Curriculum Vitae

Haihong Hao, full Professor.
MOA Laboratory for Risk Assessment of Quality and Safety of Livestock and Poultry Products/
National Reference Laboratory of Veterinary Drug Residues, Huazhong Agricultural University, Wuhan, Hubei, 430070, China.
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Academic History

2000.9~2004.6：Huazhong Agricultural University, China, B.V.Sc

2004.6-2010.6：Huazhong Agricultural University, China. Ph.D. Supervisor: Zonghui Yuan.

2008.9-2009.9：Iowa State University, U.S.A, Visiting scholar. Supervisor: Qijing Zhang.

2015.9-2017.1: National Center of Toxicological Research, U.S Food and Drug Administration. Visiting scientist. Supervisor: Carl E. Cerniglia.

Employment Record

2010.07 ~ 2013.12: Assistant professor, Huazhong Agricultural University, full time.

2014.01 ~ 2019.11: Associated professor, Huazhong Agricultural University, full time.

2019.09 ~2020.09: National Natural Science Foundation of China, part time work.

2022.06 ~2024.06: Shihezi University, Part time work.

2019.12 ~ now: Full professor, Huazhong Agricultural University, full time.

Other professional experience

2023~ now: Roster of expert for The joint FAO/WHO expert committee on food additives (JECFA) veterinary drug residue

2021 ~ now： Standing committee Member of Chinese Society for Veterinary Pharmacology and Toxicology.

2020 ~ 2021: Co-chair of Codex Alimentarius Commission (CAC) Task force on Antimicrobial Resistance (TFAMR) COP and GLIS electronic working group

2020 ~ now: Standing committee Member of the Chinese Committee on Antimicrobial Susceptibility Testing (ChiCAST), which is affiliated to the European Committee on Antimicrobial Susceptibility Testing (EUCAST), European Society of Clinical Microbiology and Infectious Disease (ESCMID).

2021~ now: Science editor of Animal Disease.

2021~ now: Guest editor of antibiotic-basel.

Research Projects

1. National Natural Science Foundation of China (NSFC 32172914): Preliminary study on the mechanism of co-resistance of **Campylobacter** to decamethylammonium bromide and erythromycin, 2022~2025. Leader PI.
2. National Natural Science Foundation of China (NSFC 31772791): The dual regulation mechanism of CRISRP-Cas on multidrug resistance and virulence in **Campylobacter jejuni**. 2018~2021. Leader PI
3. National Natural Science Foundation of China (NSFC 31101856): Regulation Mechanism of Cj0440c on antimicrobial resistance and fitness in **Campylobacter**, 2012~ 2014. Leader PI.

4. National Key Research and Development Program (2016YFD0501302)：Establishment of susceptibility breakpoints for pathogens in livestock and poultry. 201601-202012. Leader PI.
5. National Key Research and Development Program(2017YFD0501406)：Novel drug administration technology，2017/07-2020/12. Leader PI
6. MOA program: National plan on the monitoring and surveillance of foodborne antimicrobial resistance from food-producing animal, 2016~ 2022, leader PI .
7. Research fund for young scholars in the Doctoral Program of Higher Education of China (2011014612003): Regulation mechanism of signal transporter protein Cj0448c on antimicrobial resistance and virulence in **Campylobacter**, 2012~2014. Leader PI

