicators” Mississippi State University November 14, 2013
11. Invited speaker. “The Endocrine Society's 95th Annual Meeting, San Francisco, CA 6/15/2013
12. Distinguished speaker. International Conference on Nanoscience & Technology, Beijing, China September 5 to 7, 2013
13. Distinguished speaker. “Accelerating Development & Advancing Personalized Therapy Congress Conference.” Washington, DC. September 19-21, 2012.
14. Co-Chairman. “International Workshop on Exosomes” January 19 – 22, 2011 Paris. 2011.
15. Distinguished speaker. “2011 American Association for Cancer Research Annual meeting.” Orlando, FL. April 2-7, 2011.
16. Co-chair and invited speaker. “International Symposium of Cellular Vesicles: Determination of Cell Fate.” Providence, RI. April 20-23, 2011.
17. Chairman. “Tumor Exosomes Symposium” held at the American Association of Immunologists Annual Meeting. San Francisco, CA. May 16, 2011

12. BIBLIOGRAPHY:

A. Selected peer-reviewed publications (134/151)

1. **Zhang HG**, Bilbao G, Zhou T, Contreras JL, Gomez-Navarro J, Feng M, Saito I, Mountz JD and Curiel DT. (1998) Application of a Fas ligand encoding a recombinant adenovirus vector for prolongation of transgene expression. *J Virol* 72:2483-2490.
2. **Zhang HG**, Zhou T, Curiel DT and J.D. Mountz. (1998) Inhibition of TNF- α decreases inflammation and prolongs adenovirus gene expression in lung and liver. *Human Gene Ther* 9:1875-1884.
3. **Zhang HG**, Liu D, Heike Y, Yang P-A, Wang Z, Curiel DT, Wang X, Zhou T and Mountz JD. (1998) Induction of specific T-cell tolerance by adenovirus-infected, Fas ligand producing antigen presenting cells. **Nature Biotechnology** 16:1045-1049.
4. Bilbao G, **Zhang HG**, Contreras JL, Zhou T, Feng M, Saito I, Mountz JD, and Curiel D. (1999) Construction of a recombinant adenovirus vector encoding Fas ligand with a CRE/Loxp inducible system. *Transplant Proc* 1(1-2):792-793.
5. **Zhang HG**, Su X, Liu D, Liu W, Yang P, Wang Z, Edwards CK, Bluethmann H, Mountz JD and Zhou T. Induction of specific T cell tolerance by Fas ligand-expressing antigen-presenting cells. *J Immunol* 162:1423-1430.
6. **Zhang HG**, Huang N, Liu D, Bilbao L, Zhang X, Yang P, Zhou T, Curiel DT and Mountz JD. (2000) Gene therapy that inhibits nuclear translocation of nuclear factor κ B results in tumor necrosis factor α -induced apoptosis of human synovial fibroblasts. *Arthritis Rheum* 43:1094-1105.
7. **Zhang HG**, Fleck M, Kern ER, Liu D, Wang Y, Hsu HC, Yang P, Wang Z, Curiel DT, Zhou T and Mountz JD. (2000) Antigen presenting cells expressing Fas ligand down-modulate chronic inflammatory disease in Fas ligand-deficient mice. *J Clin Invest* 105:813-821.

