世界动物卫生组织
World Organisation for Animal Health

中国兽医药品监察所
China Institute of Veterinary Drug Control
国家动物布鲁氏菌病参考实验室
National Reference Laboratory for Animal Brucellosis

山西农业大学
Shanxi Agricultural University

# WOAH 亚太区布病防控及实验室诊断技术研讨会暨第四届布鲁氏菌病国际研讨会

# WOAH Regional Training Workshop on Brucellosis Control and Laboratory Diagnosis & 4th International Academic Conference on Brucellosis

# 会议手册

# Meeting Manual

**2025 年 8 月 5 日**
**August 5, 2025**

## 一、会议组织 The Conference Organizers

**主办单位：**中国兽医药品监察所

Host Organization: China Institute of Veterinary Drug Control

**协办单位：**山西农业大学

Co-organizer: Shanxi Agricultural University

**支持单位：**世界动物卫生组织

Supporting Unit: World Organisation for Animal Health

## 二、地点时间 Venue and Time

**地点：**北京龙熙维景国际会议中心

Venue: Beijing Longxi View International Conference Center

**地址：**北京市大兴区隆华大街 55 号 7 号楼

Address: Building 7, No. 55 Longhua Street,
Daxing District, Beijing

**时间：**2025 年 8 月 5 日全天会议。

Time: Full-day meeting on August 5, 2025

## 三、日程安排 Agenda

| 时间<br>Time | 主题<br>Theme | 主持人/发言人<br>Moderator/Presenter |
|---|---|---|
| 8:30-9:00 | **签到/Registration** | |
| 9:00-9:30 | 开幕式<br>Welcome remarks | 陈先国 副所长<br>中国兽医药品监察所<br>Dr. Xianguo Chen<br>Deputy Director-General, IVDC |
| 9:00-9:30 | WOAH 代表致辞<br>Speech by the WOAH Representative | 钉田・博文 博士<br>WOAH 亚太区代表处<br>Dr. Hirofumi Kugita<br>Regional Representative, WOAH RRAP |
| | 中国兽医药品监察所领导致辞<br>Speech by the IVDC | 黄伟忠 所长<br>中国兽医药品监察所<br>Dr. Weizhong Huang<br>Director-General, IVDC |
| 9:30-9:40 | **会议合照 Group Photo with All Participants** | |
| 主题 1<br>Theme 1 | **国家及地区布病防控及净化经验**<br>**National and Regional Experiences in Brucellosis Prevention, Control and Elimination** | |
| 9:40-9:55 | 澳大利亚消除牛布鲁氏菌病的成功案例及如何维持易感动物免于感染流产布鲁氏菌<br>Australia's success story on elimination of bovine brucellosis and how it maintains freedom from Brucella abortus in susceptible animals | 罗恩・格兰维尔 博士<br>澳大利亚昆士兰州<br>前首席兽医官<br>Dr. Ron Glanville<br>Former Chief Veterinary Officer for Queensland |
| 9:55-10:10 | 日本牛布鲁氏菌病的根除与自行申报<br>Eradication of bovine brucellosis and self- | 春名・美香 博士<br>日本农林水产省 |

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| | declaration | 动物卫生司<br>Dr. Mika Haruna<br>Animal Health Division, MAFF Japan |
| 10:10-10:25 | 新西兰牛布鲁氏菌的根除工作<br>*Brucella abortus* eradication In New Zealand | 保罗·宾厄姆 先生<br>新西兰第一产业部<br>Mr. Paul Bingham<br>Ministry for Primary Industries, New Zealand |
| 10:25-10:45 | 中国布鲁氏菌病防控概况<br>An overview of Brucellosis Prevention and Control in China | 朱良全研究员<br>中国兽医药品监察所<br>Research Professor Liangquan Zhu, IVDC |
| 10:45-11:00 | 提问环节 (Q & A Session) | |
| 主题 2/<br>Theme 2 | **布病致病机制研究进展**<br>**Progress in Research on the Pathogenic Mechanism of Brucellosis** | |
| 11:00-11:20 | 布鲁氏菌毒力因子致病机制及其在家畜流产中的核心作用<br>The Pathogenic Mechanism of *Brucella* Virulence Factors and Their Core Role in Livestock Abortion | 储岳峰研究员<br>中国农业科学院<br>兰州兽医研究所<br>Research Professor Yuefeng Chu, Lanzhou Veterinary Research Institute, CAAS |
| 11:20-11:40 | 布鲁氏菌生物膜渗透压应激反应的调控机制<br>The Regulatory Mechanism of Osmotic Stress Response in *Brucella* Biofilms | 张辉教授<br>石河子大学动物科学院<br>Professor Hui Zhang, College of Animal Science, Shihezi University |
| 11:40-12:00 | 布鲁氏菌持留菌的发现及 RSH 对其影响的机制研究<br>Discovery of *Brucella* Persisters and Mechanism Research on the Impact of | 靳亚平教授<br>西北农林科技大学<br>Professor Yaping Jin, Northwest A&F University |

