

# CURRICULUM VITAE

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**Education:**

۱۹۹۳-۱۹۹۷      **PhD in Microbiology, James Cook University, Australia**  
۱۹۷۸-۱۹۸۷      **Doctor of Veterinary Medicine (DVM) Tehran University, Iran,**

**Employment highlights**

**March ۱۹۹۸- current: Associate Professor, Department of Microbiology, National Research Institute of Genetic Engineering and Biotechnology (NIGEB), Iran**

Responsible for supervising research projects (M.Sc and Ph.D) on avian and other farm animal pathogens at the Microbiology Department, conducting laboratory diagnosis, advising clients and veterinarians on suspected diseases, running practical classes for molecular biology and diagnostic techniques and delivering lectures for students at undergraduate and postgraduate levels.

**July ۲۰۰۸- July ۲۰۱۰: Research Fellow, Faculty of Veterinary Science, Avian Medicine Group, The University of Melbourne, Australia**

Assisting to establish a reference laboratory for detection and characterisation of the poultry pathogens for the Australian poultry industry

I am currently involved in developing molecular diagnostic techniques such as PCR, RT-PCR, real-time PCR and High Resolution Melting Curve analysis for detection and differentiation of poultry pathogens. I am also in regular interaction with Clinical Microbiology section for processing of diagnostic cases. In addition I am involved in training research students and visiting scientists in the area of molecular microbiology.

The main research projects I am currently involved are:

- Differentiation of *Mycoplasma gallisepticum* strains using PCR and High Resolution Melting (HRM) curve analysis
- Detection and differentiation of infectious bursal disease viruses using RT-PCR and HRM curve analysis
- Development and/or optimisation of diagnostic PCRs for a range of poultry bacterial and viral pathogens

**December ۲۰۰۶- July ۲۰۰۷: *Senior Research Officer*, FAO, Central Veterinary Laboratory, Iran**

In this position I was responsible for:

- ۱- supervising and performing molecular diagnosis for FMD and AIV in the Veterinary Reference Laboratory (Tehran, Iran) including supervision of staff and analysis and reporting of the results, required by the FAO.
۲. Assisting in the process of establishing molecular diagnostic tests in sub-national laboratories in Iran by overseeing the design and implementation of quality assurance procedures required by FAO.
۳. Organised workshops for laboratory staff from different provinces.

**March ۱۹۹۷-December ۱۹۹۷: *Postdoctoral Fellow*, Department of Microbiology and Immunology, James Cook University, Australia**

The research project involved in molecular detection and characterisation of pathogens responsible for mortality in prawns in Queensland.

**۱۹۸۷-۱۹۹۲: *Veterinary practitioner*, Veterinary Organisation, Iran**

Duties included diagnosis and treatment of poultry and farm animals diseases

**Specific research projects completed:**

- Simultaneous detection of avian respiratory viruses (AIV, IBV, NDV, APV and ILTV) by Multiplex-PCR
- Expression of VP 7 gene of IBDV in *Pichia Pastoris* and evaluation of its immunogenicity
- Isolation and characterisation of Infectious Bursal Disease virus by RT-PCR-RFLP
- Expression of bovine somatotropin in yeast (*Pichia Pastoris*)
- Differentiation of foot and mouth disease virus serotypes and subtypes by RT-PCR and nucleotide sequencing
- Development of RT-PCR and multiplex-PCR for detection and subtyping of avian infectious bronchitis virus
- Detection of avian influenza virus by nested-PCR
- Differentiation of pathogenic and non-pathogenic strains of MDV type-۱ by nested-PCR
- Detection of WSSV in shrimps by PCR
- Study of polymorphism in *growth hormone* and *growth hormone receptor* gene in Iranian Holstein bulls
- Detection of Mycoplasma contaminations in cell cultures by nested-PCR
- Detection of Pestivirus contaminations in bovine semen and in cell cultures by RT-PCR
- Polymorphic analysis of BoLA-DRB3 alleles in Iranian Holstein and Sarabi cattle
- Detection of bovine herpesvirus type ۱ (BHV-۱) in bulls semen by nested-PCR
- Detection of bovine viral diarrhoea virus (BVDV) in bulls semen by RT-PCR and nested – PCR
- Detection and differentiation of sheep pox virus and orf in clinical samples by multiplex-PCR

### **Professional associations:**

- Australian Institute of Medical Scientists
- European Society for Clinical Virology
- Member of World Veterinary Poultry Association
- Member of editorial board in International Journal of Biotechnology and Biochemistry

### **Conducted workshops:**

- Detection of foot-and-mouth disease virus using molecular methods. ۲۱-۲۳ May ۲۰۰۷, (FAO) Central Veterinary Laboratory, Tehran, Iran (organiser and lecturer)
- Detection of Avian Influenza Virus by RT-PCR. ۱۱-۱۳ Nov. ۲۰۰۶, National Research Institute of Genetic Engineering and Biotechnology, Tehran, Iran (organiser and lecturer)
- Detection of animal viral diseases by RT-PCR. ۲۲-۲۷ Feb. ۲۰۰۵, National Research Institute of Genetic Engineering and Biotechnology, Tehran, Iran (organiser and lecturer)
- International workshop on genetics and molecular biology of aquatic organisms, ۲۶-۳۰ Sep. ۲۰۰۵, Urmia University, Urmia, Iran (invited speaker)
- Animal breeding using molecular methods. ۳-۷ Jan, ۲۰۰۴, National Research Institute of Genetic Engineering and Biotechnology, Tehran, Iran (organiser and lecturer)