Peer-Reviewed Publications

1. **Hao H**, Dai M, Wang Y, Peng D, Liu Z, Yuan Z*. 23S rRNA mutation A2074C conferring high-level macrolide resistance and fitness cost in Campylobacter jejuni. Microb Drug Resist. 2009 Dec;15(4):239-44.
2. **Hao H**, Dai M, Wang Y, Chen D, Yuan Z*. Quantification of mutated alleles of 23S rRNA in macrolide-resistant Campylobacter by TaqMan real-time polymerase chain reaction. Foodborne Pathog Dis. 2010 Jan;7(1):43-9.
3. **Hao H**, Dai M, Wang Y, Huang L, Yuan Z*. Key genetic elements and regulation systems in methicillin-resistant Staphylococcus aureus. Future Microbiol. 2012 Nov;7(11):1315-29.
4. **Hao H**, Cheng G, Dai M, Wu Q, Yuan Z*. Inhibitors targeting on cell wall biosynthesis pathway of MRSA. Mol Biosyst. 2012 Nov;8(11):2828-38.
5. Guo W#, **Hao H#（co-first author）**, Dai M, Wang Y, Huang L, Peng D, Wang X, Wang H, Yao M, Sun Y, Liu Z, Yuan Z*. Development of quinoxaline 1, 4-dioxides resistance in Escherichia coli and molecular change under resistance selection. PLoS One. 2012;7(8):e43322.

6. **Hao H#**, Guo W#, Iqbal Z, Cheng G, Wang X, Dai M, Huang L, Wang Y, Peng D, Liu Z, Yuan Z*. Impact of cyadox on human colonic microflora in chemostat models. Regul Toxicol Pharmacol. 2013 Dec;67(3):335-43.

7. **Hao H#**, Pan H#, Ahmad I, Cheng G, Wang Y, Dai M, Tao Y, Chen D, Peng D, Liu Z, Huang L*, Yuan Z*. Susceptibility breakpoint for enrofloxacin against swine Salmonella spp. **J Clin Microbiol. 2013 Sep;51(9):3070-2.**

8. **Hao H#**, Yuan Z#, Shen Z, Han J, Sahin O, Liu P, Zhang Q*. Mutational and transcriptomic changes involved in the development of macrolide resistance in Campylobacter jejuni. **Antimicrob Agents Chemother. 2013 Mar; 57(3): 1369-78**.

9. **Hao H**, Cheng G, Iqbal Z, Ai X, Hussain HI, Huang L, Dai M, Wang Y, Liu Z, Yuan Z*. Benefits and risks of antimicrobial use in food-producing animals. Front Microbiol. 2014 Jun 12;5:288.

10. **Hao H#**, Yao Junping#, Wu Q, Wei Y, Dai M, Iqbal Z, Wang X, Wang Y, Huang L, Chen D, Tao Y, Liu Z, Yuan Z*. Microbiological toxicity of tilmicosin on human colonic microflora in chemostats. Regul Toxicol Pharmacol. 2015 Oct;73(1):201-8.

11. **Hao H#**, Liu Jie#, Kuang X, Dai M,Cheng G, Wang X, Peng D, Ahmad I, Ren N, Liu Z, Wang Y*, Yuan Z *.Identification of Campylobacter jejuni and determination of point mutations associated with macrolide resistance using a multiplex TaqMan MGB real-time PCR. Journal of Applied Microbiology 2015, 118, 1418~1425.

12. Kuang X, **Hao H***, Dai M, Wang Y, Ahmad I, Liu Z, Zonghui Y*. Serotypes and antimicrobial susceptibility of Salmonella spp. isolated from farm animals in China. Front Microbiol. 2015 Jun 22;6:602.

13. **Hao H#**, Ren N#, Han J, Foley SL, Iqbal Z, Cheng G, Kuang X, Liu J, Liu Z, Dai M*, Wang Y*, Yuan Z*. Virulence and Genomic Feature of Multidrug Resistant Campylobacter jejuni Isolated from Broiler Chicken. Front Microbiol. 2016 Oct 14;7:1605。**IF2021=5.6398**

14. **Hao H**, Sander P, Iqbal Z, Wang Y, Cheng G, Yuan Z*. The Risk of Some Veterinary Antimicrobial Agents on Public Health Associated with Antimicrobial Resistance and their Molecular Basis. Front Microbiol. 2016 Oct 18;7:1626.

