

Dr MOHAMMED HABIELA AHMED DOUDO (BVM, MSc)

CURRENT ADDRESS (s):

- Department of Veterinary Medicine
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PREVIOUS ADDRESS:

- Central veterinary Research Laboratories
- Department of Virology_ Foot-and-Mouth Disease Unit
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PERSONAL INFORMATION:

- Place of Birth: Khartoum, Sudan
- Nationality: Sudanese
- Date of Birth: 11th of September, 1979
- Present Resident in Cambridge, UK
- Sex: Male
- Status: Single

HIGHLIGHTS:

| | | | |
|----------------------------------------|------------------|--------------------------------|-----------------------|
| Infectious diseases, | Immunology, | Virology, | Molecular biology, |
| Pathology, | Innate immunity, | Adaptive immunity, | ELISA |
| ELISpot, | Flowcytometry, | Western-Blot, | immunohistochemistry, |
| Confocal microscopy, | | Laser capture microdissection, | |
| Cell culture (primary and cell line), | | Mouse. | |

PROFESSIONAL PROFILE

I hold a bachelor's degree in veterinary medicine and a Master of Science in microbiology (virology). I have finished a PhD in viral immunology at the university of Cambridge and The Pirbright Institute. I have been investigating the role of Follicular dendritic cells (FDC), persisting Foot-and-mouth disease virus (FMDV) immunising antigen in the immune responses and in the generation and maintenance of long-term antibody responses to FMDV. Working in national and international veterinary research institutes (in Sudan and UK), I have gained a wide experience in virology, immunology and molecular. Moreover, I have gained experience designing and undertaking *in vitro* and *in vivo* experiments in mice. I have experience in developing immunological assay such as ELISAs and ELISpots. I have gained experience in immunohistochemistry I am familiar with confocal microscopy and Laser capture microdissection. Always, my progress and output has been very satisfactory. I am ambitious and accustomed to working to tight deadlines in a pressurised environment with frequently changing priorities.

SKILLS

- Computer: Microsoft (Word, Excel, PowerPoint), Adobe Photoshop (familiar),
- Comfortable using both Windows and Mac operating systems
- Programs: R, OMERO, RNA-Seq, ChIP-seq and GraphPad Prism.
- Languages:
 - **English** : Fluent (speaking/reading/writing)
 - **Arabic** : Mother tongue (speaking/reading/writing)
 - **French** : Basic (speaking/ reading/ writing)

EDUCATION

- 2012-2016 A PhD student at the department of Veterinary Medicine, University of Cambridge: I have been investigating the role of Follicular dendritic cells (FDC), persisting FMDV antigen in the immune responses using mouse as a model. Thesis title: (**The role of follicular dendritic cells and persisting foot-and-mouth disease virus antigens as determinants of immune responses to the virus**)
- 2006-2008 Research Scientist and Master of Science (MSc) in Microbiology (Virology) from Sudan Academy of Sciences- Sudan.; (www.sas.edu.sd/): My study was on the epidemiological situation of foot and mouth disease in Sudan to determine the circulating FMDV serotypes and strains in the country. My MSc thesis title is (**Current Epidemiology of foot and mouth disease in the Sudan**).
- 1998-2003 Bachelor of Veterinary medicine, Faculty of Veterinary Medicine, University of Khartoum, Khartoum, Sudan.

WORK EXPERIENCE

2008-2012 **Researcher**

- Central Veterinary Research Laboratories
- Department of Virology- Foot and Mouth disease Unit
- Duties / Responsibilities:**
- Assisting in FMD virus researches and diagnosis as:
- Isolation of FMD virus in cell culture.
- Characterization and identification of FMD virus serotypes by ELISAs & PCR.

- Demonstrating and training of students (undergraduates, MSc and PhD) in virology and diagnostic techniques.
- Maintaining safe working environment in accordance with the regulations and directives.

2005-2008 **Research Assistant**

- Central Veterinary Research Laboratories
- Department of Virology- Foot and Mouth disease Unit

Duties / Responsibilities:

- Assisting in FMD virus researches and diagnosis as:
- Isolation of FMD virus in cell culture.
- Characterization and identification of FMD virus serotypes by ELISAs & PCR.
- Demonstrating and training of students (undergraduates, MSc and PhD) in virology and virological techniques.
- Maintaining safe working environment in accordance with the regulations and directives.

2003- 2005 **Veterinarian** in private veterinary services/sectors in Khartoum- Sudan.