8. **Zhang HG**, Wang Y, Xie JF, Liang X, Liu D, Yang P, Hsu HC, Ray RB and Mountz JD. (2001) Regulation of tumor necrosis factor alpha-mediated apoptosis of rheumatoid arthritis synovial fibroblasts by the protein kinase Akt. *Arthritis Rheum.* 44(7):1555-1567.
9. Mountz JD, Van Zant GE, **Zhang HG**, Grizzle WE, Ahmed R, Williams RW and Hsu HC. (2001) Genetic dissection of age-related changes of immune function in mice. *Scand J Immunol* 54(1-2):10-20.
10. **Zhang HG**, Wang YM, Xie JF, Liang X, Hsu HC, Zhang X, Douglas J, Curiel DT and Mountz JD. (2001) Recombinant adenovirus expressing adeno-associated virus cap and rep proteins supports production of high-titer recombinant adeno-associated virus. *Gene Ther* 8(9):704-712.
11. Fleck M, **Zhang HG**, Kern ER, Hsu HC, Müller-Ladner U and Mountz JD. (2001) Treatment of chronic sialadenitis in a murine model of Sjogren's syndrome by local FasL gene transfer. *Arthritis Rheum* 44(4):964-973.
12. Hsu HC, Zhou T, Shi J, Yang PA, Liu D, **Zhang HG**, Bluethmann H and Mountz JD. (2001) Aged mice exhibit *in vivo* defective peripheral clonal deletion of D(b)/H-Y reactive CD8(+) T cells. *Mech. Ageing Dev.* 122(3):305-326.
13. Hsu HC, Shultz LD, Su X, Shi J, Yang PA, Relyea MJ, **Zhang HG** and Mountz JD. (2001) Mutation of the hematopoietic cell phosphatase (Hcph) gene is associated with resistance to gamma-irradiation-induced apoptosis in Src homology protein tyrosine phosphatase (SHP)-1-deficient "motheaten" mutant mice. *J Immunol* 166(2):772-780.
14. Ichikawa K, Liu W, Zhao L, Wang Z, Liu D, Ohtsuka T, **Zhang HG**, Mountz JD, Koopman WJ, Kimberly RP and Zhou T. (2001) Tumoricidal activity of a novel anti-human DR5 monoclonal antibody without hepatocyte cytotoxicity. *Nature Med* 7(8):954-960.
15. Hsu HC, Matsuki Y, **Zhang HG**, Zhou T and Mountz JD. (2001) The Fas signaling connection between autoimmunity and embryonic lethality. *J Clin Immunol* 21:1-14.
16. Hsu HC, Zhou T, Shi J, Yang PA, Liu D, **Zhang HG**, Bluethmann H and Mountz JD. (2001) Aged mice exhibit *in vivo* defective peripheral clonal deletion of D^b/H-Y reactive CD8⁺ T cells. *Mech Ageing Dev* 122:305-326.
17. Mountz JD, Hsu H, Matsuki Y and **Zhang HG**. (2001) Apoptosis and rheumatoid arthritis: Past, present and future directions. *Curr Rheumatol Rep* 3:70-78.
18. Hsu HC, Shi J, Yang P, Dodd C, **Zhang HG**, and Mountz JD. (2001) Activated CD8(+) T cells from aged mice exhibit decreased activation-induced cell death. *Mech Aging Dev* 122(15):1663-1684.
19. Dodd C, Hsu HC, Chu WJ, Forder J, Yang P, **Zhang HG**, Josephson L, Weissleder, Mountz JM and Mountz JD. (2001) Normal T-cell response and *in vivo* MRI imaging of T cells loaded with Tat peptide-derived nanoparticles. *J Immunol Meth* 256(1-2):89-105.
20. Hsu H-C, Mountz JD, Williams RW, Shelton BJ, Yang PA, Matsuki Y, Xu X, **Zhang HG**, Geiger H and Van Zant G. (2002) Age-related change in thymic T-cell development is associated with genetic loci on mouse chromosomes 11. *Mech Aging Dev* 123(8):1145-1158.
21. Matsuki Y, Li L, Hsu HC, Yang PA, Zheng R, Edwards CK III, Chaudry IH, **Zhang HG** and Mountz JD. (2002) Soluble Fas gene therapy protects against Fas-mediated apoptosis of hepatocytes but not the lethal effects of Fas-induced TNF- α production by Kupffer cells. *Cell Death and Development* 9(6):626-635.
22. **Zhang HG**, Yang P, Xie J, Liu L, Liu D, Xiu L, Zhou T, Wang Y, Hsu H-C and Mountz JD. (2002) Depletion of collagen II-reactive T cells and blocking of B-cell activation prevents collagen II-induced arthritis in DBA/1j mice. *J Immunol* 168(8):4164-4172.
23. **Zhang HG**, Xie J, Xu L, Yang PA, Sun S, Xu X, Wang Y, Curiel DT, Hsu HC and Mountz JD. (2002) Hepatic DR5 signaling induces apoptosis and limits adenovirus gene therapy expression in the liver. *J Virol* 76(11):5692-5700.
24. Grizzle WE, Mountz JD, Yang P, Sun S, Xu X, Van Zant GE, Williams RW, Hsu HC and **Zhang HG**. (2002) Host T-cell mediated immune response using a novel BXD

- recombinant inbred mouse breast cancer model. *Int J Cancer* 101(3):270-279.
25. **Zhang HG**, Xie J, Xu L, Curiel D, Hsu HC and Mountz JD. (2002) Addition of 6xHis-tagged peptide to the C-terminal of AAV VP3 does not affect viral tropism and production. *J Virol* 76(23):12023-12031.
 26. Matsuki Y, **Zhang HG**, Hsu HC, Yang PA, Zhou T, Dodd CH, Cecconi F, Gruss P, Tadakuma T and Mountz JD. (2002) Different role of Apaf-1 in positive selection, negative selection and death by neglect in foetal thymic organ culture. *Scand J Immunol* 56(2):174-184.
 27. Mountz JD, Van Zant G, Allison DB, **Zhang HG** and Hsu HC. (2002) Beneficial influences of systemic cooperation and sociological behavior on longevity. *Mech Ageing Dev* 123(8):963-973.
 28. **Zhang HG**, Mountz JD, Fleck M, Zhou T and Hsu HC. (2002) Specific deletion of autoreactive T cells by adenovirus-transfected, Fas ligand-producing antigen-presenting cells. *Immunol Res* 26(1-3):235-246.
 29. Mountz JD, Hsu HC, Wu Q, Liu HG, **Zhang HG** and Mountz JM. (2002) Molecular imaging: New applications for biochemistry. *J Cell Biochem* 39(Suppl):162-171.
 30. **Zhang HG** and Grizzle WE. (2003) Aging, immunity and tumor susceptibility. *Immunol Allergy Clin North Am* 23(1):83-102.
 31. Hoves S, Krause SW, Halbritter D, **Zhang HG**, Mountz JD, Scholmerich J and Fleck M. (2003) Mature but not immature Fas ligand (CD95L)-transduced human monocytes-derived dendritic cells are protected from Fas-mediated apoptosis and can be used as killer APC. *J Immunol* 170(11):5406-5413.
 32. Hsu HC, **Zhang HG**, Li L, Yi N, Yang PA, Wu Q, Wu Y, Renda J, XU X, Yang XW, Lu L, Van Zant G, Williams RW, Allison DB and Mountz JD. (2003) Age-related thymic involution in C57BL/6J x DBA/2J recombinant-inbred mice maps to mouse chromosomes 9 and 10. *Genes & Immunity* 4(6):402-410.
 33. Li L, Hsu HC, Grizzle WE, Stockard CR, Ho KJ, Lott P, Yang PA, **Zhang HG** and Mountz JD: (2003) Cellular mechanism of thymic involution. *Scand J Immunol* 57(5):410-422.
 34. Liu Z, Xu X, Hsu H-C, Yang P-A, Wu Q, Liu C, Yu S, **Zhang HG (Co-senior author)** and Mountz JD. (2003) CII-DC-AdTRAIL-DOX cell-gene therapy inhibits infiltration of CII-reactive T cells and CII-induced arthritis. *J. Clin Invest.* 2003, 112(9): 1332-41
 35. **Zhang HG**, Hsu HC, Yang PA, Wu Q, Yi N, Allison DB and Mountz JD. (2004) Identification of multiple genetic loci that regulate clearance of adenovirus gene therapy. *Gene Therapy* 11(1): 4-14.
 36. **Zhang HG**, Hyde K, Page GP, Brand JP, Zhou J, Yu S, Allison DB, Hsu HC and Mountz JD: (2004) Novel TNF- α -regulated genes in rheumatoid arthritis. *Arthritis Rheum* 50(2):420-431.
 37. **Zhang HG**, Wang J, Yang X, Hsu HC and Mountz JD: (2004) Regulation of apoptosis proteins in cancer cells by ubiquitin. (Review) *Oncogene* 23(11):2009-2015.
 38. Hoves S, Krause SW, Herfarth H, Halbritter D, **Zhang HG**, Mountz JD, Scholmerich J and Fleck M: (2004) Elimination of activated but not resting primary human CD4+ and CD8+ T cells by Fas ligand (FasL/CD95L)-expressing Killer-dendritic Cells. *Immunobiol* 208(5):463-75.
 39. Xu X, **Zhang HG**, Liu ZY, Wu Q, Yang PA, Sun SH, Chen J, Hsu HC, Mountz JD. (2004) Defective clearance of adenovirus in IRF-1 mice associated with defects in NK and T cells but not macrophages. *Scand J Immunol.*:89-99.
 40. Hsu HC, Li L, Zhang HG, Mountz JD (2005) Genetic regulation of thymic involution *Mech Ageing Dev.* 126(1):87-97