15. **Hao H#**, Zhou S#, Cheng G, Dai M, Wang X, Liu Z, Wang Y*, Yuan Z*. Effect of Tulathromycin on Colonization Resistance, Antimicrobial Resistance, and Virulence of Human Gut Microbiota in Chemostats. Front Microbiol. 2016 Apr 8;7:477.

16. Wang J#, **Hao H$^{\#}$ (并列第 1)**, Huang L, Liu Z, Chen D*, Yuan Z*. Pharmacokinetic and Pharmacodynamic Integration and Modeling of Enrofloxacin in Swine for Escherichia coli. Front Microbiol. 2016 Feb 2;7:36.

17. Sang K#, **Hao H$^{\#}$(并列第 1),** Huang L, Wang X*, Yuan Z*. Pharmacokinetic-Pharmacodynamic Modeling of Enrofloxacin Against Escherichia coli in Broilers. Front Vet Sci. 2016 Jan 7;2:80.

18. Shabbir MA, **Hao H* (corresponding author)**,Shabbir MZ, Hussain HI, Iqbal Z, Ahmed S, Sattar A, Iqbal M, Li J, Yuan Z*. Survival and Evolution of CRISPR-Cas System in Prokaryotes and Its Applications. **Front Immunol. 2016 Sep 26;7:375.**

19. Shabbir MA, **Hao H *(共同通讯)**, Shabbir MZ, Wu Q, Sattar A, Yuan Z*. Bacteria vs. Bacteriophages: Parallel Evolution of Immune Arsenals. Front Microbiol. 2016 Aug 17;7:1292.

20. Iqbal Z, Seleem MN, Hussain HI, Huang L, **Hao H (corresponding author)*,** Yuan Z*. Comparative virulence studies and transcriptome analysis of Staphylococcus aureus strains isolated from animals. Sci Rep. 2016 Oct 14;6:35442.

21. Zhang P#, **Hao H#* (co-first author and corresponding author)**, Li J, Ahmad I, Cheng G, Chen D, Tao Y, Huang L, Wang Y, Dai M, Liu Z, Yuan Z*. The Epidemiologic and Pharmacodynamic Cutoff Values of Tilmicosin against Haemophilusparasuis. Front Microbiol. 2016 Mar 22;7:385. **IF2021=5.6398 JCR Q1**

22. J. Nan#，**H. Hao#(co-first author)**，S. Xie，Y. Pan，C. Xi，F. Mao，Z. Liu，L. Huang*，Z. Yuan*. Pharmacokinetic and pharmacodynamic integration and modeling of acetylkitasamycin in swine for Clostridium perfringens. J. vet. Pharmacol. Therap.2017;40:641–65.

23. **Hao H #**, Fang X#, Han J, Foley SL, Wang Y, Cheng G, Wang X, Huang L, Dai M, Liu Z, Yuan Z*. Cj0440c Affects Flagella Formation and In Vivo Colonization of Erythromycin-Susceptible and -Resistant Campylobacter jejuni. Front Microbiol. 2017 Apr 25;8:729. doi: 10.3389/fmicb.2017.00729. eCollection 2017.

24. **Hao H#**, Li F#, Han J, Foley SL, Dai M, Wang X, Wang Y, Huang L, Sun Y, Liu Z, Yuan Z*. Cj1199 Affect the Development of Erythromycin Resistance in Campylobacter jejuni through Regulation of Leucine Biosynthesis. Front Microbiol. 2017 Jan 17;8:16.

25. Li J, **Hao H*(corresponding author)**, Cheng G, Liu C, Ahmed S, Shabbir MAB, Hussain HI, Dai M*, Yuan Z*. Microbial Shifts in the Intestinal Microbiota of Salmonella Infected Chickens in Response to Enrofloxacin. Front Microbiol. 2017 Sep 8;8:1711. **JCR Q1**

26. Li J, **Hao H (corresponding author),** Cheng G, Wang X, Ahmed S, Shabbir MAB, Liu Z, Dai M*, Yuan Z*. The effects of different enrofloxacin dosages on clinical efficacy and resistance development in chickens experimentally infected with Salmonella Typhimurium. Sci Rep. 2017 Sep 15;7(1):11676。

