

Biographical Sketch 2021

Hong Zhou MBBS, PhD,	Professor, Senior Principal Research Fellow, ANZAC Research Institute, The University of Sydney Head, Molecular Bone Biology Laboratory, Bone Research Program, ANZAC Research Institute, Sydney
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A. Education

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Ningxia Medical University, China	MBBS	1983	Medicine
The University of Melbourne, Australia	Ph.D.	1992	Medicine

B. Positions and Employment

1992-1996	NH&MRC Research Officer, Department of Medicine, The University of Melbourne, St. Vincent's Hospital, Australia
1996-2002	NH&MRC Senior Research Officer, Department of Medicine, The University of Melbourne, St. Vincent's Hospital, Australia
2004-2008	Senior Research Fellow, Bone Research Program, ANZAC Research Institute, University of Sydney, Australia
2009-2015	Associate Professor, Principal Research Fellow, ANZAC Research Institute, University of Sydney, Australia
2008-Present	Head, Molecular Bone Biology Laboratory, Bone Research Program, ANZAC Research Institute, University of Sydney, Australia
2015-Present	Professor, Senior Principal Research Fellow, ANZAC Research Institute, Concord Clinical School, University of Sydney, Australia

C. Honors and Distinctions

1987-91	The University of Melbourne Postgraduate Scholarship
1993	Young Investigator Award, 15 th Annual Meeting of the American Society for Bone and Mineral Research (ASBMR), Tampa, Florida, U.S.A
1995	Australian-Chinese Achievers' Award (in the Medicine and Dentistry category)
2007	Best Basic Abstract Award, 17 th Annual Meeting of Australian and New Zealand Bone and Mineral Society (ANZBMS), Queenstown, New Zealand
2009	Best Basic Abstract Award, 19 th Annual Meeting of ANZBMS
2011	Most Outstanding Basic Abstract, 33 th Annual Meeting of the American Society for Bone and Mineral Research (ASBMR), San Diego, CA, USA
2014	International Short Term Visiting Collaborative Research Fellowship, Minzu, University of China, Beijing, China
2016	University Fellow, Hong Kong Baptist University (2015-2016)
2020	Dr Kennedy Y.H. Wong Distinguished Visiting Professorship Scheme 2020, Hong Kong Baptist University (2020-2021)

D. Professional Memberships

1993-present:	Member, American Society for Bone and Mineral Research (ASBMR)
2004-present:	Member, Australian & New Zealand Bone & Mineral Society (ANZBMS)

2007-2016: Board of Directors, International Chinese Musculoskeletal Research Society (ICMRS)

2010-2015: Chair, Board of Directors, ICMRS

2010-2013: Chair, Fundraising Committee, ICMRS

2009-2013: Chair, Women's Committee, ICMRS

2010-pres.: Lifetime member, ICMRS

2017-pres.: Member, European Calcified Tissue Society (ECTS)

E. Major research achievements:

Hong Zhou is a Senior Principal Research Fellow at the University of Sydney and Head of the Molecular Bone Biology Laboratory at the ANZAC Research Institute, Sydney. She has considerable expertise in the cell and molecular biology of musculoskeletal tissues, glucocorticoid signalling, systemic fuel metabolism, and animal models of bone and joint pathology. Over the last 15 years, Hong Zhou has worked continuously in the areas of glucocorticoid physiology and pathophysiology, in particular of glucocorticoid action in bone. She has discovered new mechanisms for glucocorticoid-directed mesenchymal stem cell differentiation and osteoblast signalling, which have advanced our understanding of the role of steroid hormones in bone biology. Since 1996, Her research has been continuously funded through competitive grants from national and international funding agencies. (NHMRC funding: 2 program grants total, \$6.5m, 10 project grants, and 1 idea grant, total \$6.45m. In past 5 years, her research was supported by 5 NHMRC project or idea grants (CIA on 3 and CIB on 2). Over the course of her career, she has published more than 100 scientific reports (52 scientific reports, 12 reviews and 7 book chapters in the past 10 years), many of which appeared in top-ranking journals such as *J Clin Invest*, *J Exp Med*, *PNAS*, *Development*, *Arthritis Rheum*, *JBMR*, *Diabetes*, *Cancer Res*, *JBC*, *Bone Research* and *Bone* with 4,258 citations (1,314 since 2017). Her current h-index is 40 (Scopus March 2021).