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| | RSH on Them | |
| 12:00-14:00 | **午餐/Lunch** | |
| 主题 2/<br>Theme 2 | **布病致病机制研究进展**<br>**Progress in Research on the Pathogenic Mechanism of Brucellosis** | |
| 14:00-14:20 | 生物素合成系统介导布鲁氏菌胞内存活的作用机制研究<br>Research on the Mechanism of Biotin Synthesis System Mediating Intracellular Survival of *Brucella* | 陈启伟研究员<br>中国农业科学院兰州兽医研究所<br>Research Professor Qiwei Chen, Lanzhou Veterinary Research Institute, CAAS |
| 主题 3/<br>Theme 3 | **布病诊断技术新进展**<br>**Recent Advances in Brucellosis Diagnostic Techniques** | |
| 14:20-14:40 | RAVI-CRISPR 检测技术的研发及其在布鲁氏菌病快速诊断中的应用<br>Development of RAVI-CRISPR Detection Technology and Its Application in Rapid Diagnosis of Brucellosis | 谢胜松教授<br>华中农业大学<br>Professor Shengsong Xie, Huazhong Agricultural University |
| 14:40-15:00 | 《动物布鲁氏菌病诊断技术》国家标准（2025 版）技术介绍<br>Introduction to the national standard “Diagnostic Techniques for Animal Brucellosis” (2025 Edition) | 孙明军高级兽医师<br>中国动物卫生与流行病学中心<br>Senior Veterinarian Mingjun Sun, CAHEC |
| 15:00-15:20 | **茶歇/Coffee Break** | |
| 主题 4<br>Theme 4 | **布病流行病学及其他研究进展**<br>**Progress in Brucellosis Epidemiology and Other Research** | |
| 15:20-15:40 | 布鲁氏菌病疾病负担评估及防控策略经济学评价<br>Measuring the burden of brucellosis and the economic value of control strategies | 梅根·布鲁斯 副教授<br>澳大利亚默多克大学<br>Associate Professor Mieghan Bruce Murdoch University, Australia |
| 15:40-16:00 | 内蒙古牛羊布鲁氏菌病与媒介蜱关联性研究<br>Study on the Correlation between Brucellosis in | 格日勒图 教授 |

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| | Cattle and Sheep and Vector Ticks in Inner Mongolia | 内蒙古农业大学<br>Professor Gereltu, Inner Mongolia Agricultural University |
| 16:00-16:20 | 中巴布鲁氏菌病参考实验室结对项目成效<br>Achievements of the Brucellosis Reference Laboratory Twinning Project between China and Pakistan | 穆罕默德·阿布巴卡尔 博士<br>巴基斯坦国家兽医实验室<br>Dr. Muhammad Abubakar<br>National Veterinary Laboratory, Pakistan |
| 16:20-16:35 | 中国布鲁氏菌分离株 MLVA 分型遗传多样性 Meta 分析<br>Meta-Analysis of Genetic Diversity of MLVA Typing of *Brucella* Isolates in China | 朱小洁兽医师<br>中国兽医药品监察所<br>Veterinarian Xiaojie Zhu, IVDC |
| 主题 5 | **学员专题汇报**<br>**Student Special Report** | |
| 16:35-17:10 | 布鲁氏菌病监测中的挑战与困难<br>Challenges and Constraints for Brucellosis Surveillance | 不丹，斐济，菲律宾学员<br>Students from Bhutan, Fiji and the Philippines |
| 17:10-17:30 | 提问环节 (Q & A) | |

# 四、报告嘉宾简介 Introduction of the Reporting Guests

## Ron Glanville

罗恩·格兰维尔博士在澳大利亚的生物安全领域拥有 47 年的职业生涯，曾担任昆士兰州首席生物安全官和首席兽医官等职务。在政府任职期间，他在 30 多次生物安全应急响应中担任领导职务，特别是在布鲁氏菌病和结核病根除行动以及全国牲畜标识系统方面作出突出成就。自 2011 年以来，罗恩创办了一家生物安全咨询公司，为众多行业和政府客户提供高质量的咨询服务。

Dr Ron Glanville has had a 47-year career working in biosecurity in Australia, including the positions of Chief Biosecurity Officer and Chief Veterinary Officer for the State of Queensland. During his time in government, he held leadership positions in more than 30 biosecurity emergency responses, and made outstanding achievements especially in the eradication campaigns against brucellosis and tuberculosis as well as the national livestock identification system. Since 2011 Ron has established a consultancy business in biosecurity, providing quality advice to a range of industry and government clients.