41. **Zhang HG**, High KA, Wu Q, Yang P, Schlachterman A, Yu S, Yi N, Hsu HC, Mountz JD. (2005) Genetic analysis of the antibody response to AAV2 and factor IX. *Mol Ther.* 11(6):866-74
42. Yang X, Wang J, Liu C, Grizzle WE, Yu S, Zhang S, Barnes S, Koopman WJ, Kimberly RP, **Zhang HG** (2005) Cleavage of p53-Vimentin Complex Enhances TRAIL-Mediated Apoptosis of Rheumatoid Arthritis Synovial Fibroblasts. *American Journal of Pathology*,167(3):705-19.
43. Liu C, Yu S, Zinn K, Wang J, Zhang L, Jia J, Kappes JC, Barnes S, Kimberly RP, Grizzle WE, **Zhang HG**. (2006). Murine mammary carcinoma exosomes promote tumor growth by suppression of NK cell function. *J Immunol.* 1;176(3):1375-85.
44. **Zhang, HG**, Liu C, Su K, Zhang L, Yu S, Wang J, Grizzle G, Xu C, and Kimberly RP. (2006) A membrane form of TNF-cell activation induced cell death (AICD). *J. Immunol.* 15; 7385-93
45. Wang J, Liu C, Zhang L, Yu S, Grizzle G, Kimberly RP, Wan M, Xu C, and **Zhang HG**. (2006) CSN5/Jab1 regulates activation of JNK and NF-kB stimulated RA synovial fibroblasts. *American Journal of pathology*, 169: 889-902.
46. EGF receptor activity modulates apoptosis induced by Inhibition of the proteasome of vascular smooth muscle cells. *J Am SocNephrol.* 18:131-42.
48. Yu SH, Liu C, Su K, Wang J, Zhang L, Yu S, Grizzle G, Kimberly RP, and **Zhang HG**. (2007) Tumor exosomes block bone marrow dendritic cell differentiation. *Journal of Immunology*, 178: 6867-75
49. Liu C, Yu S, Wang J, Zhang L, Jia J, Kappes JC, Barnes S, Kimberly RP, Grizzle WE, Zinn K, **Zhang HG**. (2007) Expansion of tumor-associated myeloid suppressor cells represses NK Cell Cytotoxicity. *Blood*, 109:4336-42
50. Zhang HG, Kim H, Liu C, Yu S, Wang J, Grizzle W, Kimberly R, Barnes S. Curcumin reverses breast tumor exosomes mediated immune suppression of NK cell tumor cytotoxicity. 2007, 1773, 1116-1123.
5. Age-related increase of tumor susceptibility is associated with myeloid-derived suppressor cell mediated suppression of T cell cytotoxicity in recombinant inbred BXD12 mice. *Mech Ageing Dev.* 2007, 7128:672-80
52. Thymus exosomes-like particles induce regulatory T cells. *J Immunol.* 2008 15;181(8):5242-8
53. Xiang X, Poliakov A, Liu C, Liu Y, Deng Z, Wang J, Cheng Z, Shah S, Wang G, Zhang L, Grizzle W, Mobley j, and **Zhang HG** (2009) Induction of myeloid-derived suppressor cells by tumor exosomes. *International Journal of Cancer*, 124:2621-33
54. Liu y, Shah S, Xiang X, Wang j, Deng Z, Liu C, Zhang I, Wu j, Edmonds T, Jambor C, Kappes J, and **Zhang HG**. (2009) COP9 associated CSN5 regulates exosomal protein deubiquitination and sorting. *American Journal of Pathology*, 174:1415-25
55. Deng ZB, Liu Y, Liu C, Xiang X, Wang J, Cheng Z, Shah SV, Zhang S, Zhang L, Zhuang X, Michalek S, Grizzle WE, **Zhang HG**. *Hepatology.* 2009 Nov;50(5):1412-20. (**Impact Factor: 10.885 the #1 hepatology journal**)
56. Deng ZB, Poliakov A, Hardy RW, Clements R, Liu C, Liu Y, Wang J, Xiang X, Zhang S, Zhuang X, Shah SV, Sun D, Michalek S, Grizzle WE, Garvey T, Mobley J, **Zhang HG**. *Diabetes.* 2009 Nov;58(11):2498-505. (**2010 impact factor of 8.889, ranking it 5th out of 116 journals in the category "Endocrinology & Metabolism"**)
57. Liu Y, Xiang X, Zhuang X, Zhang S, Liu C, Cheng Z, Michalek S, Grizzle W, **Zhang HG**. *Am J Pathol.* 2010 May;176(5):2490-9
58. Sun D, Zhuang X, Xiang X, Liu Y, Zhang S, Liu C, Barnes S, Grizzle W, Miller D, **Zhang HG**. *Mol Ther.* 2010 Sep;18(9):1606-14
59. Xiang X, Liu Y, Zhuang X, Zhang S, Michalek S, Taylor DD, Grizzle W, **Zhang HG**. *Am J Pathol.* 2010 Oct;177(4):1606-10.
60. Zhang HG, Grizzle WE. Exosomes and cancer: a newly described pathway of immune