Key contribution to research: Hong Zhou has made a number of discoveries that changed our thinking in musculoskeletal research and led to new and exciting avenues of research:

- Discovered that glucocorticoid signalling in osteoblasts and osteocytes promotes the progression of osteoarthritis in the murine DMM model (*Osteoarthr Cartilage* 2019).
- Discovered that osteoblastic glucocorticoid signalling play a central role in Age-related changes in body composition and fuel metabolism (*funded by NHMRC APP1101879 Project Grant*).
- Discovered that osteoblasts play a central role in glucocorticoid-induced bone loss and metabolic disorders (*Bone* 2011, *J Clin Invest* 2012, *Diabetes* 2015, *Endocrinology* 2017, 2018, *Obesity* 2018).
- Discovered that glucocorticoids control mature osteoblasts to direct mesenchymal lineage commitment through Wnt signalling (*JBC* 2008, *Development* 2009, *Calcif Tissue Int* 2009, *Steroids* 2010).
- Discovered endogenous glucocorticoid signalling in osteoblasts and chondrocytes modulates the activity of autoimmune arthritis in mice (*Arthritis & Rheum* 2009, 2011, *Arthritis Res Ther* 2013, *Am J Pathol* 2016, *FASEB J* 2018).
- Established that FSH has an anabolic effect on bone mass (through inhibin A), thus contributing to the highly controversial area of FSH effects on bone (*Cell* 2006, *JBMR* 2010, *PNAS* 2010).
- Co-discovered that both calcium and vitamin D deficiency promote cancer growth in bone (*Bone* 2007, *Cancer Research* 2007, 2010, *Bone* 2010, *Prostate* 2010, *JBMR* 2014).
- Research into the growth and metastasis of osteosarcoma, identifying proteins which are now understood to be important for regulating the behaviour of bone tumours (*Breast Cancer Res. & Treat* 2000, *British J. Cancer* 2001, *Clin Cancer Res* 2001, *Calcif Tissue Int*, 2005).
- Identified, cloned and characterised a novel gene family named Osteoclast Inhibitory Lectin (OCIL) and its related family members (*JBC* 2000, 2001, 2004, 2008, *JBMR* 2004).

Research support (Past 10 years only)

NHMRC Project Grants

- **Idea Grant 1185915 Zhou**, Swarbrick, Kim. Skeletal glucocorticoid signalling is required for high-fat diet-induced bone loss and obesity. POS: 2020 – 2022; \$ 639,166
- **Project Grant 1143980 Zhou**, Seibel, Cooper. The Role of Endogenous Glucocorticoid in the Pathogenesis of Osteoarthritis. POS: 2018 – 2020; \$ 587,697
- **Project Grant 1101879** Cooper, **Zhou**, Seibel, Swarbrick, Lee, Stuart “Age-Related Changes in Body Composition and Fuel Metabolism: The Role of Glucocorticoid Signalling in Osteoblasts” POS: 2016 – 2019; \$ 820,528
- **Project Grant 1087271 Zhou H**, Seibel MJ, Cooper M. “Are Chondrocytes the Target Cells of Glucocorticoid Therapy in Autoimmune Arthritis? POS: 2015 – 2017; \$527,499
- **Project Grant 1086100** Seibel MJ, **Zhou H**, Brauner-Osborne, Swarbrick “How does osteocalcin reverse glucocorticoid-induced dysmetabolism? POS: 2015 – 2017; \$ 615,228
- **Project Grant 632766** Duque, **Zhou**, Drissi, Li “Role of Lamin A/C in Osteoblastogenesis and Age-related Bone Loss” POS: 2010 – 2012; \$ 458,550
- **Project Grant 632818 Zhou**, Seibel, Stewart, Buttgerit, Cooper “The Role of Endogenous Glucocorticoids in Autoimmune Arthritis” POS: 2010 – 2013; \$ 662,600
- **Project Grant 632819** Seibel, **Zhou**, Gundberg, Dunstan “The Role of the Osteoblast in Mediating Glucocorticoid-Induced Metabolic Dysfunction” POS: 2010 – 2013; \$ 788,900
- **Project Grant 632766** Duque, **Zhou**, Drissi, Li “Role of Lamin A/C in Osteoblastogenesis and Age-related Bone Loss”. POS: 2010 – 2012; \$458,550
- **Project Grant 570946 Zhou**, Seibel, Chen, Dunstan “How osteoblast control mesenchymal progenitors”. Period of support: POS: 2009 – 2011; \$425,875