## Mika Haruna


春名·美香博士在日本农林水产省工作，曾负责农场食源性致病菌防控以及与卫生和植物卫生措施相关的贸易规则领域的工作。自 2024 年起，任职于日本农林水产省动物卫生课，并担任国家沟通协调员，主要负责跨境动物疫病、人畜共患病等相关事务。

Dr Haruna worked at Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan mainly in the fields of control of foodborne pathogens on farms and trade rules regarding sanitary and phytosanitary measures. Since 2024, she has been working at the Animal Health Division of MAFF and as a National Focal Point for Communication, in charge of matters relevant to, inter alia, transboundary animal diseases and zoonoses.

## Paul Bingham

保罗·宾厄姆是澳大利亚和新西兰兽医科学家学院流行病学分会会员。他在新西兰初级产业部工作了 20 年，担任过多个职位，工作内容主要涉及外来疫病的调查、监测与应对。目前，担任动物健康调查与监测首席顾问，尤其对疫病暴发调查有浓厚兴趣。

Paul Bingham is a member of the Australian and New Zealand College of Veterinary Scientists epidemiology chapter by examination. Paul has worked for the New Zealand ministry for primary Industries (MPI) for 20 years, in a variety of roles revolving around exotic disease investigation, surveillance and response. Paul's current role is principal adviser animal health investigation and surveillance, and he has a special interest in disease outbreak investigation.

## 朱良全

朱良全，博士，中国兽医药品监察所研究员，WOAH 布鲁氏菌病参考实验室首席专家。现主要从事重要动物细菌性疾病及人畜共患病病原学、标准物质、诊断技术及综合防控研究。第七届中国兽药典委员会委员、中国微生物学会兽医微生物学专业委员会委员、中国防痨协会人畜共患病专业委员会常委。获省部级一等及二等奖 3 项；获国家新兽药证书 8 个；授权国家发明专利 23 项。作为首席专家制修订国家及农业行业标准各 1 项。在 Microb Genom、Vaccine 和 Front Cell Infect Microbiol 等发表论文 100 余篇，参编著作 4 部。

Dr. Liangquan Zhu, a researcher at the China Institute of Veterinary Drug Control, is the chief expert of the WOAH Reference Laboratory for Brucellosis. Zhu is currently mainly engaged in research on etiology, reference materials, diagnostic technologies, and comprehensive prevention and control of important animal bacterial diseases and zoonoses. Zhu serves as a member of the 7th Chinese Veterinary Pharmacopoeia Commission, a member of the Veterinary Microbiology Professional Committee of the Chinese Society for Microbiology, and a standing member of the Zoonoses Professional Committee of the Chinese Anti-Tuberculosis Association. Zhu has won 3 provincial and ministerial first-class and second-class awards, obtained 8 national new veterinary drug certificates, and been granted 23 national invention patents. As the chief expert, Zhu formulated and revised 1 national standard and 1 agricultural industry standard respectively. Zhu has published more than 100 papers in journals such as Microbial Genomics, Vaccine, and Frontiers in Cellular and Infection Microbiology, and participated in compiling 4 works.

## 储岳峰

储岳峰，博士，博士生导师，中国农业科学院兰州兽医研究所研究员，兰州大学教授，新疆农业大学特聘教授。先后入选农业农村部 SN 青年英才、中国农业科学院杰出青年英才、甘肃省领军人才等。主要从事布鲁氏菌病、结核病和支原体病等动物及人兽共患细菌性传染病病原学与流行病学、致病与免疫机制研究及防控技术开发工作。先后主持国家重点研发计划项目课题、国家自然科学基金、甘肃省科技重大专项等国家和省部级项目/课题 16 项，申报并获批疫苗和诊断试剂类国家新兽药注册证书 9 件（成果转化 2575 万元），获甘肃省科技进步一等奖、广东省科技进步一等奖等省部级科技奖励 8 项，制定国家和农业行业标准 5 项，授权发明专利 26 件，参与著作 8 部（主编/译 2 部），以第一或通讯作者发表论文 60 余篇，培养毕业博士生 6 人（含留学生 1 人）、硕士生 26 人，在读博硕士研究生 31 人（含留学生 5 人）。

Yuefeng Chu, Ph.D., doctoral supervisor, researcher at Lanzhou Veterinary Research Institute, Chinese Academy of Agricultural Sciences, professor at Lanzhou University, and distinguished professor at Xinjiang Agricultural University. Chu has been selected into programs such as the SN Youth Talents of the Ministry of Agriculture and Rural Affairs, the Outstanding Youth Talents of the Chinese Academy of Agricultural Sciences, and the Leading Talents of Gansu Province. The main research focuses on the etiology,

epidemiology, pathogenic and immune mechanisms, as well as the development of prevention and control technologies for animal and zoonotic bacterial infectious diseases such as brucellosis, tuberculosis, and mycoplasmosis. Chu has successively presided over 16 national and provincial-level projects/topics, including projects under the National Key Research and Development Program, the National Natural Science Foundation of China, and major scientific and technological projects of Gansu Province. Chu has applied for and obtained 9 national new veterinary drug registration certificates for vaccines and diagnostic reagents (with achievements into 25.75 million yuan). Chu has won 8 provincial and ministerial-level scientific and technological awards, including the first prize of Gansu Provincial Science and Technology Progress Award and the first prize of Guangdong Provincial Science and Technology Progress Award. Chu has formulated 5 national and agricultural industry standards, holds 26 authorized invention patents, and has participated in compiling 8 works (serving as chief editor/translator for 2 of them). Chu has published more than 60 papers as first author or corresponding author in journals such as Microbial Genomics, Vaccine, and Frontiers in Cellular and Infection Microbiology. Chu has supervised 6 graduated doctoral students (including 1 international student) and 26 master's students, and currently supervises 31 doctoral and master's students (including 5 international students).