- suppression. **Clin Cancer Res**. 2011 Mar 1;17(5):959-64.
- 62 Howcroft TK, et Al., Zhang HG. Vesicle transfer and cell fusion: Emerging concepts of cell-cell communication in the tumor microenvironment. *Cancer Biol Ther*. 2011 Aug 1;12(3):159-64
- 63 Mignot G, Chalmin F, Ladoire S, Rebe C, Ghiringhelli F. Zhang, HG Tumor exosome-mediated MDSC activation. *Am J Pathol*. 2011 Mar;178(3):1403-4
64. Zhuang X, Xiang X, Grizzle W, Sun D, Zhang S, Axtell RC, Ju S, Mu J, Zhang L, Steinman L, Miller D, Zhang HG. Treatment of brain inflammatory diseases by delivering exosome encapsulated anti-inflammatory drugs from the nasal region to the brain. **Mol Ther**. 2011 19(10):1769-79
- 65 Cai Y, et Al., Pivotal role of dermal IL-17-producing yo T cells in skin inflammation. **Immunity**. 2011 28;35(4):596-610 (Impact Factor: 24.221).
- 66 Xiang X, Zhuang X, Ju S, Zhang S, Jiang H, Mu J, Zhang L, Miller D, Grizzle W, Zhang HG. miR-155 promotes macroscopic tumor formation yet inhibits tumor dissemination from mammary fat pads to the lung by preventing EMT. **Oncogene**. 2011 4;30(31):3440-53 (2010 impact factor 7.414)
- 67 Zhuang X, Xiang X, Grizzle W, Sun D, Zhang S, Axtell RC, Ju S, Mu J, Zhang L, Steinman L, Miller D, Zhang HG: Treatment of brain inflammatory diseases by delivering exosome encapsulated anti-inflammatory drugs from the nasal region to the brain. **Mol Ther**. 2011 19(10):1769-79
- 68 Deng Z, Pardi R, Cheadle W, Xiang X, Grizzle W, Miller D, MountzJ, and Zhang HG. (2011) Plant homologue constitutive photomorphogenesis 9 (COP9) signalosome subunit CSN5 regulates innate immune responses in macrophages. **Blood**, 2011 5;117(18):4796-804.
- 69 Xiang X, Zhuang X, Ju S, Zhang S, Jiang H, Mu J, Zhang L, Miller D, Grizzle W, Zhang HG: miR-155 promotes macroscopic tumor formation yet inhibits tumor dissemination from mammary fat pads to the lung by preventing EMT. **Oncogene**. 2011 4;30(31):3440-53.
- 70 Schutz C, Hoves S, Halbritter D, Zhang HG, Mountz JD, Fleck M. Alloantigen specific deletion of primary human T cells by Fas ligand (CD95L)-transduced monocyte-derived killer-dendritic cells. *Immunology*. 2011 May;133(1):115-22
- 71 Zhang, HG, and W. Grizzle. Exosomes and Cancer: A Newly Described Pathway of Immune Suppression **Clin Cancer Res**; 2011 17(5); 959-64.
- 72 Gunn L, at. Al, Opposing roles for complement component C5a in tumor progression and the tumor microenvironment. *J Immunol*. 2012 Sep 15;189(6):2985-94.
- 73 Zhang HG, Zhuang X, Sun D, Liu Y, Xiang X, Grizzle W. Exosomes and immune surveillance of neoplastic lesions: *Biotech Histochem*. 2012 Apr;87(3):161-8.
- 74 Xiang X, Zhuang X, Ju S, Zhang S, Jiang H, Mu J, Zhang L, Miller D, Grizzle W, Zhang HG. Grainyhead transcription factor, Grhl2, determines the epithelial phenotype of breast cancers and plays a key role in epithelial-to-mesenchymal transition. *Plos One*, 2012;7(12).
- 75 Zhang HG, Editor-in-Chief, "Emerging Concepts of Tumor Exosome-Mediated Cell-Cell Communication", **Springer Science**, 2012, ISBN 1461436966
- 76 Wang Q, Zhuang X, Mu J, Deng ZB, Jiang H, Xiang X, Wang B, Yan J, Miller D, Zhang HG.: Delivery of therapeutic agents by nanopartides made of grapefruit-derived lipids. **Nat Commun**. 2013;4:1867.
- 77 Ding C, Ma Y, Chen X, Liu M, Cai Y, Hu X, Xiang D, Nath S, Zhang HG, Ye H, Powell D, Yan J. Integrin CD11b negatively regulates BCR signaling to maintain autoreactive B cell tolerance. **Nat Commun**. 2013 Nov 22;4:2813.
- 78 Wang B, Zhuang X, Deng ZB, Jiang H, Mu J, Wang Q, Xiang X, Guo H, Zhang L, Dryden G, Yan J, Miller D, Zhang HG. Targeted drug delivery to intestinal macrophages by bioactive nanovesicles released from grapefruit. **Mol Ther**. 2013 Aug 13. doi :10.1038.
- 79 Deng ZB, Zhuang X, Ju S, Xiang X, Mu J, Wang Q, Hong J, Zhang L, Kronenberg M, Yan J, Miller D, Zhang HG.: Intestinal mucus-derived nanoparticles mediate activation of Wnt/