Cancer Council NSW, Seibel, Zheng, Croucher, Zhou, Guise, Dunstan “Novel function of the cytoplasmic VDR in tumour growth” POS: 2013 – 2015; \$ 360,000

Editorial boards, Journal and Grant peer-review:

Hong Zhou is an editorial board member of several journals including Frontiers of Endocrinology, Bone Research, Journal of Orthopaedic Translation, Journal of Orthopaedic Surgery and Research. She also provides ad-hoc peer review for many journals including J Clin Invest, Arthritis & Rheum, J Bone Mineral Res, Bone Research, American J Pathology, Biomaterials, Endocrinology, Bone, Calcified Tissue Intl, Osteoporosis Intl, J Cellular Physiology and others.

Hong Zhou has served as NHMRC reviewer for the past 14 years and was a GRP member in 2008 and 2009. She also served as external reviewer for Versus Arthritis, Arthritis Care and Arthritis Research UK; for Hong Kong RGF and Health since 2014 and Hong Kong Medical Research Fund since 2016.

Professional memberships and activities: Hong Zhou was the Chair of the Board of International Chinese Musculoskeletal Research Society (ICMRS) (2011-2015) and a board member of the ICMRS from 2007-2015. She is member of Strategy Working Group of International Federation of Musculoskeletal Research Societies (IFRMS). She is an active member of number of societies including ASBMR, ANZBMS, IBMS and a lifetime member of ICMRS. She is also a member of the Concord Hospital Research Committee and of the ANZAC Institute’s Advisory Board and Head of Animal Users Group in ANZAC Research Institute. Hong Zhou served as co-chair of the Scientific Program Committee (SPC), 6th International Conference on Osteoporosis and Bone Research (ICOBR) Xi’an, China, 2012, 7th ICOBR, Xiamen, China, 2014 and 10th ICOBR, Hangzhou, China 2010. She serviced as a Co-Chair of Program Committee, International Congress on Advanced Orthopaedic and Clinical Translational Research (OTR) in Shanghai, 2013-2015. She was a SPC member of the number of national and international meetings, e.g. ANZBMS (2014) Inaugural ICMRS-ASBMR International Chinese Musculoskeletal Research Conference, China (2013 and 2015).

Invitations: Hong Zhou has been invited as a speaker at numerous national and international conferences. Recent examples are: Keynote speaker at 7th CHHK international Symposium on Stem

Cell Biology and Regenerative Medicine, Hong Kong, 2017. Plenary speaker, 7th ICOBR 2014 and 9th ICOBR 2018, Invited speaker at ANZBMS- IFMRS-JSBMR international conference, 2017; 12th, 13th and 14th International Congress of Chinese Orthopaedic Association, 2017, 2018 and 2019. 'Meet-The-Professor' session, ASBMR 2015 annual meeting, Seattle, USA. Hong served as session Chair at many domestic and international conferences, e.g. ANZBMS, ICMRS-ASBMR International Musculoskeletal Research Conference 2013 and 2015.