**张辉**

张辉，教授，博士，博士生导师，兵团畜禽产业技术体系领衔专家、天山英才、兵团英才、兵团中青年科技创新领军人才、兵团高等学校优秀青年教师，石河子大学动物科技学院院长。主要从事人兽共患病防控技术研究。主持省部级以上科研项目 20 余项，发表 SCI 收录论文 80 余篇，兵团科技一等奖 1 项、二等奖 4 项，科技成果转化 2 项。

Hui Zhang, professor, Ph.D., doctoral supervisor, leading expert of the Corps' Livestock and Poultry Industry Technology System, Tianshan Talent, Corps Talent, leading talent in scientific and technological innovation among young and middle-aged people in the Corps, and outstanding young teacher in colleges and universities of the Corps, is currently the Dean of the College of Animal Science and Technology, Shihezi University. Zhang mainly engages in research on prevention and control technologies for zoonoses. Zhang has presided over more than 20 scientific research projects at or above the provincial and ministerial level, published more than 80 SCI-indexed papers, won 1 first prize and 4 second prizes of the Corps Science and Technology Award, and achieved 2 scientific and technological achievement transfers.

## 靳亚平

靳亚平，陕西宝鸡人，博士，西北农林科技大学二级教授，博士生导师。国务院学位委员会第八届兽医学科组成员，农业农村部动物生物技术重点实验室副主任，家畜生物学国家重点实验室（培育） 副主任，三秦学者学术带头人；中国畜牧兽医学会理事；陕西省奶牛产业技术体系首席；灵武两院三基地首席科学家。主要从事家畜感知障碍性疾病防治、动物克隆与基因编辑技术等科研与教学工作。发表学术论文 150 余篇，参加编写教材、专著等 10 部。获得陕西省科技进步一等奖 1 项。

Yaping Jin, born in Baoji, Shaanxi Province, holds a doctoral degree. Jin is a second-level professor and doctoral supervisor at Northwest A&F University. Jin serves as a member of the 8th Veterinary Science Discipline Group of the Academic Degrees Committee of the State Council, deputy director of the Key Laboratory of Animal Biotechnology, Ministry of Agriculture and Rural Affairs, deputy director of the State Key Laboratory of Livestock Biology (in cultivation), and academic leader of the "Sanqin Scholars" program. Jin is also a council member of the Chinese Association of Animal Science and Veterinary Medicine, chief expert of the Shaanxi Dairy Industry Technology System, and chief scientist of the "Two Academies and Three Bases" in Lingwu. Jin's main research and teaching work focuses on the prevention and treatment of livestock perceptual disorder diseases, animal cloning, and gene editing technologies. Jin has published more than 150 academic papers and participated in the compilation of 10 teaching materials and monographs. Jin has won one first prize of the Shaanxi Provincial Science and Technology Progress Award.

## 陈启伟

陈启伟，博士，副研究员，中国农业科学院硕士研究生导师，现就职中国农业科学院兰州兽医研究所畜禽重要人兽共患病团队。国家级动物疫病净化评审专家，牛羊病防治专家，主要从事布鲁氏菌等重要人兽共患细菌病的防控技术及耐药机制、新型诊断技术研发、新型益生菌筛选、防病抗病的功能型微生态新产品的创制等研究。先后主持和参与国家自然科学基金、甘肃省青年科技基金、“十四五”国家重点研发计划等项目课题 10 多项。近五年，围绕重要动物细菌病的综合防控技术研究，发表国家级论文 45 篇，其中以第一或通讯作者在 Journal of Bacteriology 和 The FASEB Journal 等 SCI 杂志发表 10 多篇；获授权国家发明专利 9 项，制定农业行业标准 4 项，完成并申报新兽药证书 2 项，主编译著 4 部，实用新型专利 6 项，软件著作权 3 项，向农业农村部国家疫病预防控制中心提交布病专项防控调研报告 1 份等。

