曲鲁江 教授

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曲鲁江 简历

1975年2月17日出生于新疆，1997年毕业于塔里木农垦大学兽医学院，现就职中国农业大学，动物科技学院动物遗传育种与繁殖系家禽，博士生导师，农业部家禽品质监督检验测试中心副主任、质量负责人、检测室主任，中国畜牧兽医学会家禽学分会理事，《中国畜牧杂志》遗传育种部分的主编兼杂志副主编，《生物多样性》杂志编委，主持“ 十二五” 国家科技支撑项目一项、国家自然科学基金三项，参加或子课题主持十余项国家级及省部级课题。获得省部级奖励 5 项，并发表 SCI 论文 40 余篇，其中以第一或通讯作者发表 SCI 论文 30多篇，累计影响因子达60以上，获得发明专利3项，申请发明专利 4 项。培育蛋鸡新品种6个，并通过国家新品种审定。

1、家禽产业技术研发

参加了“大午金凤”、“农大5号”、“农大3号”、“新杨白”、“新杨绿”、“北京油鸡”等蛋鸡品种的选育及推广，并通过国家畜禽新品种审定。并因此获得了国家科技进步二等奖、北京市科学技术一等奖、安徽省科技进步二等奖等奖励。通过以上科

研工作，在科学技术的研发、推广和应用上创造了相应的价值，对国内外同类研究也有一定的促进作用

2、家禽品质性状形成的分子基础

找到了决定鸡绿壳蛋形成的分子机制，这是迄今为止第一个被发现的决定鸟类蛋壳颜色的基因和突变。已在PLoS Genetics上发表。

3、家禽的抗病遗传育种

鸡对禽流感和马立克氏病的抗病性研究，找到了与鸡抗病相关的部分基因和标记，其可以作为鸡抗病育种的候选标记。已发表在PLoS One，Immunogenetics，Poultry Science等SCI杂志上。

4、家禽遗传多样性

利用分子生物学手段，分析了我国78个地方鸡种和26个地方鸭种的遗传多样性。已发表在多篇SCI论文。

5、家禽的基因组研究

国内外鸡种的全基因组拷贝数变异和插入/缺失突变，已发表在BMC genomics等杂志上。

教育经历：

2005.3-2007.3，瑞典乌普萨拉大学，进化生物学中心，博士后，导师， Hans Ellegren

2001/9 - 2004/7，中国农业大学，动物遗传育种与繁殖，博士，导师：杨宁

1998/9 - 2001/7，新疆农业大学，兽医微生物及免疫学，硕士，导师：单文鲁

1993/9 - 1997/7，塔里木农垦大学，兽医，学士，导师：喻华英

工作经历：

2004/7 - 至今，中国农业大学，动物科技学院，教授

1997/7 - 1998/6，新疆阿勒泰畜牧学校，兽医系，助教

主要主持科研项目及人才计划项目情况：

1、国家自然科学基金面上项目:利用全基因组关联分析鉴定抗鸡白痢的候选基因，2018.1-2022.12

2、国家自然科学基金面上项目:洪山鸡垂尾性状的遗传基础研究，2016.1-2019.12

3、2012年入选教育部新世纪优秀人才

4、国家科技支撑项目，2011BAD28B03、优质高产高效家禽新品种（系）选育与关键技术研究及示范、2011/01-2015/12、1359万、正在进行、主持。