27. Chen T, Cheng G, Ahmed S, Wang Y, Wang X, **Hao H*(corresponding author)** , Yuan Z*. New methodologies in screening of antibiotic residues in animal-derived foods: Biosensors. **Talanta. 2017 Dec 1;175:435-442.**

28. Hussain HI, Iqbal Z, Seleem MN, Huang D, Sattar A, **Hao H* (corresponding author)** , Yuan Z*. Virulence and transcriptome profile of multidrug-resistant Escherichia coli from chicken. Sci Rep. 2017 Aug 21;7(1):8335.

29. Shabbir MA, Wu Q, Shabbir MZ, Sajid A, Ahmed S, Sattar A, Tang Y, Li J, Maan MK, **Hao H*(corresponding author),** Yuan Z*.The CRISPR-cas system promotes antimicrobial resistance in Campylobacter jejuni. Future Microbiol. 2018 Dec;13:1757-1774. doi: 10.2217/fmb-2018-0234. IF5y=3.7550。

30. Muhammad A B Shabbir, Yanping Tang, Zihui Xu, Mingyue Lin, Guyue Cheng, Menghong Dai, Xu Wang, Zhengli Liu, Zonghui Yuan*, Haihong Hao * (corresponding

author ）. The Involvement of the Cas9 Gene in Virulence of Campylobacter jejuni. Frontiers in Cellular and Infection Microbiology. 2018 Aug 20;8:285.

31. Shabbir MAB, Shabbir MZ, Wu Q, Mahmood S, Sajid A, Maan MK, Ahmed S, Naveed U, **Hao H*(**corresponding author**),** Yuan Z*. CRISPR-cas system: biological function in microbes and its use to treat antimicrobial resistant pathogens. Ann Clin Microbiol Antimicrob. 2019 Jul 5;18(1):21. doi: 10.1186/s12941-019-0317-x.

32. **Haihong Hao,** Kuppan Gokulan, Silvia A Piñeiro, Katherine M Williams, Zonghui Yuan, Carl E Cerniglia*, Sangeeta Khare*. Effects of Acute and Chronic Exposure to Residual Level Erythromycin on Human Intestinal Epithelium Cell Permeability and Cytotoxicity. Microorganisms. 2019 Sep 6;7(9). DOI: 10.3390/microorganisms7090325.

33. Jun Li #, **Haihong Hao#(co-first author),** Menghong Dai, Heying Zhang, Jianan Ning, Guyue Cheng, Muhammad Abu Bakr Shabbir, Abdul Sajid, Zonghui Yuan*. Resistance and Virulence Mechanisms of Escherichia coli Selected by Enrofloxacin in Chicken. Antimicrobial Agents and Chemotherapy. 2019 Apr 25;63(5):e01824-18. doi: 10.1128/AAC.01824-18 .

34. Li J, Zhang H, Ning J, Sajid A, Cheng G, Yuan Z, **Hao H*(通讯作者)**. The nature and epidemiology of OqxAB, a multidrug efflux pump. DOI: 10.1186/s13756-019-0489-3. Antimicrob Resist Infect Control. 2019 Feb 22;8:44. IF=6.454. JCR Q1

35. Zihui Xu#, Anxiong Huang#, Xun Luo, Peng Zhang, Lingli Huang, Xu Wang, Kun Mi, Shiwei Fang, Xiao Huang, Jun Li, Zonghui Yuan and **Haihong Hao*** Exploration of Clinical Breakpoint of Danofloxacin for Glaesserella parasuis in Plasma and in PELF. Antibiotics-Basel. 2021 Jul; 10(7): 808. Published online 2021 Jul 2.

