Personal information

Name	Eman Hamza	**Gender**	Female
Date of Birth	July 13 1969	**Citizenship**	Egyptian
Address	Längimoosstrasse 26, 3075 Berne	**Email address**	e.hamza@gmx.ch
Languages	English (very good), German (good), French (good), Arabic (mother tongue)		

Education

2004 – 2008	**PhD** in Immunology, Institute of Veterinary Virology, Vetsuisse Faculty, University of Berne, Switzerland
1995 – 2001	**Master** followed by **PhD** in Zoonoses, Department of Zoonoses, Faculty of Veterinary Medicine, University of Cairo, Egypt
1987 – 1992	Bachelor in Veterinary Medicine Studies, University of Cairo, Egypt

Employment history

Current	Lecturer, Department of Zoonoses, Faculty of Veterinary Medicine, University of Cairo, Egypt
2013-2015	Internship, Institute of Veterinary Bacteriology, University of Berne, Switzerland
	Internship, National Centre of Competence in Research Trans-Cure (NCCR) Institute of Biochemistry and Molecular Medicine, University of Berne, Switzerland
	Internship, Swiss Institute of Allergy and Asthma, Davos, Switzerland
2008-2013	Postdoc, Clinical Immunology, Department of Clinical Research and Veterinary Public health, Vetsuisse Faculty, University of Berne, Switzerland
2002-2008	Research Assistant, then PhD student, Department of Immunology, Institute of Veterinary Virology, University of Berne, Switzerland
1994-2002	Demonstrator, assistant lecturer then lecturer, Department of Zoonoses, Faculty of Veterinary Medicine, Cairo University, Egypt
1993-1994	Veterinarian, Department of Food Hygiene, Helwan University, Egypt

Teaching

- Immunology lectures (8 hours /semester), 2nd year veterinary students, Vetsuisse Faculty, University of Berne, Switzerland
- Immunology PhD students (1 week), Vetsuisse Faculty, University of Berne
- Zoonoses lectures (12 hours / semester), 4th year veterinary students, Faculty of Veterinary Medicine, Cairo University, Egypt

Supervision of students

- Doctoral students, med.vet. Simone Lanz, Vetsuisse Faculty, University of Berne, Switzerland
- Master students, med.vet. Anja Ziegler, Vetsuisse Faculty, University of Berne, Switzerland

Grant application

Co-applicant in Morris Animal Foundation, Ref. N. D14EQ-81($11.880); entitled: Improving allergen specific immuno-therapy: in vitro evaluation of DC-targeting peptides and of new adjuvants in combination with recombinant allergens

Prizes

Vetsuisse Faculty prize for the best published research paper year 2013, University of Berne, Switzerland

Further Education

- Project management, University of Berne
- **Didactic courses:** Bausteine für gute Hochschullehre, Selbstevaluation der Lehre, Studierende führen
- **Bioinformatics courses;** R , Bash, RNA and DNA sequencing analysis, modelling and cancer genomics

Research projects

1. **Immune response against Campylobacter species**
   Time period: **2015**. Place: Institute of Veterinary Bacteriology, Vetsuisse Faculty, University of Berne
2. **Molecular mechanisms involved in the regulation of NHE (Na/Hydrogen transport exchanger)**
   Time period: **2014.** Place: NCCR, University of Berne, Switzerland**.**
3. **Molecular cloning of 3 *Culicoides* allergens and its protein expression**
   Time period: **2014.** Place: SIAF, Davos, Switzerland.
4. **In vitro evaluation of DC-targeting peptides and of new adjuvants in combination with allergens**
   Time period: **2013-2014,** Place: Clinical Immunology, Department of Veterinary Clinical Research and Public Health, Vetsuisse Faculty, University of Berne
5. **Individual susceptibility for Equine sarcoids -horse skin tumor disease-**
   Time period: **2012-2013**. Place: Horse Clinic, Vetsuisse Faculty, University of Berne.
6. **Characterization of T cell response in Recurrent airway obstruction**
   Time period: **2010-2012.** Place: Horse Clinic, Vetsuisse Faculty, University of Berne.
7. **Characterization of T regulatory cells and their function in horses**
   Time period: **2008-2013**. Place: Clinical Immunology, Department of Veterinary Clinical Research and Public Health, Vetsuisse Faculty, University of Berne.
8. **Role of T cells in Insect Bite hypersensitivity in Icelandic horses**
   Time period: **2002-2008**. Place: Institute of Veterinary Virology, Vetsuisse Faculty, University of Berne.
9. **Epidemiological studies on some animal reservoirs of Influenza virus** (Time period: **1997-2001)**
   Epidemiological survey on viral zoonotic diseases common in Egypt (Time period: **1994-1997)**
   Place: Department of Zoonoses, Faculty of Veterinary medicine, University of Cairo, Egypt.

Experience with the following techniques

- **Cell Culture:**
  - Peripheral blood mononuclear cells (PBMC) isolation from human, cattle and horses
  - Development of dendritic cells, Ex-Vivo experiments and stimulation of immune cells
  - Primary Cell culture and cell transfections (Lipofectamine, Electroporation, Heat Shock)
- **Immunology techniques:**
  - Flow-cytometry, multiple fluorescence cellular and intracellular staining, FACS-Aria, LSRII, SORP and ImageStreamer
  - Cytokine ELISA, ELISPOT and cytokine bead assay (Luminex)
  - Functional assay of regulatory cells (using Thymidine incorporation or CFSE)
  - Western blotting, Immuno-precipitation and Co-immuno-precipitation
  - Immunocytochemistry and confocal microscopy
  - Antibody labeling with zenon and or biotinylation
  - 2D Gel Electrophoresis
- **Bacterial culture and identification:**
  - MALDI-TOF
- **Molecular Biology:**
  - RNA isolation from PBMC and skin biopsies, PCR and QRT-PCR
  - Molecular cloning in E.coli and yeast
  - Protein expression in E.coli and yeast
  - Protein purification ÄKTA, Nickel Resin chromatography and protein precipitation

Reviewer for scientific journals

European Journal of Clinical and experimental allergy; Equine Veterinary Journal; Veterinary Dermatology

Membership in scientific organizations

Swiss Society for Allerglogy and Immunology (SSAI), European Academy of Allergy and clinical immunology (EAACI)