Qiwei Chen, Ph.D., associate researcher, master supervisor of the Chinese Academy of Agricultural Sciences (CAAS), currently works in the Team of Major Zoonoses in Livestock and Poultry at the Lanzhou Veterinary Research Institute, CAAS. Chen is a nationally accredited expert for animal disease eradication assessment and a specialist in the prevention and control of bovine and ovine diseases. Chen's research primarily focuses on the prevention and control technologies and antimicrobial resistance

mechanisms of major zoonotic bacterial diseases such as brucellosis, the development of novel diagnostic technologies, the screening of new probiotics, and the innovation of functional microecological products for disease prevention and resistance. Chen has led or participated in over 10 projects national and provincial research projects, including those funded by the National Natural Science Foundation of China, the Gansu Provincial Youth Science and Technology Fund, and the National Key R&D Program under China's 14th Five-Year Plan. In the past five years, focusing on the research of comprehensive prevention and control technologies for major animal bacterial diseases, Chen has published 45 national-level papers, including more than 10 first-author or corresponding-author articles in SCI journals such as Journal of Bacteriology and The FASEB Journal; Chen has obtained 9 authorized national invention patents, developed 4 agricultural industry standards, completed and applied for 2 new veterinary drug certificates, edited 4 translated works, obtained 6 utility model patents and 3 software copyrights, and submitted 1 special policy research report on brucellosis prevention and control to the National Animal Disease Prevention and Control Center under the Ministry of Agriculture and Rural Affairs.

**谢胜松**

谢胜松，华中农业大学动物科学技术学院、动物医学院基础兽医系教授，博士生导师。主要致力于猪基因编辑与抗病育种研究，研发了高效精准的灵剪基因编辑新工具；创建了基于猪全基因组 CRISPR 文库的高通量功能靶标挖掘技术体系，筛选并鉴定出针对非洲猪瘟、仔猪腹泻等重要疫病的关键抗病靶标；培育了基因编辑抗蓝耳病猪和转乳铁蛋白抗菌猪等育种新材料。相关成果先后发表在 Nat Commun(2 篇）、PLoS Pathog 等国内外行业主流期刊。主持多项科研项目，包括国家万人计划青年拔尖人才项目、国家自然科学基金青年项目、面上项目及“十四五”重点研发计划子课题等。获授权国家发明专利和国际专利多件，参编学术专著 2 项。2020 年获教育部科技进步一等奖和 2024 年获国家技术发明二等奖各 1 项。兼任中国生物化学与分子生物学会农业专业分会青年委员。

Shengsong Xie is a professor and doctoral supervisor in the Department of Basic Veterinary Medicine, College of Animal Science and Technology & College of Veterinary Medicine, Huazhong Agricultural University. Xie's main research focuses on pig gene editing and disease-resistant breeding. Xie has developed a new efficient and precise "Lingjian" gene-editing tool; established a high-throughput functional target mining technology system based on the pig whole-genome CRISPR library, and screened and identified key disease-resistant targets for major diseases such as African swine fever and piglet diarrhea; and bred new breeding materials such as gene-edited blue-ear disease-resistant pigs and lactoferrin-transgenic antibacterial pigs. Relevant achievements have been published in leading domestic and international journals including Nature Communications (2 articles) and PLoS Pathogens. Xie has presided over a number of scientific research projects, including the National Ten-Thousand Talents Program for Young Top Talents, the Youth Project and General Project of the National Natural Science Foundation of China, and sub-projects of the "14th Five-Year Plan" National Key R&D Program. Xie has been granted multiple national invention patents and international

patents, and participated in compiling 2 academic monographs. Xie was awarded the First Prize of Science and Technology Progress by the Ministry of Education in 2020 and the Second Prize of National Technological Invention in 2024. Xie also serves as a youth committee member of the Agricultural Professional Branch of the Chinese Society of Biochemistry and Molecular Biology.

## 孙明军

孙明军，中国农业大学理学博士，副研究员，日本熊本大学和英国帝国理工博士后，现任职于中国动物卫生与流行病学中心，国家动物布鲁氏菌病专业实验室。2014 年起，持续开展全国动物布病专项流行病学调查、布病紧急流调监测、布病无疫区评估等工作，完成上报 20 余份布病流行病学调查报告、防控措施建议等。持续多年开展布病血清学及病原学诊断方法、病原学鉴定及分子流行病学分析等研究工作，构建了我国动物布鲁氏菌流行菌株溯源数据库，参与修订 2025 版《动物布鲁氏菌病诊断技术》国家标准。主持的《动物布鲁氏菌分子溯源和快速确诊技术集成》入选 2023 年中国农业农村重大新技术。获得布病相关发明专利 3 项、国家和行业标准 5 项，发表相关 SCI 及核心期刊文章 30 余篇。