36. Anxiong Huang, Shuge Wang, Jinli Guo, Yufeng Gu, Jun Li, Lingli Huang, Xu Wang, Yanfei Tao, Zhenli Liu, Zonghui Yuan, **Haihong Hao***. Prudent Use of Tylosin for Treatment of Mycoplasma gallisepticum Based on Its Clinical Breakpoint and Lung Microbiota Shift. Frontiers in Microbiology, 2021 Sep 9;12:712473.

37. Zahid Iqbal*, Hafiz Iftikhar Hussain, Mohamed N Seleem, Muhammad Abu Bakr Shabbir, Adeel Sattar, Amjad Islam Aqib, Xiuhua Kuang, Awais Ihsan*, **Haihong Hao*.** RNA-seq-based transcriptome analysis of a cefquinome-treated, highly resistant, and virulent MRSA strain. Microb Pathog. 2021 Nov;160:105201. .

38. Hafiz Iftikhar Hussain*, Zahid Iqbal, Mujahid Iqbal, Xiuhua Kuang, Yulian Wang, Lingquan Yang, Awais Ihsan, Amjad Islam Aqib, Qari Muhammad Kaleem, Yufeng Gu, **Haihong Hao**.** Coexistence of virulence and β-lactamase genes in avian pathogenic Escherichia coli. Microb Pathog. 2022 Jan 5;163:105389. doi: 10.1016/j.micpath.2022.105389.

39. Xinyu Dai†, Yufeng Gu†, Jinli Guo, Lingli Huang, Guyue Cheng, Dapeng Peng* and **Haihong Hao***. Clinical Breakpoint of Apramycin to Swine Salmonella and Its Effect on Ileum Flora. International Journal of Molecular Sciences. 2022, 23, 1424. https://doi.org/10.3390/ijms23031424.

40. Anxiong Huang#, Feng Mao#, Lingli Huang, Shuyu Xie, Yuanhu Pan, Wei Qu, Guyue Cheng, Zhenli Liu, Zonghui Yuan, Dapeng Peng*, **Haihong Hao***. PK-PD Modeling and Optimal Dosing Regimen of Acetylkitasamycin against Streptococcus suis in Piglets. Antibiotics (Basel). 2022 Feb 21;11(2):283.

41. Anxiong Huang, Xiao Huang, Zhihao Zhang, Zonghui Yuan, Lingli Huang, Yulian Wang, Yanfei Tao, Dongmei Chen, Zhenli Liu and **Haihong Hao***. Dosing Regimen of Aditoprim and Sulfamethoxazole Combination for the Glaesserella parasuis Containing Resistance and Virulence Genes. Pharmaceutics 2022, 14, 2058.

42. Anxiong Huang, Xun Luo, Zihui Xu, Lingli Huang, Xu Wang, Shuyu Xie, Yuanhu Pan, Shiwei Fang, Zhenli Liu, Zonghui Yuan, **Haihong Hao***.Optimal Regimens and Clinical Breakpoint of Avilamycin Against Clostridium perfringens in Swine Based on PK-PD Study. Front Pharmacol. 2022 Feb 24;13:769539.

43. Shuge Wang, Anxiong Huang, Yufeng Gu, Jun Li, Lingli Huang, Xu Wang, Yanfei Tao, Zhenli Liu, Congming Wu, Zonghui Yuan and **Haihong Hao***. Rational Use of Danofloxacin for Treatment of Mycoplasma gallisep-ticum in Chickens Based on the Clinical Breakpoint and Lung Microbiota shift. Antibiotics (Basel). 2022 Mar 17;11(3):403.

44. Shahzad Rafiq, **Haihong Hao*,** Muhammad Ijaz, Ahmed Raza. Pharmacological Effects of Houttuynia cordata Thunb (H. cordata): A Comprehensive Review. Pharmaceuticals (Basel). 2022 Aug 29;15(9):1079.

45. Yuanling Huang, Wenhui Wang, Zhihao Zhang, Yufeng Gu, Anxiong Huang, Junhao Wang, **Haihong Hao***. Phage Products for Fighting Antimicrobial Resistance. Microorganisms. 2022 Jun 30;10(7):1324.