Research training and teaching since 2010: As primary or co-supervisor, Hong Zhou has supervised and supervising 10 PhD students, 3 international exchanging PhD students from China sponsored by CSC scholarship, 1 MPhil student, 1 Honours student, 16 doctoral students from Humboldt University Berlin, Germany (an ongoing collaborative research program), and 12 Summer Research Scholarship students. In addition, her research has attracted 14 International Visiting Fellows, who brought their own funding along.

Publications (past 10 years):

Original contributions

1. Ooi Li, **Zhou H**, Kalak R, Zheng Y, Conigrace A, Seibel MJ, Dunstan CR Vitamin D Deficiency Promotes Human Breast Cancer Growth in a Murine Model of Bone Metastasis. *Cancer Research* 70: 1835-1844, 2010
2. Weber AJ, Li G, Kalak R, Street J, Buttgerit F, Dunstan CR, Seibel MJ and **Zhou H** Osteoblast-targeted Disruption of Glucocorticoid Signalling does not delay intramembranous bone healing. *Steroids* 75: 282-286, 2010.
3. Liu PY, Kalak R, Lue YH, Jia Y, Erkkila K, **Zhou H**, Seibel MJ, Wang C, Swerdloff RS, Dunstan CR. Genetic and Hormonal Control of Bone Volume, Architecture and Remodelling in XXY Mice. *J Bone Miner Res* 25:2148-54, 2010
4. Ooi LL, Zheng Y, **Zhou H**, Trivedi T, Conigrave AD, Seibel MJ and Dunstan CR Vitamin D Deficiency Promotes Growth of MCF-7 Human Breast Cancer in a Rodent Model of Osteosclerotic Bone Metastasis. *Bone* 47:795-803, 2010
5. Allan CM, Kalak R, Dunstan CR, McTavish KJ, **Zhou H**, Handelsman DJ, Seibel MJ. Follicle-stimulating hormone increases bone mass in female mice. *Proc Natl Acad Sci* 52:22629-34, 2010.
6. Simanainen U, Lampinen A, Henneicke H, Brennan T, Harwood TD, Herrmann M, Seibel MJ, Handelsman DJ and **Zhou H** Long-term corticosterone treatment induced lobe-specific pathology in mouse prostate. *Prostate* 71: 289-297, 2011
7. Zheng Y, **Zhou H**, Ooi LL, Dunstan CR, Seibel MJ Vitamin D Deficiency Promotes Prostate Cancer Growth in Bone. *Prostate* 71: 1012-1021, 2011
8. Henneicke H, Herrmann M, Kalak R, Brennan TC, Heinevetter U, oura N, Day RE, Huscher D, Buttgerit F, Dunstan CR, Seibel MJ, **Zhou H**. Corticosterone selectively targets endocortical surfaces by an osteoblast-dependent mechanism. *Bone* 49: 733-742, 2011
9. Georgiou KR, King TJ, Scherer MA, **Zhou H**, Foster BK, Xian CJ. Attenuated Wnt/ β -catenin signalling mediates methotrexate chemotherapy –induced bone loss and marrow adiposity in rats. *Bone* 50: 1223-1233, 2012
10. Kam WW, Meikle SR, **Zhou H**, Zheng Y, Blair JM, Seibel MJ, Dunstan CR, Banati RB. The 18kDa Translocator Protein (Peripheral Benzodiazepine Receptor) Expression in the Bone of Normal, Osteoprotegerin or Low Calcium Diet Treated Mice. *PLoS One* 7 (1): e30623, 2012
11. Cooper MS, **Zhou H**, Seibel MJ. Selective glucocorticoid receptor agonists – glucocorticoid therapy with no regrets? *J Bone Miner Res*. 27: 2238-41, 2012
12. Brennan-Speranza TC, Henneicke H, Gasparini SJ, Blankenstein KI, Heinevetter U, Cogger VC, Svistounov D, Zhang Y, Cooney GJ, Buttgerit F, Dunstan CR, Gundberg C, **Zhou H**, Seibel MJ. Osteoblasts mediate the adverse effects of glucocorticoids on fuel metabolism. *J Clin Invest* 122: 4172-89, 2012