- catenin signaling plays a role in induction of liver NKT cell anergy. **Hepatology**. 2013 57(3):1250-61.
- 80 Ma Y, Xiang D, Sun J, Ding C, Liu M, Hu X, Li G, Kloecker G, Zhang HG, Yan J. Targeting of antigens to B lymphocytes via CD19 as a means for tumor vaccine development. *J Immunol*. 2013 190(11):5588-99.
- 81 Ju S, Mu J, Dokland T, Zhuang X, Wang Q, Jiang H, Xiang X, Deng ZB, Wang B, Zhang L, Roth M, Welti R, Mobley J, Jun Y, Miller D, Zhang HG.: Grape exosome-like nanoparticles induce intestinal stem cells and protect mice from DSS-induced colitis. **Mol Ther**. 2013 Jul;21(7):1345-57.
- 82 Deng ZB, Zhuang X, Ju S, Xiang X, Mu J, Liu Y, Jiang H, Zhang L, Mobley J, McClain C, Feng W, Grizzle W, Yan J, Miller D, Kronenberg M, Zhang HG.: Exosome-like nanoparticles from intestinal mucosal cells carry prostaglandin E2 and suppress activation of liver NKT cells. *J Immunol*, 2013, 190(7):3579-89.
- 83 Sun D, Zhuang X, Zhang S, Deng ZB, Grizzle W, Miller D, Zhang HG. Exosomes are endogenous nanoparticles that can deliver biological information between cells. **Adv Drug Deliv Rev**. 2013 Mar;65(3):342-7.
- 84 Huang-Ge Zhang and William E. Grizzle. A Novel Pathway of Local and Distant Intercellular Communication that Facilitates the Growth and Metastasis of Neoplastic Lesions. *The American Journal of Pathology* 2014, Volume 184, Issue 1, January, Pages 28-4
- 85 Mu J, Zhuang X, Wang Q, Jiang H, Deng ZB, Wang B, Zhang L, Kakar S, Jun Y, Miller D, Zhang HG. Interspecies communication between plant and mouse gut host cells through edible plant derived exosome-like nanoparticles. *Mol Nutr Food Res*. 2014;58(7):1561-73.
- 86 Jiang H, Wang P, Wang Q, Deng ZB, Zhuang X, Mu J, Zhang L, Wang B, Jun Y, Miller D, Zhang HG. Restoration of miR17/20a in Solid Tumor Cells Enhances the Natural Killer Cell Antitumor Activity by Targeting Mekk2. **Cancer Immunol Res**. 2014; DOI:10.1158/2326-6.
- 87 Jiang H, Wang Q, Zhuang X, Mu J, Deng ZB, Xiang X, Wang B, Yan J, Miller D, Zhang HG.: Quantitatively controlling expression of miR-17~92 determines colon tumor progression in a mouse tumor model, *The American Journal of Pathology* 2014, 86,1355-68
- 88 Beach A, Zhang, HG, Ratajczak M, Kakare S. Exosomes: An overview of biogenesis, composition and role in ovarian cancer. *Journal of Ovarian Research*, 2014, 7, 14-24
- 89 Deng et Al., Zhang HG Enterobacteria-secreted particles induce production of exosome-like S1P- containing particles by intestinal epithelium to drive Th1?-mediated tumorigenesis, **Nature Communications**, 2015;6:6956.
- 90 Wang et Al., Grapefruit-Derived Nanovectors Use an Activated Leukocyte Trafficking Pathway to Deliver Therapeutic Agents to Inflammatory Tumor Sites, **Cancer Research**, 2015;75:2520-9.
- 91 Zhuang X, Teng Y, Samykutty A, Mu J, Deng Z, Zhang L, Cao P, Rong Y, Yan J, Miller D, Zhang HG. Grapefruit-derived nanovectors delivering therapeutic miR17 through an intranasal route inhibit brain tumor progression. **Molecular therapy**, 2016 Feb;24(1):96-105.
- 92 Liu M, Luo F, Ding C, Albeituni S, Hu X, Ma Y, Cai Y, McNally L, Sanders MA, Jain D, Kloecker G, Bousamra M 2nd, Zhang HG, Higashi RM, Lane AN, Fan TW, Yan J. Dectin-1 Activation by a Natural Product 13-Glucan Converts Immunosuppressive Macrophages into an M1-like Phenotype. *J Immunol*. 2015 Oct 9. pii: 1501158
- 93 Zhuang X, Deng ZB, Mu J, Zhang L, Yan J, Miller D, Feng W, McClain CJ, Zhang HG. Ginger- derived nanoparticles protect against alcohol-induced liver damage. **J Extracell Vesicles**. 2015 Nov 25;4:28713. doi: 10.3402/jev.v4.28713.
- 94 Teng Y, Mu J, Hu X, Samykutty A, Zhuang X, Deng Z, Zhang L, Cao P, Yan J, Miller D, Zhang HG. Grapefruit-derived nanovectors deliver miR-18a for treatment of liver