46. Yufeng Gu#, Xiuhua Kuang#, Abdul Sajid#, Yulian Wang#, Zhimin Zhang, Zihui Xu, Guyue Cheng, Abu Baker Shabbirb, Zonghui Yuan, **Haihong Hao***. Prevalence and mechanism of antimicrobial resistance and pathogenicity of Salmonella isolated from foodborne animal in China. LWT - Food Science and Technology 184 (2023) 114906.

47. Tao Li*, **Haihong Hao**, Xiaolin Hou, Jiang Xia. Editorial: Antimicrobial resistance: agriculture, environment and public health within One Health framework. Front Microbiol. 2023 Nov 1:14:1252134.

48. Shahzad Rafiq, Muhammad AbuBakar Shabbir, Ahmed Raza, Shoaib Irshad, Andleeb Asghar, Muhammad Kashif Maan, Mushtaq Ahmed Gondal, **Haihong Hao*.** CRISPR-Cas System: A new dawn to combat antibiotic resistance. BioDrugs 2024 Apr 11.

Book chapters

1. Book: Salmonella-A re-emerging pathogen. Edited by Maria Teresa Mascellino. Published in London, UK. 2018 IntechOpen. Dr_Microbe/istock. ISBN 978-1-78923-444-2. Chapter6: virulence or fitness of antimicrobial resistant Salmonella. Jun Li, **Haihong Hao*(corresponding author)**, Abdul Sajid, Heying Zhang and Zonghui Yuan.
2. Book: Fighting Antimicrobial Resistance. Edited by Ana Budimir. Published by IAPC publishing, Zagred, Croatia, 2018. ISBN 978-953-56942-6-7. Chapter 16 PK/PD for prediction and contain of antimicrobial resistance. Abdul Sajid, Saeed Ahmed, Muhammad Abu Bakr Shabbir, Muhammad Kashif Maan, Ijaz Ahmed, Li Jun, Zonghui Yuan, and **Haihong Hao*(corresponding author)**.

3. Book: Antimicrobial resistance and virulence common mechanisms, edited by Etienne Giraud, Ivan Rychlik and Axel Cloeckaert. Published in Frontier in Microbiology. 2017 May. ISSN 1664-8714. ISBN 978-2-88945-181-4. DOI 10.3389/978-2-88945-181-4. Chapter10 :Virulence and Genomic Feature of Multidrug Resistant Campylobacter jejuni Isolated from Broiler Chicken. **Haihong Hao#**, Ni Ren#, Jing Han, Steven L. Foley, Zahid Iqbal, GuyueCheng, XiuhuaKuang, Jie Liu, Zhenli Liu, Menghong Dai, Yulian Wang and Zonghui Yuan*.
4. Book: About the Foodborne Pathogen Campylobacter. Edited by Odile Tresse, Avelino Alvarez-Ordonez and Ian F. Connerton. Published in Frontier in Microbiology and Frontier in Cellular and infection Microbiology. ISSN 1664-8714 ISBN 978-2-88945-388-7 DOI 10.3389/978-2-88945-388-7. Chapter 4.4: Characterization of New Genes. Cj0440c Affects Flagella Formation and In Vivo Colonization of ErythromycinSusceptible and -Resistant Campylobacter jejuni. **Haihong Hao#**, Xia Fang#, Jing Han, Steven L. Foley, Yulian Wang, GuyueCheng, Xu Wang, Lingli Huang, Menghong Dai, Zhenli Liu and Zonghui Yuan.Chapter 4.5:Cj1199 Affect the Development of Erythromycin Resistance in Campylobacter jejuni through Regulation of Leucine Biosynthesis. **Haihong Hao#**, Fei Li#, Jing Han, Steven L. Foley, Menghong Dai, Xu Wang, Yulian Wang, Lingli Huang, Yawei Sun, Zhenli Liu and Zonghui Yuan*.
5. Book: Top 10 Contributions on Microbiology. Chapter 6 Bacteria vs. Bacterophages: Parallel Evolution of Immune Arsenals. Published in Avidscience. June 28, 2018。 ISBN: 978-93-88170-12-3. Muhammad Abu Bakr Shabbir, **Haihong hao***, Muhammad Zubair Shabbir, Wu qin, Adeel Sattar and Zonghui Yuan.
6. Book: Top 5 contributions on Immunology: 3nd Edition. Chapter 7 Survival and Evolution of CRSIPR-Cas System in Prokaryotes and its Applications. Published in Avidscience. June 25, 2018. ISBN: 978-93-88170-29-1. Muhammad Abu bakrshabbir, **Haihong Hao***, Muhammad Zubair shabbir, Hafiz iftikhar Hussain, Zahid Iqbal, Saeed Ahmed, Adeel Sattar, Mujahid Iqbal, Jun Li and Zonghui Yuan*.