13. Hardy RS, Hulso C, Liu Y, Gasparini SJ, Fong-Yee C, Tu J, Stoner S, Stewart PM, Raza K, Cooper MS, Seibel MJ, **Zhou H**. Characterisation of fibroblast-like synoviocytes from a murine model of joint inflammation. *Arthritis Res Ther* 15: R24, 2013
14. Li A, Hardy R, Stoner S, Tuckermann J, Seibel M, **Zhou H**. Deletion of mesenchymal glucocorticoid receptor attenuates embryonic lung development and abdominal wall closure. *PLoS One* 8: e63578, 2013
15. Spies CM, Wiebe E, Tu J, Li A, Gaber T, Huscher D, Seibel MJ, **Zhou H**, Buttgerit F. Acute murine antigen-induced arthritis is not affected by disruption of osteoblastic glucocorticoid signalling. *BMC Musculoskelet Disord* 15:31 2014
16. Zhao B, Choi JP, Jaehne M, Gao YR, Desai R, Tuckermann J, Zhou H, Handelsman DJ, Simanainen, U. Glucocorticoid receptor in prostate epithelia is not required for corticosteroid-induced epithelial hyperproliferation in the mouse prostate. *Prostate* 74:1068-1078, 2014
17. Zheng Y, Chow SO, Boerner, K, Basel D, Mikuscheva A, Kim S, Fong-Yee C, Trivedi T, Buttgerit F, Sutherland RL. **Zhou H**, Seibel MJ. Direct Cross-Talk between Cancer and Osteoblast Lineage Cells Fuels Metastatic Growth in Bone via Auto-Amplification of IL-6 and RANKL Signaling Pathways. *J Bone Miner Res* 29: 1938-49, 2014
18. Tu J, Henneicke H, Zhang Y, Stoner S, Cheng TL, Schindeler A, Chen D, Tuckermann J, Cooper MS, Seibel MJ, **Zhou H**. Disruption of Glucocorticoid Signalling in Chondrocytes Delays Metaphyseal Fracture Healing but does not Affect Normal Cartilage and Bone Development. *Bone* 69: 12-22, 2014
19. Gao YR, Walters KA, Desai R, **Zhou H**, Handelsman DJ, Simanainen U. Androgen receptor inactivation resulted acceleration in pubertal mammary gland growth, up-regulation of ER α expression and Wnt/ β -catenin signalling in female mice. *Endocrinology* 155: 4951-4963, 2014
20. Zheng Y, Basel D, Chow SO, Fong-Yee C, Kim S, Buttgerit F, Dunstan CR, **Zhou H**, Seibel MJ. Targeting IL-6 and RANKL signalling inhibits prostate cancer growth in bone. *Clin Exp Metastasis* 8: 921-933, 2014
21. Kong X, Yu J, Bi J, Qi H, Di W, Wu L, Wang L, Zha J, Lv S, Zhang F, Li Y, Hu F, Liu F, **Zhou H**, Liu J, Ding G. Glucocorticoids transcriptionally regulate miR-27b expression promoting body fat accumulation via suppressing the browning of white adipose tissue. *Diabetes* 64:393-404, 2015
22. Wang T, Li J, Jin Z, Wu F, Li Y, Wang X, **Zhou H**, Zhou Q. Dynamic Frequency of Blood CD4⁺CD25⁺ Regulatory T Cells in Rats with Collagen-induced Arthritis. *Korean J Physiol Pharmacol*. 19:83-88, 2015
23. Zheng LZ, Cao HJ, Chen SH, Tang T, Fu WM, Huang L, Chow DH, Wang YX, Griffith JF, He W, **Zhou H**, Zhao W, Zhang G, Wang XL, Qin L. Blockage of Src by specific sirna as a novel therapeutic strategy to prevent destructive repair in steroid-associated osteonecrosis in rabbits. *J Bone Miner Res* 30:2044-2057, 2015
24. Bermeo S, Vidal C, **Zhou H**, Duque G. Lamin A/C acts as an essential factor in mesenchymal stem cell differentiation through the regulation of the dynamics of the Wnt/ β -catenin pathway. *J Cell Biochem* 116: 2344-2353, 2015
25. Tu J, Zhang Y, Kim S, Wiebe E, Spies CM, Buttgerit F, Cooper MS, Seibel MJ, **Zhou H**. Transgenic Disruption of Glucocorticoid Signaling in Osteoblasts Attenuates Joint Inflammation in Collagen Antibody-Induced Arthritis. *Am J Pathol* 186: 1293-1301, 2016
26. Gasparini SJ, Weber MC, Henneicke H, Kim S, **Zhou H**, Seibel MJ. Continuous corticosterone delivery via the drinking water or pellet implantation: A comparative study in mice. *Steroids* 116: 76-82, 2016
27. Trivedi T, Zheng Y, Fournier PGJ, Murthy S, John S, Schillo S, Dunstan CR, Mohammad KS, **Zhou H**, Seibel MJ, Guise TA. The vitamin D receptor is involved in the regulation of human breast cancer cell growth via a ligand-independent function in cytoplasm. *Oncotarget* 8:26687-26701, 2017.