TRAINING AND SKILLS

- 1- Biological Imaging Data Management for Life Scientists, 14/07/2016, University of Cambridge
- 2- Introduction to RNA-seq and ChIP-seq data analysis, 18-19/07/2016, University of Cambridge
- 3- An Introduction to Solving Biological Problems with R, 1-2/09/2016, University of Cambridge
- 4- An introduction to Statistics, the Pirbright Institute, UK. 02 April 2014.
- 5- FlowJo-10 High-throughput flowcytometry analysis, The Pirbright Institute, UK. 28 January 2014.
- 6- Flow Cytometry Course, AHVLA Weybridge, UK. 21 November 2103.
- 7- Introduction to research management The Pirbright Institute 02 April 2014.
- 8- Bioinformatics: Introduction to Metabolomics, University of Cambridge, 31 July 2013.
- 9- An introduction to Statistics, the Pirbright Institute 18-19 February 2014.
- 10- An Introduction to Immunology, University of Warwick. 15- 16 April 2013.
- 11- Home office course (Personal Licence) – (Mouse, cattle, sheep, goats, pigs), VLA Weybridge. 22-24 October 2012.
- 12- Wellcome Trust Advanced courses, Open Door Workshop: Working with the Human Genome Sequence, KEMRI/Wellcome Trust Research Programme, and Kilifi, Kenya. 31October -2 November 2011.
- 13- Research fellowship to develop FMDV-3D ELISA using a recombinant FMDV-3D protein, with Dr Satya Parida, Institute for Animal Health – Pirbright- UK funded by Rothamsted International- UK. May -November 2010.
- 14- Molecular characterization of foot and mouth disease virus isolates from Sudan (1974-2008) at Institute for Animal Health, Pirbright, UK funded by CVRL-Sudan, FAO-Italy and Defra-UK. January-March 2009.
- 15- A two week comprehensive training course in FMD diagnostics at the Institute for Animal Health, Pirbright, UK, Funded by Arab-British Chamber foundation and the Government of Sudan. April 2007.

MEMBERSHIPS

- 1- Member of Microbiology Society
- 2- Member of Sudan Veterinary Medical Association

PRIZES AND AWARDS

- 1- Islamic Development Bank- Cambridge Trust PhD Merit Scholarship 2012-2016.
- 2- The Pirbright prize for the best poster presentation, UK, April 2014.
- 3- African Fellowship Award, Rothamsted International, UK, 2010.
- 4- Prize of Outstanding student, Faculty of veterinary medicine, University of Khartoum, 2003.
- 5- Prize of Outstanding student in surgery and gynaecology, Faculty of veterinary medicine - University of Khartoum, 2003.

ADDITIONAL INFORMATION:

- Hobbies: International Travel, football, Hiking, reading and swimming

PUBLICATIONS

- 1- **Habiela, M.**, Seago, J., Perez-Martin, E., Waters, R., Windsor, M., Salguero, F.J., Wood, J., Charleston, B., Juleff, N., 2014. Laboratory animal models to study foot-and-mouth disease: a review with emphasis on natural and vaccine-induced immunity. *The Journal of general virology* 95, 2329-2345.
- 2- **M. Habiela**, N. P. Ferris, G. H. Hutchings, J. Wadsworth, S. M. Reid, M. Madi, K. Ebert, K. J. Sumption, N. J. Knowles, D. P. King and D. J. Paton (2010): Molecular characterization of foot-and-mouth disease viruses collected from Sudan, *Transboundary and Emerging Diseases*, **57(5)-305-314**.
- 3- **Habiela, M.**, M. A. G. Alamin, Y. A. Raouf, Y. H. Ali (2010): Epizootiological Study of Foot and Mouth Disease in the Sudan: The Situation after Two Decades. *Vet. Arhiv* **80(1) 11-26**.
- 4- Raouf Y A, Ali B H, El Amin M A, A Shallalie A M, Hiba Hashim and **Habiela M**, (2010): Laboratory Investigation of Three Outbreaks Of Foot-And-Mouth Disease At Central Sudan And The Disease Type Situation. *Bull. Anim. Hlth. Prod. Afr.* **58, 308-314**.
- 5- **M. Habiela**, Y. A. Raouf and H. Nur Eldin, Screening of Foot and mouth disease in small ruminants in Khartoum State, *The Sudan Journal of Veterinary Research*, *Sudan J. Vet. Res.* (2009), 24: 61-64.
- 6- Y. A. Raouf, B. H. Ali, M. A. El Amin, **M. Habiela**, M. M. Salih, Mahasin El Nur and H. Nur Eldin (2007): Selection of antigen dose for foot and mouth disease antibody detection liquid-phase blocking ELISA spot test - *The Sudan Journal of Veterinary Research*, (22) **25-36**.
- 7- Y. A. Raouf, M. A. El Amin, M. M. Salih, Mahasin El Nur, B.H. Ali, A.M.S. ElEragi, M. I. Mahgoub, **M. Habiela**, and H. Nur Eldin, (2006): Some Observations on the Performance of the Liquid-Phase Blocking Sandwich Elisa for the Detection of Antibodies against Foot and Mouth Disease Virus - *The Sudan Journal of Veterinary Researches*, (21) **25-38**.