- metastasis of colon cancer by induction of M1 macrophages. *Oncotarget*. 2016 Mar 25
- 95 Zhang HG, Cao P, Teng Y, Hu X, Wang Q, Yeri AS, Zhuang X, Samykutty A, Mu J, Deng ZB, Zhang L, Mobley JA, Yan J, Van Keuren-Jensen K, Miller D. Isolation, identification, and characterization of novel nanovesicles. *Oncotarget*. 2016 May 12.
- 96 Ding C, et al., STAT3 Signaling in B Cells Is Critical for Germinal Center Maintenance and Contributes to the Pathogenesis of Murine Models of Lupus. *J Immunol*. 2016 Jun 1;196(11):4477-86.
- 97 Albeituni SH, et al., Yeast-Derived Particulate 13-Glucan Treatment Subverts the Suppression of Myeloid-Derived Suppressor Cells (MDSC) by Inducing Polymorphonuclear MDSC Apoptosis and monocytic MDSC Differentiation to APC in Cancer. *J Immunol*. 2016 1;196(5):2167-80.
- 98 Zhang HG, Cao P, Teng Y, Hu X, Wang Q, Yeri AS, Zhuang X, Samykutty A, Mu J, Deng ZB, Zhang L, Mobley JA, Yan J, Van Keuren-Jensen K, Miller D. Isolation, identification, and characterization of novel nanovesicles. *Oncotarget*. 2016 Jul 5;7(27):41346-41362.
- 99 Ding C, Chen X, Dascani P, Hu X, Bolli R, Zhang HG, Mcleish KR, Yan J. STAT3 Signaling in B Cells Is Critical for Germinal Center Maintenance and Contributes to the Pathogenesis of Murine Models of Lupus. *J Immunol*. 2016 Jun 1;196(11):4477-86.
- 100 Deng Z, Rong Y, Teng Y, Zhuang X, Samykutty A, Mu J, Zhang L, Cao P, Yan J, Miller D, Zhang HG. Exosomes miR-126a released from MDSC induced by DOX treatment promotes lung metastasis, **Oncogene**. 2017 Feb 2;36(5):639-651.
- 101 Teng Y, Ren Y, Hu X, Mu J, Samykutty A, Zhuang X, Deng Z, Kumar A, Zhang L, Merchant ML, Yan J, Miller DM, Zhang HG. (2017) MVP-mediated exosomal sorting of miR-193a promotes colon cancer progression, **Nat Commun**. 2017 Feb 17;8:14448.
- 102 Deng Z, Rong Y, Teng Y, Mu J, Zhuang X, Tseng M, Samykutty A, Zhang L, Yan J, Miller D, Suttles J, Zhang HG. Broccoli-Derived Nanoparticle Inhibits Mouse Colitis by Activating Dendritic Cell AMP- Activated Protein Kinase, **Mol Ther**. 2017m, Volume 25, Issue 7, p1641-1654,
- 103 Fleming C, Cai Y, Sun X, Jala VR, Xue F, Morrissey S, Wei YL, Chien YH, Zhang HG, Haribabu B, Huang J, Yan J. Microbiota-activated CD103+ DCs stemming from microbiota adaptation specifically drive gammadeltaT17 proliferation and activation, **Microbiome**. 2017 Apr 24;5(1):46.
- 104 Sun X, Cai W, Fleming C, Tong Z, Wang Z, Ding C, Qu M, Zhang HG, Suo J, & Yan J. Innate yoT17 cells play a protective role in DSS-induced colitis via recruitment of Gr-1+CD11b+ myeloid suppressor cells, *Oncolimmunology*, 2017. Volume 6, 2017 - Issue 5.
- 105 Teng T, Ren Y, Sayed M, Hu X, Lei C, Kumar A, Hutchins E, Mu J, Deng Z, Luo C, Sriwastva M, Zhang L, Hsieh M, Reiman R, Bodduluri H, Jun Y, Jala R, Miller D, Keuren-Jensen K, Merchant M, McClain C, Park J, Egilmez NK, and Zhang HG. Plant-derived exosomal microRNAs shape the gutmicrobiota. **Cell Host &Microbe**, 2018, 1934-6069
- 106 Wang Q, Zhuang X, Sriwastva M, Mu J, Teng Y, Deng Z, Zhang L, Sundaram K, Kumar A, Miller D, Yan J, and Zhang HG. Blood exosomes regulate the tissue distribution of grapefruit-derived nanovedor via the CD36 and IGFR1 pathways, **Theranostics**, 2018, 8(18), 4912-4924
- 107 Cai, Yihua Xue, Feng Quan, Chen Qu, Minye Liu, Na Zhang, Yuan Fleming, Chris Hu, Xiaoling Zhang, Huang-Ge, Weichselbaum, Ralph Fu, Yang-Xin Tieri, David Rouchka, Eric C Zheng, Jie Yan, Jun Yan , A Critical Role of the IL-1beta-IL-1R Signaling Pathway in Skin Inflammation and Psoriasis Pathogenesis *J Invest Dermatol*. 2018Aug 15. pii: 0022-02X(18)32478-3. doi: 10.1016/j.jid.2018.07.025.
- 108 Li, Z.Wang, H. Yin, H.Bennett, C. Zhang, H. G. Guo, P. Arrowtail RNA for Ligand Display on Ginger Exosome-like Nanovesicles to Systemic Deliver siRNA for Cancer Suppression. *Sci Rep*. 2018 Oct 2;8(1):14644. doi: 10.1038/s41598-018-32953-7
- 109 Ding C, Sun X, Wu C, Hu X, Zhang HG, Yan J. Tumor Microenvironment Modulates Immunological Outcomes of Myeloid Cells with mTORC1 Disruption. *J Immunol*. 2019 Mar