28. Henneicke H, Li J, Kim S, Gasparini SJ, Seibel MJ, **Zhou H**. Chronic Mild Stress Causes Bone Loss via an Osteoblast-Specific Glucocorticoid-Dependent Mechanism. *Endocrinology* 158: 1939-1950, 2017
29. Zheng Y, Trivedi T, Lin RCY, Fong-Yee C, Nottle R, Manibo J, Chen Y, Hossain M, Horas K, Dunstan CR, **Zhou H**, Seibel MJ. Loss of the vitamin D receptor in human breast and prostate cancers strongly induces cell apoptosis through down-regulation of Wnt/ β -catenin signalling. *Bone Research* 5: 170123, 2017 doi:10.1038/boneres.2017.23
30. Tu J, Stoner S, Fromm P, Wang T, Chen D, Tuckermann J, Cooper MS, Seibel MJ, **Zhou H**. Endogenous Glucocorticoid Signaling in Chondrocytes Attenuates Joint Inflammation and damage. *FASEB J* 32: 478-487, 2018
31. Yang D, Anderson P, Barratt K, Trilian R, **Zhou H**, Morris H, Atkins GJ. Both ligand and VDR expression levels critically determine the effect of $1\alpha,25$ -dihydroxyvitamin-D3 on osteoblast differentiation. *J Steroid Biochem Mol Biol* 177:83-90, 2018
32. Lv Y, Yu J, Sheng Y, Huang M, Kong X, Di W, Liu J, **Zhou H**, Liang H, Ding G. Glucocorticoids suppressing the browning of adipose tissue via miR-19b in male mice. *Endocrinology* 159: 310-322, 2018
33. Yu J, Lv Y, Di W, Liu J, Kong X, Di W, Sheng Y, Huang M, Lv S, Qi H, Gao M, Liang H, Kim S, Fu Z, **Zhou H**, Ding G. MiR-27b-3p Regulation in Browning of Human Visceral Adipose Related to Central Obesity. *Obesity* 26:387-396, 2018
34. Sattler J, Tu J, Stoner S, Buttgerit F, Seibel MJ, **Zhou H**, Cooper MS. Role of 11β -HSD type 1 in Abnormal HPA axis activity during immune-mediated arthritis. *Endocr Connect* 7:385-394, 2018
35. Kim S, Foong D, Cooper MS, Seibel MJ, **Zhou H**. Comparison of blood sampling methods for plasma corticosterone measurements in mice associated with minimal stress-related artefacts. *Steroids* 135:69-72, 2018