5、现代农业产业技术体系北京市创新团队，CARSTP、家禽团队遗传育种功能研究室主任及岗位科学家、2011/01-2016/12、420万、正在进行、主持。

6、国家自然科学基金青年基金项目，30500357、鸡Mx基因的变异分析及与禽流感抗病力的相关性研究、2006/01-2008/12、25万元、已结题、主持。

First author (co-first author) and corresponding author publications

1. Wang Q, Pi J, Pan A, Shen J, **L. Qu.** A novel sex-linked mutant affecting tail formation in Hongshan chicken. Sci Rep. 2017 Aug 30;7(1):10079.
2. Wang Q, Mank JE, Li J, Yang N, **L. Qu.**Allele-Specific Expression Analysis Does Not Support Sex Chromosome Inactivation on the Chicken Z Chromosome. Genome Biol Evol. 2017 Mar 1;9(3):619-626.
3. Nie C, Zhang Z, Zheng J, Sun H, Ning Z, Xu G, Yang N, **L. Qu.** Genome-wide association study revealed genomic regions related to white/red earlobe color trait in the Rhode Island Red chickens. BMC Genet. 2016 Aug 5;17(1):115.
4. Zhang Z, Nie C, Jia Y, Jiang R, Xia H, Lv X, Chen Y, Li J, Li X, Ning Z, Xu G, Chen J, Yang N, **L. Qu.** Parallel Evolution of Polydactyly Traits in Chinese and European Chickens. PLoS One. 2016 Feb 9;11(2):e0149010.
5. Fu, D., D. Zhang, G. Xu, K. Li, Q. Wang, Z. Zhang, J. Li, Y. Chen, Y. Jia and **L. Qu.** Effects of different rearing systems on meat production traits and meat fiber microstructure of Beijing-you chicken. Anim Sci J 86(7): 729-735. 2015.
6. Li, K., L. Lian, N. Yang and **L. Qu.** Temporal expression and DNA hypomethylation profile of CD30 in Marek's disease virus-infected chicken spleens. Poult Sci 94(6): 1165-1169. 2015.
7. Lian, L., D. Zhang, Q. Wang, N. Yang and **L. Qu.** The inhibitory effects of gga-miR-199-3p, gga-miR-140-3p, and gga-miR-221-5p in Marek's disease tumorigenesis. Poult Sci 94(9): 2131-2135. 2015.
8. Sun, H., R. Jiang, S. Xu, Z. Zhang, G. Xu, J. Zheng and**L. Qu.** Transcriptome responses to heat stress in hypothalamus of a meat-type chicken. J Anim Sci Biotechnol 6(1): 6. 2015.
9. Wang, Q., K. Li, D. Zhang, J. Li, G. Xu, J. Zheng, N. Yang and **L. Qu.** Next-Generation Sequencing Techniques Reveal that Genomic Imprinting Is Absent in Day-Old Gallus gallus domesticus Brains. PLoS One 10(7): e0132345. 2015.
10. Yan, Y., N. Yang, H. H. Cheng, J. Song and **L. Qu.** Genome-wide identification of copy number variations between two chicken lines that differ in genetic resistance to Marek's disease. BMC Genomics 16: 843. 2015.
11. Yi, G., J. Yuan, H. Bi, W. Yan, N. Yang and **L. Qu.** In-Depth Duodenal Transcriptome Survey in Chickens with Divergent Feed Efficiency Using RNA-Seq. PLoS One 10(9): e0136765. 2015
12. Zhang, Z., C. Nie, Y. Jia, R. Jiang, H. Xia, X. Lv, Y. Chen, J. Li, X. Li, Z. Ning, G. Xu, J. Chen, N. Yang and **L. Qu.**. Parallel Evolution of Polydactyly Traits in Chinese and European Chickens. PLoS One 11(2): e0149010. 2016.
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1. Wang, Z., **L. Qu**, J. Yao, X. Yang, G. Li, Y. Zhang, J. Li, X. Wang, J. Bai, G. Xu, X. Deng, N. Yang, and C. Wu An EAV-HP insertion in 5' Flanking region of SLCO1B3 causes blue eggshell in the chicken. PLoS Genet. 2013. 9:e1003183.
2. Sun, H., S. Chen, X. Cai, G. Xu, and **L. Qu** Correlation analysis of the total IgY level in hen serum, egg yolk and offspring serum. J Anim Sci Biotechnol. 2013. 4:10.
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5. Lian, L., **L. J. Qu**, J. X. Zheng, C. J. Liu, Y. P. Zhang, Y. M. Chen, G. Y. Xu, and N. Yang Expression profiles of genes within a subregion of chicken major histocompatibility complex B in spleen after Marek's disease virus infection. Poult Sci. 2011.89:2123-2129.
6. Zhang, W., **L. Qu**, G. Xu, L. Lian, J. Zheng, and N. Yang Hypomethylation upregulates the expression of CD30 in lymphoma induced by Marek's disease virus. Poult Sci. 2011. 91:1610-1618.

7. **Qu, L.**, W. Liu, F. Yang, Z. Hou, J. Zheng, G. Xu, and N. Yang Origin and domestication history of Peking ducks deltermined through microsatellite and mitochondrial marker analysis. Sci China C Life Sci. 52:1030-1035. 2009.
8. Berlin, S., **Qu, L.**, Li, X., Yang, N. & Ellegren, H. Positive diversifying selection in avian Mx genes. Immunogenetics. 2008. 60: 689-97.
9. **Qu, L.**, X. Li, G. Xu, K. Chen, H. Yang, L. Zhang, G. Wu, Z. Hou, G. Xu, and N. Yang Evaluation of genetic diversity in Chinese indigenous chicken breeds using microsatellite markers. Sci China C Life Sci. 2006. 49:332-341.
10. **Qu, L.**, X. Li, G. Wu, and N. Yang Efficient and sensitive method of DNA silver staining in polyacrylamide gels. Electrophoresis. 2005. 26:99-101.

Other papers (coauthored)

