JIANNAN ZHANG (张剑南)

Associate Research Fellow at Sichuan University. I am also employed as a Post-doctoral Fellow in Wang yajun (王亚军) Lab at Sichuan University (四川大学).

I am broadly interested in Avian Physiology, Endocrinology and Metabolism, and Transgenesis in chicken.

RESEARCH EXPERIENCE

present | 2021
Associate Research Fellow
Sichuan University — Sichuan University
• 2021-present, Associate Research Fellow, The College of Life Sciences

present | 2017
Post-doctoral Fellow
Sichuan University — Sichuan University

2021 | 2017
Assistant Research Fellow
Sichuan University — Sichuan University
• 2017-2021, Assistant Research Fellow, The College of Life Sciences

EDUCATION

2017 | 2011
PhD., Cell Biology
Sichuan University — Sichuan, CN

2011 | 2007
B.S., National Base of Life Science & Biotechnology Education
Sichuan University — Sichuan, CN

TEACHING EXPERIENCE

2023 | 2019
Developmental biology (发育生物学)
Undergraduate level class, The College of Life Sciences — Sichuan University
• Undergraduate level class

2021
Cell biology (细胞生物学)
Undergraduate level class, The College of Life Sciences — Sichuan University
• Undergraduate level class

GRANTS

2024 | 2023
热应激影响家鸡肝脏脂质代谢的调控机制解析(2023NSFSC0230)
主持, CNY ￥200,000, 四川省自然科学基金

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For more information, please contact me via email.

SKILLS

Wet-lab

- Molecular cloning
- Functional analysis
- IHC/ISH/FISH/Co-IP/Chip-Seq...
- Gene-editing with CRISPR/Cas9
- PGCs culture and Microinjection

Dry-lab

- RNA-Seq data analysis
- scRNA-Seq data analysis
- Highly skilled in R and Bash.

*Made with the R package **pagedown**.*

Last updated on 2023-01-06.

2021 | 2020

垂体激素ACTH调控家鸡肝脏糖脂代谢的机制探究 (2020T130439)

主持, CNY ￥180,000, 中国博士后科学基金特别资助

2021 | 2019

多不饱和脂肪酸调控家鸡肝脏脂肪生成的机制解析（省重） (2019YJ0017)

主持, CNY ￥100,000, 四川省科学技术厅-应用基础研究

家鸡GPR120受体介导多不饱和脂肪酸对肝脏脂质代谢的调节效应探究 (31802056)

主持, CNY ￥300,000, 国家自然科学基金青年项目

PUBLICATIONS

2023

Cholecystokinin (CCK) and its receptors (CCK1R and CCK2R) in chickens: functional analysis and tissue expression

Poultry Science. 2023, 102 (1), 102273. doi: 10.1016/j.psj.2022.102273

• Yiping, Wan; Qiuyang, Deng; Zhichun, Zhou; Yue, Deng; **Jiannan, Zhang**; Juan, Li;Yajun, Wang*;

2022

A gene expression atlas of Lohmann white chickens

bioRxiv. 2022. doi: 10.1101/2022.07.30.500160

• **Jiannan Zhang**#, Xinglong Wang, Can Lv, Yiping Wan, Xiao Zhang, Juan Li, Yajun Wang*
• preprint

Characterization of the Chicken Melanocortin 5 Receptor and its Potential Role in Regulating Hepatic Glucolipid Metabolism

Frontiers in physiology. 2022, 2101. doi: 10.3389/fphys.2022.917712

• Xiao Zhang#, Jiancheng Su#, Tianjiao Huang, Xinglong Wang, Chenlei Wu, Jing Li, Juan LI, **Zhang, Jiannan***, Yajun Wang*

Characterization of CRH-Binding Protein (CRHBP) in chickens: molecular cloning, tissue distribution and investigation of its role as a negative feedback regulator within the hypothalamus–pituitary–adrenal axis

Genes. 2022, 13(10), 1680. doi: 10.3390/genes13101680

• Yiping Wan, Zheng Zhang, Dongliang Lin, Xinglong Wang, Tianjiao Huang, Jiancheng Su, **Jiannan Zhang**, Juan Li, Yajun Wang*

Characterization of Chicken A2A-Adrenoceptor: Molecular Cloning, Functional Analysis, and Its Involvement in Ovarian Follicular Development.

