



UvA-DARE (Digital Academic Repository)

Antimicrobial drug resistance at the human-animal interface in Vietnam

Nguyen, V.T.

[Link to publication](#)

Citation for published version (APA):

Nguyen, V. T. (2017). Antimicrobial drug resistance at the human-animal interface in Vietnam

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <http://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

APPENDIX

Acknowledgments

Firstly, I would like to thank my promoters **Prof. Constance Schultsz**, **Prof. Jaap Wagenaar** who have put a lot of effort into supervising me and patiently reviewed my thesis. Dear Constance and Jaap, thank you for accepting me as your PhD student. I'm particularly fascinated by your profound knowledge, intellectual scientific intuition as well as your connections with other scientists worldwide. Secondly, I am enormously grateful to my co-promoter, **Dr. Ngo Thi Hoa** who gave me the opportunity to conduct my PhD at the Oxford University Clinical Research Unit (OUCRU) in Vietnam. Dear Hoa, thank you for your motivation and guidance during my PhD journey. I am very thankful for having you as my mentor. You have provided me endless scientific support and precious daily supervision. Thank you for taking care of my PhD project and offering me your warm help that has secured me and motivated me to move on with my PhD. I also would like to thank **Prof. Menno de Jong** for reviewing this thesis as well as for his support and advice in my PhD project.

Many thanks to **Dr. Juan Carrique-Mas**, who has patiently coached me with the epidemiological data analyses. Dear Juan, thank you for your patience, motivation and most importantly friendship. I have learnt from you not only scientific knowledge but also dealing with difficulties and having confidence in science.

I also would like to thank **Prof. Anita Hardon** for her technical supports and useful advices in preparing the questionnaires that used in the study.

I very much appreciated the help of **Mr. James Campbell**, **Mr. Nguyen Van Minh**, **Mrs. Ha Thanh Tuyen**, **Ms. Nguyen Thi Nhung**, **Ms. Hoang Ngoc Nhung**, **Mrs. Tran Thi Bich Chieu** and **Ms. Huynh Ngan Ha** at OUCRU, Vietnam. My PhD could not have been completed without a lot of technical support from all of you.

I would like to say thank you to **Dr. Thai Quoc Hieu**, **Dr. Ho Huynh Mai** at the Sub-Department of Animal Health in Tien Giang as well as **Dr. Nguyen Thi Nhu Mai** and **Dr. Nguyen Duc Duy** at the Preventive Medicine Center in Tien Giang for providing essential and technical support during the sample collection of my PhD project.

APPENDIX

I am extremely grateful to get intensive support from **Dr. Arie van der Ende** and my colleagues at the Academic Medical Center: **Laura, Payal, Niels, Jarne, Willemine, Kim, Leonie, Xiaolin,** and **Martijn**. I also thank colleagues, friends and students whose names I did not mention but have helped me in different ways. It was great fun and pleasure to work, lunch and coffee together with you all. Thank you for providing me many informative and practical supports for my living in the Netherlands. Thank you for listening to my complaints, sharing jokes and helping me with my Dutch questions. Every time I recall, I am delighted and grateful for the friendship I made with you all. I will never forget these beautiful and precious memories.

I would like to give my cordial thanks to **Friso, Julien** and **Carmen** at The Amsterdam Institute for Global Health and Development. Thank you for your substantial support and warm help before and during my stay in Amsterdam. My travel and my stay in Amsterdam will not be easier without you.

I also would like to thank my colleagues at the Veterinary Department, Can Tho University, especially **Dr. Luu Huu Manh** and **Dr. Nguyen Huu Hung** who supported and encouraged me greatly throughout my PhD. Many thanks to **Mrs. Bui Thi Le Minh, Ms. Huynh Ngoc Trang, Ms. Nguyen Ho Bao Tran** and **Mrs. Nguyen Thu Tam** for the support and help during my study.

Life will not be colorful without my lovely Vietnamese friends in Amsterdam: **Duy, Cong Nguyen, Triet, Truc Anh, Ngoc Anh, Nguyen, Chi, Thanh, Chung, Cuong, Hien, Thao, Uyen...** Thank you for sharing Vietnamese foods and cheerful game time with me and bringing me the joyful time after research.

The biggest thank you goes to my family: **my Dad, my Mum, my brother, my sister-in-law, my niece** and **nephew**. Con cảm ơn Ba Mẹ vì đã sinh ra con, thương yêu con, sẵn sàng hi sinh tất cả để con có được cơ hội học tập tốt nhất. Ba Mẹ luôn ở bên con trong những lúc khó khăn nhất. Dù Ba đã đi xa và không được chứng kiến ngày con thật sự trưởng thành; nhưng con biết ở nơi nào đó, Ba vẫn dõi theo từng bước đi của con. Con yêu Ba Mẹ nhiều.