- 1;202(5):1623-1634. doi: 10.4049/jimmunol.
- 110 Cai Y, Xue, Qin H, Chen X, Liu N, Fleming C, Hu X, Zhang HG, Chen F, Zheng J, Yan J. Differential Roles of the mTOR-STAT3 Signaling in Dermal gammadelta T Cell Effector Function in Skin Inflammation. **Cell Rep.** 2019 Jun 4;27(10):3034-3048.e5. doi:10.1016/j.celrep.2019.05.019.
- 111 Dascani P, Ding C, Kong X, Tieri D, Hu X, Zhang HG, Kitamura D, Balli R, Rouchka EC, Yan J. Transcription Factor STAT3 Serves as a Negative Regulator Controlling IgE Class Switching in Mice. *Immunohorizons.* 2018 Dec 5;2(11):349-362. doi:10.4049/immunohorizons.1800069.
- 122 Sundaram K., et al, Zhang HG, Plant-Derived Exosomal Nanoparticles Inhibit Pathogenicity of Porphyromonas gingivalis, *iScience,* 2019, Nov 22;21:308-327. doi: 10.1016/j.isci.2019.10.032.
- 113 Singh R, Chandrashekharappa S, Bodduluri SR, Baby BV, Hegde B, Katia NG, Hiwale AA, Saiyed T, Patel P, Vijay-Kumar M, Langille MGI, Douglas GM, Cheng X, Rouchka EC, Waigel SJ, Dryden GW, Alatassi H, Zhang HG, Haribabu B, Vemula PK, Jala VR. Enhancement of the gut barrier integrity by a microbial metabolite through the Nrf2 pathway. **Nat Commun.** 2019 Jan 9;10(1):89. doi: 10.1038/s41467-018-07859-7.
- 114 Ding C, Sun X, Wu C, Hu X, Zhang HG, Yan J. Tumor Microenvironment Modulates Immunological Outcomes of Myeloid Cells with mTORC1 Disruption. *J Immunol.* 2019 Mar 1;202(5):1623-1634. doi: 10.4049/jimmunol.1801112. Epub 2019 Jan 21.
- 115 Cai Y, Xue F, Qin H, Chen X, Liu N, Fleming C, Hu X, Zhang HG, Chen F, Zheng J, Yan J. Differential Roles of the mTOR-STAT3 Signaling in Dermal γ T Cell Effector Function in Skin Inflammation. **Cell Rep.** 2019 Jun 4;27(10):3034-3048.e5. doi: 10.1016/j.celrep.2019.05.019.
- 116 Cai Y, Xue F, Quan C, Qu M, Liu N, Zhang Y, Fleming C, Hu X, Zhang HG, Weichselbaum R, Fu YX, Tieri D, Rouchka EC, Zheng J, Yan J. A Critical Role of the IL-1 -IL-1R Signaling Pathway in Skin Inflammation and Psoriasis Pathogenesis. *J Invest Dermatol.* 2019 Jan;139(1):146-156. doi: 10.1016/j.jid.2018.07.025. Epub 2018 Aug 16.
- 117 Min Liu, Zan Tong, Chuanlin Ding, Fengling Luo, Shouzhen Wu, Caijun Wu, Sabrin Albeituni, Liqing He, Xiaoling Hu, David Tieri, Eric C. Rouchka, Michito Hamada, Satoru Takahashi, Andrew A. Gibb, Goetz Kloecker, Huang-Ge Zhang, Michael Bousamra, Bradford G. Hill, Xiang Zhang, and Jun Yan . Transcription factor c-Maf is a checkpoint that programs macrophages in lung cancer. **J Clin Invest.** 2020. .
- 118 Lei C, Mu J, Teng Y, He L, Xu F, Zhang X, Sundaram K, Kumar A, Sriwastva MK, Lawrenz MB, Zhang L, Yan J, Feng W, McClain CJ, Zhang X and Zhang HG. Lemon Exosome-like Nanoparticles-Manipulated Probiotics Protect Mice from C. diff Infection. *iScience.* 2020;23:101571.
- 119 Bridgwater C, Geller A, Hu X, Burlison JA, Zhang HG, Yan J and Guo H. Zr-Labeled Anti-PD-L1 Antibody Fragment for Evaluating In Vivo PD-L1 Levels in Melanoma Mouse Model. *Cancer Biother Radiopharm.* 2020;35:549-557.
- 120 Kumar A, Sundaram K, Mu J, Dryden GW, Sriwastva MK, Lei C, Zhang L, Qiu X, Xu F, Yan J, Zhang X, Park JW, Merchant ML, Bohler HCL, Wang B, Zhang S, Qin C, Xu Z, Han X, McClain CJ, Teng Y and Zhang HG. High-fat diet-induced upregulation of exosomal phosphatidylcholine contributes to insulin resistance. **Nat Commun.** 2021;12:213.
- 121 Lei C, Teng Y, He L, et al. Lemon exosome-like nanoparticles enhance stress survival of gut bacteria by RNase P-mediated specific tRNA decay. *iScience.* 2021;24(6):102511.
- 122 Morrissey SM, Geller AE, Hu X, et al. A specific low-density neutrophil population correlates with hypercoagulation and disease severity in hospitalized COVID-19 patients. **JCI Insight.** 2021;6(9).
- 123 Morrissey SM, Zhang F, Ding C, et al. Tumor-derived exosomes drive immunosuppressive macrophages in a pre-metastatic niche through glycolytic dominant metabolic reprogramming. **Cell Metab.** 2021;33(10):2040-2058 e2010¹⁻¹⁴