Genes. 2022, 13 (7), 1113. doi: 10.3390/genes12040489

• Jiang, B.#; Cao, B.; Zhou, Z.; Li, Z.; Lv, C.; **Zhang, J.**; Zhang, H.; Wang, Y.; Li, J.*;

Evidence for Neuropeptide W Acting as a Physiological Corticotropin-Releasing Inhibitory Factor in Male Chickens

Endocrinology . 2022, 163 (7), bqac073. doi: 10.1016/j.psj.2021.101445

• Liu, M.#; Bu, G.#; Wan, Y.; **Zhang, J.**; Mo, C.; Li, J.; Wang, Y.*;

LncEDCH1 improves mitochondrial function to reduce muscle atrophy by interacting with SERCA2

Molecular Therapy-Nucleic Acids. 2022, 27: 319-334. doi: 10.1016/j.psj.2021.101445

• Cai, B.[#]; Ma, M.[#]; Zhang, J.; Wang, Z.; Kong, S.; Zhou, Z.; Lian, L.; **Zhang, J.**; Li, J.; Wang, Y.; Li, H.[*]; Zhang, X.; Nie, Q.[*];
• Impact Factor = 10.18

2021

Neuropeptide S (NPS) and its receptor (NPSR1) in chickens: cloning, tissue expression, and functional analysis

Poultry Science. 2021, 100 (12), 101445. doi: 10.1016/j.psj.2021.101445

• Chao Fang[#], **Jiannan Zhang[#]**, Yiping Wan, Zejiao Li, Feiyang Qi, Yuanhao Dang, Juan Li, Yajun Wang[*];

Molecular Cloning and Functional Characterization of Three 5-HT Receptor Genes (HTR1B, HTR1E, and HTR1F) in Chickens

Genes. 2021, 12(6): 891. doi: 10.3390/genes12060891

• Caiyun Sun, Yang Qiu, Qin Ren, Xiao Zhang, Baolong Cao, Yi Zou, Juan Li, **Jiannan Zhang[*]**, Yajun Wang;

Single-Cell RNA Sequencing Analysis of Chicken Anterior Pituitary: A Bird' s-Eye View on Vertebrate Pituitary

Frontiers in physiology. 2021, 12. doi: 10.3389/fphys.2021.562817

• **Jiannan Zhang[#]**, Can Lv[#], Chunheng Mo, Meng Liu, Yiping Wan, Juan Li[*], Yajun Wang[*];
• Impact Factor = 4.566

Characterization of Four Orphan Receptors (GPR3, GPR6, GPR12 and GPR12L) in Chickens and Ducks and Regulation of GPR12 Expression in Ovarian Granulosa Cells by Progesterone

Genes. 2021, 12(4): 489. doi: 10.3390/genes12040489

• Li, Z.; Jiang, B.; Cao, B.; Zhang, Z.; **Zhang, J.**; Li, J.; Huang, Y.[*]; Wang, Y.[*];

Characterization of four urotensin II receptors (UTS2Rs) in chickens

Peptides. 2021, 138: 170482. doi: 10.1016/j.peptides.2020.170482

• Cui, L.[#], Lv, C.[#], **Zhang, J.**, Li, J.[*], & Wang, Y.[*];

2020

The Asp298Asn polymorphism of melanocortin-4 receptor (MC4R) in pigs: evidence for its potential effects on MC4R constitutive activity and cell surface expression

Animal Genetics. 2020, 51(5):694-706. doi: 10.1111/age.12986

• **Zhang, J[#]**; Li, J[#]; Wu, C; Hu, Z; An, L; Wan, Y; Fang, C; Zhang, X; Li, J[*]; Wang, Y[*];
• Impact Factor = 2.841

Melanocortin Receptor 4 (MC4R) Signaling System in Nile Tilapia

International Journal of Molecular Sciences. 2020, 21(19):7036. doi: 10.3390/ijms21197036