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3. Han B, Lian L, Li X, Zhao C, **L. Qu,** Liu C, Song J, Yang N. Chicken gga-miR-103-3p Targets CCNE1 and TFDP2 and Inhibits MDCC-MSB1 Cell Migration. G3 (Bethesda). 2016 May 3;6(5):1277-85.
4. Jin S, Moujahid el ME, Duan Z, Zheng J,**L. Qu,** Xu G, Yang N, Chen S. Association of AMPK subunit gene polymorphisms with growth, feed intake, and feed efficiency in meat-type chickens. Poult Sci. 2016 Jul 1;95(7):1492-7.
5. Han B, Lian L, Li X, Zhao C, **Qu L,** Liu C, Song J, Yang N. Chicken gga-miR-130a targets HOXA3 and MDFIC and inhibits Marek's disease lymphoma cell proliferation and migration. Mol Biol Rep. 2016 Jul;43(7):667-76.
6. An, J. Y., J. X. Zheng, J. Y. Li, D. Zeng,**L. J. Qu**, G. Y. Xu, and N. Yang Effect of myofiber characteristics and thickness of perimysium and endomysium on meat tenderness of chickens. Poult Sci 89:1750-1754. 2011.
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9. Hou, Z. C., F. X. Yang, **L. J. Qu**, J. X. Zheng, J. M. Brun, B. Basso, F. Pitel, N. Yang, and G. Y. Xu Genetic structure of Eurasian and North American mallard ducks based on mtDNA data. Anim Genet 43:352-355. 2011.
10. Jie, H., L. Lian, **L. J. Qu**, J. X. Zheng, Z. C. Hou, G. Y. Xu, J. Z. Song, and N. Yang Differential expression of Toll-like receptor genes in lymphoid tissues between Marek's disease virus-infected and noninfected chickens. Poult Sci 92:645-654. 2012.
11. Li, D. F., L. Lian, **L. J. Qu**, Y. M. Chen, W. B. Liu, S. R. Chen, J. X. Zheng, G. Y. Xu, and N. Yang A genome-wide SNP scan reveals two loci associated with the chicken resistance to Marek's disease. Anim Genet 44:217-222. 2012.
12. Li, D. F., W. B. Liu, J. F. Liu, G. Q. Yi, L. Lian,**L. J. Qu**, J. Y. Li, G. Y. Xu, and N. Yang Whole-genome scan for signatures of recent selection reveals loci associated with important traits in White Leghorn chickens. Poult Sci 91:1804-1812. 2012.
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14. Li, G., D. Li, N. Yang, **L. Qu**, Z. Hou, J. Zheng, G. Xu, and S. Chen A genome-wide association study identifies novel single nucleotide polymorphisms associated with dermal shank pigmentation in chickens. Poult Sci. 2013.
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16. Liu, W., D. Li, J. Liu, S. Chen, **L. Qu**, J. Zheng, G. Xu, and N. Yang A genome-wide SNP scan reveals novel loci for egg production and quality traits in white leghorn and brown-egg dwarf layers. PLoS One 6:e28600. 2011.
17. Liu, W. B., S. R. Chen, J. X. Zheng,**L. J. Qu**, G. Y. Xu, and N. Yang Developmental phenotypic-genotypic associations of tyrosinase and melanocortin 1 receptor genes with changing profiles in chicken plumage pigmentation. Poult Sci 89:1110-1114. 2010.

18. Wang, P., J. Zheng, **L. Qu, L.** Lian, G. Xu, and N. Yang Molecular cloning, sequence characterization, SNP detection, and tissue expression analysis of duck FMO3 gene. Mol Cell Biochem 379:141-151. 2013.
19. Yan, Y., G. Yi, C. Sun, **L. Qu**, and N. Yang Genome-wide characterization of insertion and deletion variation in chicken using next generation sequencing. PLoS One 9:e104652. 2014.
20. Yang, X., J. Zheng, **L. Qu**, S. Chen, J. Li, G. Xu, and N. Yang Methylation status of cMHM and expression of sex-specific genes in adult sex-reversed female chickens. Sex Dev 5:147-154. 2011
21. Yang, X., J. Zheng, G. Xu, **L. Qu**, S. Chen, J. Li, and N. Yang Exogenous cMHM regulates the expression of DMRT1 and ER alpha in avian testes. Mol Biol Rep 37:1841-1847. 2011.
22. Yao, J. F., Z. X. Chen, G. Y. Xu, X. L. Wang, Z. H. Ning, J. X. Zheng, **L. J. Qu**, and N. Yang Low-density lipoprotein receptor-related protein 8 gene association with egg traits in dwarf chickens. Poult Sci 89:883-886. 2010
23. Yi, G., W. Liu, J. Li, J. Zheng, **L. Qu**, G. Xu, and N. Yang Genetic analysis for dynamic changes of egg weight in 2 chicken lines. Poult Sci. 2013.
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25. Li, X. Y., **L. J. Qu**, J. F. Yao, and N. Yang Skewed allele frequencies of an Mx gene mutation with potential resistance to avian influenza virus in different chicken populations. Poult Sci 85:1327-1329. 2006.
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27. Yang, X., J. Zheng, R. Na, J. Li, G. Xu, **L. Qu**, and N. Yang Degree of sex differentiation of genetic female chicken treated with different doses of an aromatase inhibitor. Sex Dev 2:309-315. 2008.
28. Wang, X. L., J. X. Zheng, Z. H. Ning,**L. J. Qu**, G. Y. Xu, and N. Yang Laying performance and egg quality of blue-shelled layers as affected by different housing systems. Poult Sci 88:1485-1492. 2009.
29. Berlin, S., **Qu, L.** & Ellegren, H. Adaptive evolution of gamete-recognition proteins in birds. J Mol Evol, 67, 488-96. 2008.