Oral and Poster presentation in the Academic Conference

1. **Haihong Hao,** Hafiz I. Hussain, Zahid Iqbal, Zonghui Yuan*. Functional Genomics and Transcriptomic of Virulent and Multidrug Resistant Escherichia coli of Poultry Origin. The 4th World Congress and Exhibition on Antibiotics and Antibiotic Resistance" during June 14-15, 2018 at Barcelona, Spain. "31st Euro Global Summit and Expo on Vaccines & Vaccination" which is going to be held during June 14-16, 2018 in Barcelona, Spain. Antibiotics 2018 Organizing Committee Conference Series LLC LTD. Oral Presentation.
2. **Haihong Hao#**, Zhang Peng#, Jun Li, Guyue Cheng, Dongmei Chen, Yanfei Tao, Lingli Huang, Zonghui Yuan*. Epidemiologic and pharmacodynamic cutoff values of tilmicosin against Haemophilusparasuis". 14th International congress of the European Association for Veterinary Pharmacology and Toxicology. June 24-27, 2018 in Wroclaw, Poland. Oral Presentation.
3. **Haihong Hao#**, Muhammad Abu bakr Shabbir, Yanping Tang, Qin Wu, Jun Li, Muhammad Zubair Shabbir, Saeed Ahmed, Adeel Sattar, Muhammad Kashif Maan, and Zonghui Yuan* "Role of CRISPR-cas system on antimicrobial resistance in Campylobacter jejuni. 6th Edition of International Conference on Antibiotics, Antimicrobials & Resistance" during October 11-12, 2018 in Edinburgh, Scotland. Oral Presentation.
4. **Haihong Hao#**, Zihui Xu#, Xun Luo, Lingli Huang, ShuyuXie, Wei Qu, Yuanhu Pan, Xu Wang, Yulian Wang, Guyue Cheng, Zonghui Yuan*. Clinical breakpoint (CBP) of danofloxacin against Haemophilusparasuis in pigs. Ninth International Conference on Antimicrobial Agents in Veterinary Medicine. Rome, Italy from October 16-19, 2018. Oral Presentation.
5. **Haihong Hao**, Shengxi Zhou, Zhenli Liu, Yulian Wang, Zonghui Yuan*. Microbiological Safety of Tulathromycin on Human Gut Flora in Chemostats. Poster Session Title Antimicrobial Resistance in Food-borne and Zoonotic Pathogens. Poster Board Number SUNDAY-403. 116th American Society for Microbiology general meeting, ASM Microbe 2016 and ICAAC 2016, June 16-20, Boston, USA.
6. **Haihong Hao**, Zhangqi Shen, TaradonLuangtongkum, Jing Han, Byeonghwa Jeon, Qijing Zhang*. Mechanisms Involved in the Development of Macrolide Resistance in

Campylobacter jejuni. Poster number Z-054.109thAmerican Society for MicrobiologyGeneral Meeting, Philadelphia. May 24-31, 2009.