36. Chen Y, Wang D, Peng H, Chen X, Han X, Yu J, Wang W, Liang L, Liu Z, Zheng Y, Hu J, Yang L, Li J, **Zhou H**, Cui X, Li F. Epigenetically upregulated oncoprotein PLCE1 drives esophageal carcinoma angiogenesis and proliferation via activating the NF- κ B signaling pathway and VEGF-C/ Bcl-2 expression. *Mol Cancer* 18:1-19, 2019
37. Gasparini SJ, Swarbrick MM, Kim S, Thai LJ, Henneicke H, Cavanagh LL, Tu J, Weber MC, **Zhou H**, Seibel MJ. Androgens sensitise mice to glucocorticoid-induced insulin resistance and fat accumulation. *Diabetologia* doi.org/10.1007/s00125-019-4887-0, 2019
38. Jørgensen CV, **Zhou H**, Seibel MJ, Bräuner-Osborne H. Label-free dynamic mass redistribution analysis of endogenous adrenergic receptor signaling in primary preadipocytes and differentiated adipocytes. *J Pharmacol Toxicol Methods* 97: 59-66, 2019
39. Jørgensen CV, Gasparini SJ, Tu J, **Zhou H**, Seibel MJ, Bräuner-Osborne H. Metabolic and skeletal homeostasis are maintained in vull locus GPRC6A knockout mice. *Sci Rep* 9: 5995, 2019
40. Horas K, Zheng Y, Fong-Yee C, Macfarlane E, Manibo J, Chen Y, Qiao J, Gao M, Haydar N, McDonald MM, Croucher PI, **Zhou H**, Seibel MJ. Loss of the vitamin D receptor in human breast cancer cells transition and skeletal colonisation. *J Bone Miner Res* 34: 1721-1732, 2019
41. Tu J, Zhang P, Zhe J, Henneicke H, Li J, Kim S, Swarbrick MM, Wu Y, Little CB, Seibel MJ, **Zhou H**. Disruption of glucocorticoid signaling in osteoblasts attenuates age-related surgically induced osteoarthritis. *Osteoarthritis Cartilage* 27: 1518-1525, 2019
51. Chen Y, Xin H, Peng H, Shi Q, Li M, Yu J, Tian Y, Han X, Chen X, Zheng Y, Hu J, Huang X, Liu Z, Huang X, **Zhou H**, Cui X, Li F. Hypomethylation-linked activation of PLCE1 impedes autophagy and promotes tumorigenesis through MDM2-mediated ubiquitination and destabilization of p53. *Cancer Res* 80:2175-2189, 2020
52. Henneicke H, Kim S, Swarbrick MM, Li J, Gasparini SJ, Thai J, Foong D, Cavanagh LL, Fong-Yee C, Karsten E, Lin RCY, Cooper MS, **Zhou H**, Seibel MJ. Skeletal glucocorticoid signalling determines leptin resistance and obesity in aging mice. *Molecular Metabolism* 42: 101098, 2020