- 124 Teng Y, Xu F, Zhang X, et al. Plant-derived exosomal microRNAs inhibit lung inflammation induced by exosomes SARS-CoV-2 Nsp12. **Mol Ther**. 2021;29(8):2424-2440.
- 125 Kumar A, Sundaram K, Mu J, et al. High-fat diet-induced upregulation of exosomal phosphatidylcholine contributes to insulin resistance. **Nat Commun**. 2021;12(1):213.
- 126 Kumar A, Ren Y, Sundaram K, et al. miR-375 prevents high-fat diet-induced insulin resistance and obesity by targeting the aryl hydrocarbon receptor and bacterial tryptophanase (tnaA) gene. **Theranostics**. 2021;11(9):4061-4077.
- 127 Cong M, Tan S, Li S, et al. Technology insight: Plant-derived vesicles-How far from the clinical biotherapeutics and therapeutic drug carriers? **Adv Drug Deliv Rev**. 2022;182:114108.
- 128 Geller AE, Shrestha R, Woeste MR, et al. The induction of peripheral trained immunity in the pancreas incites anti-tumor activity to control pancreatic cancer progression. **Nat Commun**. 2022;13(1):759.
- 129 Jiang M, Li F, Liu Y, et al. Probiotic-derived Nanoparticles Inhibit ALD through Intestinal miR194 Suppression and Subsequent FXR Activation. *Hepatology*. 2022.
- 130 Kumar A, Sundaram K, Teng Y, et al. Ginger nanoparticles mediated induction of Foxa2 prevents high-fat diet-induced insulin resistance. **Theranostics**. 2022;12(3):1388-1403.
- 131 Sriwastva MK, Deng ZB, Wang B, et al. Exosome-like nanoparticles from Mulberry bark prevent DSS-induced colitis via the AhR/COPS8 pathway. **EMBO Rep**. 2022;23(3):e53365.
- 132 Sundaram K, Mu J, Kumar A, et al. Garlic exosome-like nanoparticles reverse high-fat diet induced obesity via the gut/brain axis. *Theranostics*. 2022;12(3):1220-1246.
- 133 Teng Y, Mu J, Xu F, et al. Gut bacterial isoamylamine promotes age-related cognitive dysfunction by promoting microglial cell death. **Cell Host Microbe**. 2022.
134. Xu F, Mu J, Teng Y, et al. Restoring Oat Nanoparticles Mediated Brain Memory Function of Mice Fed Alcohol by Sorting Inflammatory Dectin-1 Complex Into Microglial Exosomes. **Small**. 2022;18(6):e2105385.

b. Published invited papers:

1. Exosomes: a key to delivering genetic materials, (2012). *Advanced Drug Delivery Reviews*. The journal 'Advanced Drug Delivery Reviews' is highly respected (2009 impact factor stands at 12.080) and serves as a leading forum for documenting critical reviews on current or emerging challenges in the design, engineering, and therapeutic applications of advanced drug and gene delivery systems. More information is available on www.elsevier.com/locate/addr.
2. **Zhang HG**, Wang J, Yang X, Hsu HC and Mountz JD. (2004) Regulation of apoptosis proteins in cancer cells by ubiquitin. (Review) *Oncogene* 23(11):2009-2015
3. Mountz JD, Hsu HC, Wu Q, Liu HG, **Zhang HG** and Mountz JM. (2002) Molecular imaging: New applications for biochemistry. *J Cell Biochem* 39(Suppl):162-171.
4. Mountz JD, Hsu H, Matsuki Y and **Zhang HG**. (2001) Apoptosis and rheumatoid arthritis: Past, present and future directions. *Curr Rheumatol Rep* 3:70-78.
5. Hsu HC, Matsuki Y, **Zhang HG**, Zhou T and Mountz JD. (2001) The Fas signaling connection between autoimmunity and embryonic lethality. *J Clin. Immunol* 21(1):1-14.
6. Bilbao G, **Zhang HG**, Contreras JL, Zhou T, Feng M, Saito I, Mountz JD, and Curiel D. (1999) Construction of a recombinant adenovirus vector encoding Fas ligand with a CRE/Loxp inducible system. *Transplant Proc* 1(1-2):792-793.
7. Mountz JD, **Zhang HG**, and Zhou T. (1999) Apoptosis and cell death in the

endocrine system. *Recent Prog. Hormone Res* 54:235-269.

c. Review articles:

1. Zhang, HG and Grizzle WG. (2012) Exosomes: A novel pathway of local and distant intercellular communication that facilitates the growth and metastasis of neoplastic lesions. *Cancer Biomarkers*,
2. Hsu HC, Li L, **Zhang HG**, Mountz JD. (2005) Genetic regulation of thymic involution. *Mech Ageing Dev.* 126(1):87-97
3. **Zhang HG** and Grizzle WE. (2003) Aging, immunity and tumor susceptibility. *Immunol Allergy Clin North Am* 23(1):83-102.
4. Mountz JD, Van Zant G, Allison DB, **Zhang HG** and Hsu HC. (2002) Beneficial influences of systemic cooperation and sociological behavior on longevity. *Mech Ageing Dev* 123(8):963-973.
5. **Zhang HG**, Mountz JD, Fleck M, Zhou T and Hsu HC. (2002) Specific deletion of autoreactive T cells by adenovirus-transfected, Fas ligand-producing antigen-presenting cells. *Immunol Res* 26(1-3):235-246.

d. Books and book chapters:

1. Zhang HG, Editor-in-Chief, "Emerging Concepts of Tumor Exosome-Mediated Cell-Cell Communication", Springer Science, 2013,
2. Mountz JD, Hsu H-C, and Zhang H-G: Origin of the invasive RA synovial fibroblasts: Extrinsic immunologic factors and intrinsic molecular changes in synovial fibroblasts. In: "Biological Therapy in Rheumatology," 2004
3. Zhang HG, Hsu H-C, and Mountz JD: Novel methods to eliminate the immune response to adenovirus gene therapy. In: "Adenoviral Vectors for Gene Therapy." DT Curiel and JT Douglas, Eds. Elsevier Science (USA), 2002, pp 409-428.
4. Zhang HG, Fleck M, Hsu HC, Edwards CK, Curiel DT, Zhou T and Mountz JD: Gene therapy for management of lupus: correction of Fas and Fas ligand-induced apoptosis in murine disease - therapeutic rationale and strategies. In: "Gene Therapy Inflammatory Disease," CH Evans and PD Robbins, Eds., Birkhauser Verlag, 2000.
5. Mountz JD, Hsu HC, Zhang HG and Zhou T: Apoptosis. In: "Current Molecular medicine: Principles of Molecular Rheumatology," GC Tsokos, Ed. Humana Press, Inc. Totowa, JN. 2000.
6. Hsu H-C, Zhang H-G, Zhou T, and Mountz JD: Management of murine lupus by regulation of Fas and Fas ligand apoptosis: therapeutic rationale and strategies. In: "Lupus - Molecular and Cellular Pathogenesis," GM Krammer and GC Tsokos, Eds., Humana Press Inc, 1999.