CONTRIBUTION IN NATIONAL AND INTERNATIONAL CONFERENCES

- 1- Open Session of the European Commission for the Control of Foot-and-Mouth Disease (EUFMD) The Practice of Innovation 26 - 28 October 2016 - Cascais. Portugal. The Paper: Hana Yousif, Inas Habiballa, Salma Kamal, Donald King, Nick Knowles, Jemma Wadsworth, Yazid Khalleil and **Mohammed Habiela** : (Characterization of FMDV isolates from Sudan collected from 2009-2011 outbreaks)
- 2- Microbiology Society annual conference, - ACC Liverpool, UK, 21 - 24 Mar 2016
- 3- Cambridge University Vet School Research Open Day, 16 December 2015
- 4- Global foot and mouth disease research Alliance (GFRA) Conference_ Hanoi, Vietnam_ 20-22 October 2015.
- 5- Islamic Development bank -UK Scholars symposium May 2015- Imperial College, London, UK.
- 6- Open Session of the European Commission for the Control of Foot-and-Mouth Disease (EUFMD) Standing Technical Committee, Dubrovnik, Croatia. 29-31 October 2014
- 7- Wolfson Research event_2014, Wolfson College, University of Cambridge, 2 May 2014.
- 8- Global foot and mouth disease research Alliance (GFRA) Conference_ 8-10/10/2013_Arusha_ Tanzania
- 9- Participated, as Instructor, in AOAD workshop: Investigation and Control of Foot and mouth disease, 2-6 October 2011, Arab organization for agricultural development (AOAD) Headquarters, Khartoum -Sudan.
- 10- Participated in Second Eastern Africa Regional Laboratories Network for FMD (EARLN-FMD) Addis Ababa, Ethiopia, 14-15 February 2011, sponsored by FAO- Rome- Italy.
- 11- Open Session of the European Commission for the Control of Foot-and-Mouth Disease (EUFMD) Standing Technical Committee, 28/September-1/ October 2010, Vienna, Austria.: (**M. Habiela**¹, N. P. Ferris, G. H. Hutchings, J. Wadsworth, S. M. Reid, M. Madi, K. Ebert, K. J. Sumption, N. J. Knowles, D. P. King and D. J. Paton (**Molecular Biological Study on Sudanese Foot and mouth disease viruses**)
- 12- Participated in the first Eastern Africa FMD Laboratory expert workshop, Nakuru, Kenya, 8-12 February 2010, sponsored by FAO- Rome- Italy.
- 13- Attended the Global Foot and mouth disease research alliance (GFRA) workshop on: Early Pathogenesis and transmission of FMDV, Pirbright, UK 21-22 January 2010.
- 14- Participated in a technical workshop dedicated to foot-and-mouth disease in Africa organized by FAO in collaboration with OIE, IBAR and the EU-FMD Commission, held at AU-IBAR Headquarters in Nairobi, Kenya, 26-30 January 2009.
- 15- The Global Control of FMD (Tools, Ideas and Ideals) Open Session of the Research Group of the European Commission for the Control of Foot-and-Mouth Disease (EUFMD), Erice, Sicily, Italy, 14-17 October 2008: (**Mohammed Habiela**, Mohammed Abdel Gaffar, Yazeed Abdel Raouf, Yahia H. Ali, **Epizootiological study of Foot and mouth disease in the Sudan: The situation after two decades**)
- 16- Raouf, Y, **Habiela, M. & Yagoub, I. (2008): Control of transboundary and export diseases: Foot and mouth disease**, the first scientific conference on animal health, production, fisheries and wildlife of Animal Resources Research Corporation (ARRC), 17-21 August 2008, Khartoum- Sudan.

REFERENCE:

- 1- **Professor James Wood**, Alborada Professor of Equine and Farm Animal Science, Head of Department of Veterinary Medicine. University of Cambridge, Department of Veterinary Medicine, Madingley Road, Cambridge, CB3 0ES, UK. E-mail: jlw2@cam.ac.uk, Office Phone: +44 (0)1223 764666.
- 2- **Dr Nick Juleff**, Senior Program Officer; Bill & Melinda Gates Foundation. 500 5th Ave North Seattle, WA 98109 United States. E-mail: Nick.juleff@gatesfoundation.org . Phone: 012062591849.
- 3- **Dr Julian Seago**, Head of viral immunology group. Viral Immunology Group, the Pirbright Institute, Ash road, Pirbright, Woking, Surrey, UK. E-mail: Julian.seago@pirbright.ac.uk. Phone : 01483 231380
- 4- **Professor Jonathan Heeney**, Professor of Comparative Pathology, Head of the Laboratory of Viral Zoonotics (LVZ). University of Cambridge, Department of Veterinary Medicine, Madingley Road, Cambridge, CB3 0ES, UK. E-mail: jlh66@cam.ac.uk. Office Phone: +44 (0) 1223 766250.