Nguyen Vinh Trung

PORTFOLIO

| | |
|---|-------------|
| Name PhD student: Nguyen Vinh Trung | |
| PhD period: 2011-2017 | |
| Name PhD supervisors: Constance Schultsz, Jaap Wagenaar, Ngo Thi Hoa | |
| 1. PhD training | |
| | Year |
| General courses | |
| - Systematic Reviews (Graduate School, AMC, UvA) | 2012 |
| - Basic Safety Laboratory (Graduate School, AMC, UvA) | 2013 |
| - Oral presentation in English (Graduate School, AMC, UvA) | 2013 |
| - Reference Manager (Graduate School, AMC, UvA) | 2013 |
| - Computing in R (Graduate School, AMC, UvA) | 2013 |
| - Scientific writing in English for publication (Graduate School, AMC, UvA) | 2014 |
| Specific courses | |
| - Intensive course in epidemiology and medical statistics (the London School of Hygiene and Tropical Medicine, London, UK) | 2012 |
| - One Health course (Erasmus University Medical Center, Rotterdam, the Netherlands) | 2012 |
| - DNA technology (Graduate School, AMC, UvA) | 2013 |
| - Bioinformatics (Graduate School, AMC, UvA) | 2013 |
| Seminars, workshops and master classes | |
| - Author and Reviewer workshop | 2013 |
| - Symposium Epidemiology of ESBLs in animals, humans and healthcare (UMC Utrecht) | 2013 |
| Presentations | |
| - International workshop on the use of antimicrobials in livestock production and antimicrobial resistance in the Asia-Pacific region; Negombo, Sri Lanka – oral presentation | 2012 |
| - 23 rd European Congress of Clinical Microbiology and Infectious Diseases; Berlin, Germany – oral presentation | 2013 |
| - 54 th Inter-science Conference on Antimicrobial Agents and Chemotherapy; Washington D.C, United States – poster presentation | 2014 |
| - 3 rd International One Health Congress; Amsterdam, the Netherlands – oral presentation | 2015 |
| - 26 th European Congress of Clinical Microbiology and Infectious Diseases; Amsterdam, the Netherlands – oral presentation | 2016 |

APPENDIX

| | |
|---|------|
| (Inter)national conferences | |
| - Scientific Spring Meeting KNVM & NVMM | 2013 |
| - Scientific Spring Meeting KNVM & NVMM | 2014 |

| | |
|---|-------------|
| 2. Parameters of Esteem | |
| | Year |
| Grants | |
| - Public Engagement Seed Awards for the project “Community engagement activities to reduce the risk of zoonotic infections and antimicrobial resistance in Vietnam”, funded by Public Engagement Department, the Oxford University Clinical Research Unit | 2016 |
| Awards and Prizes | |
| - ASM Student and Post-Doctoral Fellows Travel Grant | 2014 |

| | |
|--|-------------|
| 3. Publications | |
| | Year |
| Peer reviewed | |
| 1. Carrique-Mas JJ, Trung NV, Hoa NT, Mai HH, Thanh TH, Campbell JJ, et al. Antimicrobial usage in chicken production in the Mekong Delta of Vietnam. <i>Zoonoses and public health</i> . 2015 Apr;62 Suppl 1:70-8. | 2015 |
| 2. Nguyen VT, Carrique-Mas JJ, Ngo TH, Ho HM, Ha TT, Campbell JJ, et al. Prevalence and risk factors for carriage of antimicrobial-resistant <i>Escherichia coli</i> on household and small-scale chicken farms in the Mekong Delta of Vietnam. <i>The Journal of antimicrobial chemotherapy</i> . 2015 Jul;70(7):2144-52. | 2015 |
| 3. Nhung NT, Cuong NV, Campbell J, Hoa NT, Bryant JE, Truc VN, et al. High levels of antimicrobial resistance among <i>Escherichia coli</i> isolates from livestock farms and synanthropic rats and shrews in the Mekong Delta of Vietnam. <i>Applied and environmental microbiology</i> . 2015 Feb;81(3):812-20. | 2015 |
| 4. Nhung NT, Thuy CT, Trung NV, Campbell J, Baker S, Thwaites G, et al. Induction of Antimicrobial Resistance in <i>Escherichia coli</i> and | 2015 |

APPENDIX

| | |
|---|------|
| <p>Non-Typhoidal Salmonella Strains after Adaptation to Disinfectant Commonly Used on Farms in Vietnam. <i>Antibiotics</i>. 2015;4(4):480-94.</p> | |
| <p>5. Nguyen NT, Nguyen HM, Nguyen CV, Nguyen TV, Nguyen MT, Thai HQ, et al. The use of colistin and other critical antimicrobials on pig and chicken farms in southern Vietnam and their association with resistance in commensal <i>Escherichia coli</i>. <i>Applied and environmental microbiology</i>. 2016 Apr 15.</p> | 2016 |
| <p>6. Trung NV, Carrique-Mas JJ, Nghia NH, Tu LT, Mai HH, Tuyen HT, et al. Non-Typhoidal Salmonella Colonization in Chickens and Humans in the Mekong Delta of Vietnam. <i>Zoonoses and public health</i>. 2016 May 6.</p> | 2016 |
| <p>7. Van Cuong N, Nhung NT, Nghia NH, Mai Hoa NT, Trung NV, Thwaites G, et al. Antimicrobial Consumption in Medicated Feeds in Vietnamese Pig and Poultry Production. <i>EcoHealth</i>. 2016 May 19.</p> | 2016 |
| <p>8. Trung NV, Nhung HN, Carrique-Mas JJ, Mai HH, Tuyen HT, Campbell J, et al. Colonization of Enteroggregative <i>Escherichia coli</i> and Shiga toxin-producing <i>Escherichia coli</i> in chickens and humans in southern Vietnam. <i>BMC microbiology</i>. 2016;16:208.</p> | 2016 |
| <p>9. Trung NV, Matamoros S, Carrique-Mas JJ, Nghia NH, Nhung NT, Chieu TTB. Zoonotic transmission of mcr-1 colistin resistance gene from small-scale poultry farms, Vietnam. <i>Emerg Infect Dis</i>. 2017 Mar</p> | 2017 |