• Liu, Tianqiang; Deng, Yue; Zhang, Zheng; Cao, Baolong; Li, Jing; Sun, Caiyun; Hu, Zhixing; **Zhang, Jiannan**[*]; Li, Juan; Wang, Yajun[*];
• Impact Factor = 4.556

Characterization of a novel thyrotropin-releasing hormone receptor, TRHR3, in chickens

Poultry Science. 2020, 99(3):1643-1654. doi: 10.1016/j.psj.2019.10.062

• Li, Xiaoxiao[#]; Li, Zhengyang[#]; Deng, Yue; **Zhang, Jiannan**; Li, Juan[*]; Wang, Yajun[*];

Characterization of the neuropeptide FF (NPFF) gene in chickens: evidence for a single bioactive NPAF peptide encoded by the NPFF gene in birds

Domestic Animal Endocrinology. 2020, :106435. doi: 10.1016/j.domaniend.2020.106435

• Chen, J[#]; Huang, S[#]; **Zhang, J**; Li, J[*]; Wang, Y[*];

2019

Arginine vasotocin (AVT)/mesotocin (MT) receptors in chickens: Evidence for the possible involvement of AVT-AVPR1 signaling in the regulation of oviposition and pituitary prolactin expression

General and Comparative Endocrinology. 2019, 281:91-104. doi: 10.1016/j.ygcen.2019.05.013

• Wu, Chao; Lv, Can; Wan, Yiping; Li, Xiaoxiao; **Zhang, Jiannan**[*]; Li, Juan; Wang, Yajun[*];

Regulation of Pituitary Cocaine-and Amphetamine-Regulated Transcript Expression and Secretion by Hypothalamic Gonadotropin-Releasing Hormone in Chickens

Frontiers in physiology. 2019, 10:. doi: 10.3389/fphys.2019.00882

• Mo, Chunheng; Lv, Can; Huang, Long; Li, Zhengyang; **Zhang, Jiannan**; Li, Juan[*]; Wang, Yajun[*];

Endothelins (EDN1, EDN2, EDN3) and their receptors (EDNRA, EDNRB, EDNRB2) in chickens: Functional analysis and tissue distribution

General and comparative endocrinology. 2019, 283:113231. doi: 10.1016/j.ygcen.2019.113231

• Liu, Haikun; Luo, Qin; **Zhang, Jiannan**; Mo, Chunheng; Wang, Yajun[*]; Li, Juan[*];

Identification of a Novel Functional Corticotropin-Releasing Hormone (CRH2) in Chickens and Its Roles in Stimulating Pituitary TSHβ Expression and ACTH Secretion

Frontiers in Endocrinology. 2019, 10:595. doi: 10.3389/fendo.2019.00595

• Bu, Guixian[#]; Fan, Jie[#]; Yang, Ming; Lv, Can; Lin, Yin; Li, Jinxuan; Meng, Fengyan; Du, Xiaogang; Zeng, Xianyin[*]; **Zhang, Jiannan**; Juan Li; Yajun Wang[*]

2018

Characterization of the Apelin/Elabela Receptors (APLNR) in Chickens, Turtles, and Zebrafish: Identification of a Novel Apelin-Specific Receptor in Teleosts

Frontiers in endocrinology. 2018, 9:756. doi: 10.3389/fendo.2018.00756

• **Zhang, Jiannan**; Zhou, Yawei; Wu, Chenlei; Wan, Yiping; Fang, Chao; Li, Jing; Fang, Wenqian; Yi, Ran; Zhu, Guoqiang; Li, Juan[*]; Yajun Wang[*]

The orphan G protein-coupled receptor 25 (GPR25) is activated by Apelin and Apela in non-mammalian vertebrates

Biochemical and Biophysical Research Communications. 2018, 501(2):408-414. doi: 10.1016/j.bbrc.2018.04.229

• **Zhang, Jiannan**[#]; Wan, Yiping[#]; Fang, Chao; Chen, Junan; Ouyang, Wangan; Li, Juan[*]; Wang, Yajun[*];

Characterization of neuromedin U (NMU), neuromedin S (NMS) and their receptors (NMUR1, NMUR2) in chickens