Reviews

53. Buttgerit F, Straub RH, Seibel MJ, **Zhou H** Exogenous and endogenous glucocorticoids in rheumatic diseases. *Arthritis & Rheum* 63: 1-9, 2011
54. Zheng Y, **Zhou H**, Dunstan CR, Sutherland R, Seibel MJ The role of the bone microenvironment in skeletal metastasis. *Journal of Bone Oncology* 2: 47-57, 2013
55. Seibel MJ, Cooper MS, **Zhou H** Glucocorticoid-induced osteoporosis: mechanisms, management and future perspectives. *The Lancet Diabetes & Endocrinology* 1: 59-70, 2013
56. **Zhou H**, Cooper MS, Seibel MJ Endogenous glucocorticoids and bone. *Bone Research*, 2:107-119, 2013
57. Jing-bao Li, Xiao Lin, **Zhou H** Glucocorticoid and bone. *Chin J Osteoporosis & Bone Miner Res*, 6:283-292, 2013
58. Henneicke H, Gasparini SJ, Brennan-Speranza TC, **Zhou H**, Seibel MJ. Glucocorticoids and bone: local effects and systemic implications. *Trends Endocrinol Metab.* 25: 197-211, 2014
59. Cooper MS, Seibel MJ, **Zhou H** Glucocorticoids, bone and energy metabolism. *Bone* 82: 64-68, 2015
60. Horas K, Zheng Y, **Zhou H**, Seibel MJ. Animal models for breast cancer metastasis to bone: opportunities and limitations. *Cancer Invest* 33: 459-468, 2015
61. **Zhou H**, Seibel MJ. Osteoblasts and global energy metabolism-beyond osteocalcin. *Nat Rev Rheumatol.* doi:10.1038/nrrheum.2017.35 (2017)
62. Hardy R, **Zhou H**, Seibel MJ and Cooper MS. Glucocorticoids and bone: consequences of endogenous and exogenous excess and replacement therapy *Endocrine Reviews* 39: 519-548, 2018
63. Su N, Yang J, Xie Y, Du X, Chen H, **Zhou H**, Chen L. Bone function, dysfunction and its role in diseases including critical illness. *Int J Biol Sci* 15: 776-787, 2019
64. Macfarlan E, Seibel MJ, **Zhou H**. Arthritis and the role of endogenous glucocorticoids. *Bone Research* 8:33 2020

Book Chapters

65. Zheng Y, Seibel MJ, **Zhou H**. Methods in Bone Biology: Cancer and Bone. In *Osteoporosis Research: Animal Models*, Gustavo D & Ken W (eds). Springer pp 83-92, 2011
66. Zheng Y, Seibel MJ, **Zhou H**. Animal models and evaluation of cancer bone metastasis. In *Orthopaedic Medicine: From bedside to Bench to Bedside*. Qin L (ed). Peoples' Medical Publishing House, pp 170-176, 2013.
67. Tu J and **Zhou H**. Genetically modified animal models and bone research. In *Orthopaedic Medicine: From bedside to Bench to Bedside*. Qin L (ed). Peoples' Medical Publishing House, pp 186-193, 2013
68. Tu J and **Zhou H**. Genetically modified animal models in bone and joints research. In *Murine models for Bone and joint disease*. Chen D & Jing HT (Eds), **Zhou H** (Co-ed). China Press of Traditional Chinese Medicine, ISBN: 978-7-5132-4413-8, 2017
69. **Zhou H**, Cooper MS and Seibel MJ. *Chapter 39*: Basic and clinical aspects of glucocorticoid action in bone. In *Principles of Bone Biology* 4th Edition. Bilezikian J, Martin TJ, Clemens T and Rosen C (eds). Elsevier pp 915-933, 2019
70. Kim S, Macfarlan E, Seibel MJ, **Zhou H**. Bone Metabolism. In *Encyclopedia of Molecular Pharmacology*, Offermanns S and Rosenthal W (eds.) Springer, Berlin, DOI: 10.1007/978-3-030-21573-6_31-1, 2020
71. Kim S, Macfarlan E, Seibel MJ, **Zhou H**. Joint development and genetic joint Diseases. In *Encyclopedia of Bone Biology*, Mone Zaidi (ed.) Elsevier, ISBN 978-0-12-814082-6, p. 718-725, 2020

PATENTS:

Zhou H, Gillespie MT, Hu Y, Kartsogiannis V and Ng KW. “Inhibitor of osteoclast precursor formation.” Australian Patent (*No. 780470*) 2005. International Publication Number WO 01/05964 A1

Wang X, Ling Q, Wang N, **Zhou H** and Cao H. “Application of Icaritin as a drug on prevention of Alzheimer's Disease” China Patent (*ZL 201310362101.9*) 2015.