Mingjun Sun, holds a Ph.D. in Science from China Agricultural University and is an associate researcher. He has postdoctoral research experience at Kumamoto University in Japan and Imperial College London in the UK. Currently, Sun works at the China Animal Health and Epidemiology Center, National Professional Laboratory for Animal Brucellosis. Since 2014, Sun has been continuously engaged in national special epidemiological surveys on animal brucellosis, emergency epidemiological investigation and monitoring of brucellosis, and assessment of brucellosis-free areas, completing and submitting more than 20 brucellosis epidemiological investigation reports and suggestions on prevention and control measures. For many years, Sun has been conducting research on serological and etiological diagnostic methods for brucellosis, etiological identification, and molecular epidemiological analysis. Sun has constructed a traceability database for prevalent strains of animal Brucella in China and participated in the revision of the 2025 edition of the national standard Diagnostic Techniques for Animal Brucellosis. The project Integration of Molecular Traceability and Rapid Diagnosis Technologies for Animal Brucella presided over by Sun was selected into the 2023 Major New Agricultural and Rural Technologies in China. Sun has obtained 3 invention patents related to brucellosis, 5 national and industry standards, and published over 30 papers in SCI-indexed and core journals.

## Mieghan Bruce

梅根·布鲁斯是澳大利亚莫道克大学兽医学院生物安全与同一健康中心兽医流行病学副教授，其研究重点是整合流行病学与经济学，探究农业与健康之间的关联。参与了“全球动物疾病责任（GBADs）”项目，致力于量化动物健康问题造成的影响。担任同一健康学术主席、生物安全与同一健康中心联合副主任，以及东盟-澳大利亚同一健康奖学金项目联合负责人。为兽医、动物健康、人类健康政策和生物安全专业的本科及研究生讲授流行病学课程。拥有十多年的兽医临床实践经验，还曾担任联合国粮农组织（FAO）和欧盟发展项目的顾问，负责确定防控动物疾病和人畜共患病相关的成本与收益。

Mieghan Bruce is an Associate Professor in Veterinary Epidemiology at Murdoch University, Australia. Mieghan's research focuses on integrating epidemiology and economics to investigate the links between agriculture and health. Mieghan collaborates on the Global Burden of Animal Diseases (GBADs) program, quantifying the impact of animal health problems. Mieghan is the Academic Chair for One Health, co-Deputy Director Centre for Biosecurity and One Health, and co-lead on the ASEAN-Australia One Health Fellowship program. She teaches epidemiology to undergraduate and postgraduate students enrolled in veterinary, animal health, human health policy and biosecurity courses. With more than ten years of experience in veterinary clinical practice, she has also worked as a consultant for FAO and EU development projects, identifying the costs and benefits associated with controlling livestock and zoonotic diseases.

## 格日勒图

格日勒图，内蒙古农业大学兽医学院教授，博士生导师。曾分别在2008年和2016年日本北海道国立带广畜产大学原虫病研究中心和国立东京农工大学传染病研究中心做访问学者2次。现任“野生动物生物安全管控国家创新联盟”常务理事。包括Frontiers in Microbiology、Frontiers in Veterinary Science和Ticks＆Tick Borne Diseases等国内外期刊上发表学术论文50余篇；授权国家专利2项。获得2022-2023年度神农中华农业科技奖研究类成果三等奖。曾经主持国家自然科学基金项目4项，省部级项目4项，内蒙古自治区自然科学基金3项，内蒙古自治区科技创新引导奖励资金项目1项，国家重点研发“十三五”规划项目子课题1项。

Geriletu is a Professor and doctoral supervisor at the College of Veterinary Medicine, Inner Mongolia Agricultural University. He was a visiting scholar at the Protozoan Disease Research Center of Obihiro University of Agriculture and Veterinary Medicine in Hokkaido, Japan in 2008, and at the Infectious Disease Research Center of Tokyo University of Agriculture and Technology in 2016. He currently serves as an executive director of the National Innovation Alliance for Wildlife Biosecurity Control and Management. Geriletu has published more than 50 academic papers in domestic and international journals, including Frontiers in Microbiology, Frontiers in Veterinary Science and Ticks & Tick-Borne Diseases; and holds 2 national patents. Geriletu won the third prize of the Research Achievement Award in the 2022-2023 Shennong China

Agricultural Science and Technology Award. Geriletu has presided over 4 projects of the National Natural Science Foundation of China, 4 provincial and ministerial-level projects, 3 projects of the Natural Science Foundation of Inner Mongolia Autonomous Region, 1 project of the Science and Technology Innovation Guidance and Incentive Fund of Inner Mongolia Autonomous Region, and 1 sub-project under the National Key Research and Development Program during the 13th Five-Year Plan period.

## Muhammad Abubakar

穆罕默德·阿布巴卡尔，博士，巴基斯坦国家兽医实验室（国家粮食安全和研究部）高级科学干事。主要从事工作：疫情监测，样本采集，流行病学数据收集；帮助畜牧业团队实施项目；监督传染病的实验室诊断；基于分子生物学技术的 TAD 诊断；支持巴基斯坦的实验室；担任 PSDP 项目的项目经理。

Muhammad Abubakar, Ph.D., is a Senior Scientific Officer at the National Veterinary Laboratory (Ministry of National Food Security and Research) of Pakistan. His main work includes: epidemic surveillance, sample collection, and epidemiological data gathering; assisting livestock teams in project implementation; supervising laboratory diagnosis of infectious diseases; transboundary animal disease (TAD) diagnosis based on molecular biology technologies; providing support to laboratories in Pakistan; and serving as the project manager of the PSDP project.