Peptides. 2018, 101:69-81. doi: 10.1016/j.peptides.2017.12.022

• Wan, Yiping[#]; **Zhang, Jiannan**[#]; Fang, Chao; Chen, Junan; Li, Jing; Li, Juan[*]; Wu, Chenlei; Wang, Yajun[*];

2017

The interaction of MC3R and MC4R with MRAP2, ACTH, α-MSH and AgRP in chickens

Journal of Endocrinology. 2017, 234(2):155-174. doi: 10.1530/JOE-17-0131

• **Zhang, Jiannan**; Li, Xin; Zhou, Yawei; Cui, Lin; Li, Jing; Wu, Chenlei; Wan, Yiping; Li, Juan[*]; Wang, Yajun[*];
• Impact Factor = 4.706

Molecular characterization of neuropeptide Y (NPY) receptors (Y1, Y4 and Y6) and investigation of the tissue expression of their ligands (NPY, PYY and PP) in chickens

General and comparative endocrinology. 2017, 240:46-60. doi: 10.1016/j.ygcen.2016.09.005

• Gao, Shunyu[#]; **Zhang, Jiannan**[#]; He, Chen; Meng, Fengyan; Bu, Guixian; Zhu, Guoqiang; Li, Juan[*]; Wang, Yajun[*];

Characterization of melanin-concentrating hormone (MCH) and its receptor in chickens: Tissue expression, functional analysis, and fasting-induced up-regulation of hypothalamic MCH expression

Gene. 2017, 615:57-67. doi: 10.1016/j.gene.2017.03.009

• Cui, Lin; Lv, Can; **Zhang, Jiannan**; Mo, Chunheng; Lin, Dongliang; Li, Juan[*]; Wang, Yajun[*];

2016

Molecular characterization of three NPY receptors (Y2, Y5 and Y7) in chickens: Gene structure, tissue expression, promoter identification, and functional analysis

General and Comparative Endocrinology. 2016, 236:24-34. doi: 10.1016/j.ygcen.2016.04.019

• He, Chen[#]; **Zhang, Jiannan**[#]; Gao, Shunyu; Meng, Fengyan; Bu, Guixian; Li, Juan[*]; Wang, Yajun[*];

2014

Identification and characterization of the free fatty acid receptor 2 (FFA2) and a novel functional FFA2-like receptor (FFA2L) for short-chain fatty acids in pigs: Evidence for the existence of a duplicated FFA2 gene (FFA2L) in some mammalian species

Domestic animal endocrinology. 2014, 47:108-118. e1. doi: 10.1016/j.domaniend.2013.10.004

• **Zhang, J**; Cheng, S; Wang, Y[*]; Yu, X; Li, J[*];

- **Synthesis and biological evaluation of novel benzamide derivatives as potent smoothened antagonists**
  Bioorganic & medicinal chemistry letters. 2014, 24(5):1426-1431. doi: 10.1016/j.bmcl.2014.01.006
  • Wu, Tian-Ming; Wang, Dao-Cai; Xiang, Pu; **Zhang, Jian-Nan**; Sang, Ya-Xiong; Lin, Hong-Jun; Chen, Jie; Xie, Gang; Song, Hang; Zhao, Ying-Lan*;

- **Glucagon-like peptide (GCGL) is a novel potential TSH-releasing factor (TRF) in Chickens: I) Evidence for its potent and specific action on stimulating TSH mRNA expression and secretion in the pituitary**
  Endocrinology. 2014, 155(11):4568-4580. doi: 10.1210/en.2014-1331
  • Huang, Guian; He, Chen; Meng, Fengyan; Li, Juan; **Zhang, Jiannan**; Wang, Yajun*;

CONFERENCE PRESENTATIONS

2017 - **黑皮质素系统在家鸡能量平衡中的作用机理解析**
四川省细胞生物学会2017年度学术大会 — Chengdu, CN

2011 - **家鸡促甲状腺激素受体(cTSHR)的克隆、剪切变体鉴定及其功能分析**
第十六次全国动物遗传育种学术讨论会系列学术报告会 — Yangzhou, CN