## 朱小洁

朱小洁，中国兽医药品监察所国家动物布鲁氏菌病参考实验室，2022 年毕业于华中农业大学预防兽医学博士和澳大利亚默多克大学兽医流行病学博士。长期从事结核病和布鲁氏菌病流行病学及新型诊断标识与试剂的研究，发表 SCI 收录论文 16 篇。

Xiaojie Zhu, from the National Reference Laboratory for Animal Brucellosis, China Institute of Veterinary Drug Control, obtained a doctor's degree in Preventive Veterinary Medicine from Huazhong Agricultural University and a doctor's degree in Veterinary Epidemiology from Murdoch University, Australia in 2022. Zhu has long been engaged in research on the epidemiology of tuberculosis and brucellosis, as well as new diagnostic markers and reagents, and has published 16 papers indexed by SCI.

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## 七、参会注意事项 Notes for Participants

出席会议人员请提前 10 分钟到会场，进入会场后请关闭手机或调为振动。

Participants are kindly requested to arrive at the venue 10 minutes early. Upon entering, please turn off your mobile phones or switch them to silent/vibration mode.

提示：会议期间严格遵守中央八项规定精神及其实施细则。

# 八、国家/WOAH/FAO 动物布鲁氏菌病参考实验室介绍
# Introduction to the National/WOAH/FAO Reference Laboratory for Animal Brucellosis

## 发展历程 Development History

1952 年，成立布鲁氏菌病专业实验室，开展布病防控技术研究；2015 年获“农业部人畜共患病研究创新团队”；2018 年被认定为“国家动物布鲁氏菌病参考实验室”；2019 年，被认定为“WOAH（原 OIE）布鲁氏菌病参考实验室”；2021 年，被认定为“FAO 布鲁氏菌病参考中心”。

In 1952, a dedicated laboratory for brucellosis was established to conduct research on brucellosis prevention and control technologies. In 2015, it was awarded the "Innovation Team for Zoonoses Research of the Ministry of Agriculture". In 2018, it was designated as the "National Reference Laboratory for Animal Brucellosis". In 2019, it was accredited as the "WOAH (formerly OIE) Reference Laboratory for Brucellosis". In 2021, it was accredited as the "FAO Reference Centre for Brucellosis".

## 主要业绩 Main Achievements

疫苗方面：1969 年研制成功可用于牛、羊、猪等多种动物免疫接种的猪种布鲁氏菌病活疫苗（S2 株），19 世纪 60 年代，利用从国外引进的菌种 A19 株，研制成功布鲁氏菌病活疫苗（A19 株）。

Vaccines: In 1969, the live Brucella suis vaccine (strain S2) was successfully developed, which can be used for immunization of cattle, sheep, pigs and other animals. In the 1960s, the live Brucellosis vaccine (strain A19) was successfully developed using strain A19 introduced from abroad.

检测技术：1958 年建立布病平板凝集试验方法，1959 年建立布病试管凝集试验方法；1982 年研制建立布病全乳环状凝集、补体结合试验和虎红平板凝集方法；21 世纪，先后研制牛布病 iELISA 试剂盒、布病 cELISA 试剂盒、布病抗体检测试纸条、布病荧光偏振试剂盒、羊布鲁氏菌 iELISA 试剂盒等。

Detection technologies: The Brucellosis plate agglutination test method was established in 1958, and the Brucellosis tube agglutination test method was

established in 1959; In 1982, the Brucellosis whole milk ring agglutination test, complement fixation test and rose bengal plate agglutination test were developed and established; In the 21st century, cattle Brucellosis iELISA kit, Brucellosis cELISA kit, Brucellosis antibody detection test strip, Brucellosis fluorescence polarization kit, sheep Brucella iELISA kit and other products have been developed successively.

## 奖章荣誉 Medals and Honors

1978 年，布鲁氏菌活疫苗（S2 株）获全国科技大会表彰；1991 年，中监所获“全国动物布鲁氏菌病防治先进工作单位”；1993 年，布鲁氏菌活疫苗（S2 株）获国家发明二等奖；2002 年，中监所获“全国地方病防治工作先进集体”。

In 1978, the Live Brucella Vaccine (Strain S2) was commended at the National Science and Technology Conference; In 1991, the China Institute of Veterinary Drug Control was awarded the "National Advanced Work Unit for Animal Brucellosis Prevention and Control"; In 1993, the Live Brucella Vaccine (Strain S2) won the Second Prize of National Invention; In 2002, the China Institute of Veterinary Drug Control was awarded the "National Advanced Collective for Endemic Disease Prevention and Control".

## 人才队伍 Talent Team

上世纪六十年代，以谢昕为首的老一辈科学家励精图治，为我所布病科研工作打下良好的基础。经过多年的磨砺，实验室组建成了一支高素质、高效率的创新团队，现有固定工作人员 12 人，其中博士 7 人，硕士 3 人，本科 2 人。在读博士、硕士研究生 8 人。团队主要研究方向为布鲁氏菌病流行病学监测与分析；布鲁氏菌病基础研究以及布鲁氏菌病综合防控技术。

In the 1960s, senior scientists led by Xin Xie worked diligently and laid a solid foundation for the brucellosis research in our institute. After years of refinement, the laboratory has built a high-quality, high-efficiency innovative team. Currently, there are 12 permanent staff members, including 7 with doctoral degrees, 3 with master's degrees, and 2 with bachelor's degrees. There are 8 doctoral and master's students studying here. The team's main research directions include epidemiological surveillance and analysis of

brucellosis, basic research on brucellosis, and comprehensive prevention and control technologies for brucellosis.

**硬件设施 Hardware Facilities**

拥有 1500m² 独立的生物安全 2 级实验室（BSL-2）、120 m2 分子生物学实验室和 ABSL-3 实验室。配备有激光共聚焦显微镜、测序仪、流式细胞仪、ELISA 工作站、多功能酶标仪、荧光偏振检测仪、中高压层析系统、实时荧光 PCR 仪等大型设备。

It has an independent Biosafety Level 2 (BSL-2) laboratory covering 1,500 m², a molecular biology laboratory of 120 m², and an ABSL-3 laboratory. It is equipped with large-scale equipment such as a laser scanning confocal microscope, sequencer, flow cytometer, ELISA workstation, multi-mode microplate reader, fluorescence polarization detector, medium and high-pressure chromatography system, and real-time fluorescent PCR instrument.

**重点工作 Key Work**

围绕布鲁氏菌基因组学、蛋白质组学、分子流行病学、感染与免疫鉴别诊断分子标识、新型疫苗生产用菌种构建与筛选等方面开展科学研究；基于国内布氏菌病流行情况开展免疫、控制与净化综合技术研究，为国家制定防控政策提供技术支撑；开展布病疫苗及诊断制品质量控制和评价，为布病防控提供物质保障；开展布病防控知识宣传和培训，提高基层动物防疫人员技术水平和工作能力。

Scientific research focuses on areas such as Brucella genomics, proteomics, molecular epidemiology, molecular markers for differential diagnosis of infection and immunity, as well as the construction and screening of bacterial strains for developing new vaccines. Based on the prevalence of brucellosis in China, integrated studies are conducted on immunization, control, and purification technologies to provide technical support for formulating national prevention and control policies. Quality control and evaluation of brucellosis vaccines and diagnostic products are implemented to ensure a material foundation for disease prevention and control efforts. Publicity and training on brucellosis prevention and control knowledge are conducted to improve the technical level and work ability of grassroots animal epidemic prevention personnel.

## 国际合作 International Cooperation

实验室被认定为国际组织的参考实验室后，积极开展国际交流，定期组织国际布病大会，多项研发成果被法国、以色列等 FAO/WOAH 布病参考实验室引进使用，并获得高度评价。2022 年 6 月，参考实验室作为母实验室与巴基斯坦结对 WOAH 中-巴结对项目，为巴基斯坦及“一带一路”沿线国家提供布病诊断防控技术和专家咨询服务。

Since being accredited as a reference laboratory by international organizations, the laboratory has actively carried out international exchanges and regularly organized international brucellosis conferences. A number of its R&D achievements have been adopted and used by FAO/WOAH brucellosis reference laboratories in countries such as France and Israel, and have received high acclaim. In June 2022, as the parent laboratory, the Reference Laboratory partnered with Pakistan in the WOAH China-Pakistan Twinning Project, providing brucellosis diagnostic and control technologies as well as expert consulting services for Pakistan and other countries along the "Belt and Road" initiative.

## 发展愿景 Development Vision

今后，实验室将在布病感染与免疫鉴别方法研究、流行病学研究、新型诊断技术研究、防控策略研究等方面开展创新性工作，全面贯彻习近平总书记关于加强国家生物安全风险防控和治理体系建设指示精神，切实做好布病源头防控工作，维护畜牧业生产安全、公共卫生安全和生物安全，为布病防控贡献参考实验室智慧。

Moving forward, the laboratory will carry out innovative work in research on differential methods for brucellosis infection and immunity, epidemiological research, novel diagnostic technologies, and prevention and control strategies. It will fully implement the guiding principlesspirit of General Secretary Xi Jinping's instructions on strengthening the construction of national biosafety risk prevention and control and governance systems. The laboratory will focus on enhancing source-level prevention and control of brucellosis, safeguard the safety of animal husbandry production, public health and biosafety, and contributing scientific expertise of the reference laboratory to brucellosis prevention and control.