### **Patents:**

- Ghorashi, S.A. – RNA extraction reagent - Iranian Patent No. ۳۱۲۳۹ (commercialised)
- Ghorashi, S.A. – DNA extraction reagent - Iranian Patent No. ۳۱۲۳۷ (commercialised)
- Ghorashi, S.A. – Foot-and-mouth disease virus detection Kit - Iranian Patent No. ۵۶۹۲۹ (commercialised)
- Ghorashi, S.A. – Avian influenza virus detection Kit - Iranian Patent No. ۳۲۸۱۲

## PUBLICATIONS:

### ۱. Refereed publications:

- ۱- Latifi-Navid S, **Ghorashi SA**, Siavoshi F, Linz B, Massarrat S, Khegay T, Salmanian AH, Shayesteh AA, Masoodi M, Ghanadi K, Ganji A, Suerbaum S, Achtman M, Malekzadeh R, Falush D. (۲۰۱۰) Ethnic and geographic differentiation of *Helicobacter pylori* within Iran. PLoS One. Mar ۲۲;۵(۳):e۹۶۴۵
- ۲- **Ghorashi SA**, Noormohammadi AH, Markham PF. (۲۰۱۰) Differentiation of *Mycoplasma gallisepticum* strains using PCR and High Resolution Melting Curve Analysis. Microbiology. ۱۵۶:۱۰۱۹-۱۰۲۹
- ۳- Feberwee, A., Morrow, C.J., **Ghorashi, S.A.**, Noormohammadi, A. and W. J. M. Landman (۲۰۰۹) Effect of a live *Mycoplasma synoviae* vaccine on the production of eggshell apex abnormalities after a dual infection with *M. synoviae* and IBV D۱۴۶۶. Avian Pathology ۳۸ (۵): ۳۳۳-۳۴۰
- ۴- Pashmi M, Qanbari S, **Ghorashi SA**, Sharifi AR, Simianer H. (۲۰۰۹) Analysis of relationship between bovine lymphocyte antigen DRB<sup>۳,۲</sup> alleles, somatic cell count and milk traits in Iranian Holstein population. Journal of Animal Breeding and Genetics. ۱۲۶(۴):۲۹۶-۳۰۳
- ۵- Shojaee S, Sina F, Farboodi N, Fazlali Z, Ghazavi F, **Ghorashi SA**, Parsa K, Sadeghi H, Shahidi GA, Ronaghi M, Elahi E. (۲۰۰۹) A clinic-based screening of mutations in exons ۳۱, ۳۴, ۳۵, ۴۱, and ۴۸ of LRRK۲ in Iranian Parkinson's disease patients. Movement Disorders. ۱۵;۲۴(۷):۱۰۲۳-۱۰۲۳۷
- ۶- Akbarpour, M., Houshmand, M., **Ghorashi, S.A.**, Hayatgheybi, H. (۲۰۰۸) Screening for FecG<sup>H</sup> Mutation of Growth Differentiation Factor ۹ Gene in Iranian Ghezel Sheep Population. International Journal of Fertility and Sterility, Volume: ۲, Number: ۳, ۱۳۹-۱۴۴
- ۷- Jorfi E., Amini F., **Ghorashi S.A.**, Mortezaei S.R.S. (۲۰۰۸) Molecular genetic study on Hilsa shad, *Tenulosa ilisha*, in Khoozestan-Iran using RAPD Analysis. Iranian Journal of Fisheries Sciences. ۱۷ (۱): ۳۱-۴۴
- ۸- Bahari A, **Ghorashi, S.A.**, Sadeghi Nasab A., Salehi-Tabar, R. (۲۰۰۹) Detection of Equine influenza viral sequences using a novel nested PCR. Iranian Veterinary Journal ۴: ۲۲-۲۸
- ۹- **Ghorashi, S. A.**, Fatemi, S. M., Amini, F., Houshmand, M., Salehi Tabar, R., Hazaie, K. (۲۰۰۸) Phylogenetic analysis of anemonefishes of the Persian Gulf using mtDNA sequences. African Journal of Biotechnology ۷ (۱۲): ۲۰۷۴-۲۰۸۰
- ۱۰- Daliri, M., **Ghorashi, S.A.**, Morshedi, D., Hajian, T., Afshar, K. (۲۰۰۷) Detection of

bovine viral diarrhea virus in bovine semen using nested-PCR. Iranian Journal of Biotechnology, ۵ (۱): ۴۸-۵۱

- ۱۱- Rahimi, S., Salehifar, E., **Ghorashi, S.A.**, Grimes, J.L., Kaimi Torshizi, M.A. (۲۰۰۷) The effect of egg-derived antibody on prevention of avian influenza subtype H<sup>۹</sup>N<sup>۲</sup> in layer chicken. International Journal of Poultry Science ۶ (۳): ۲۰۷-۲۱۰
- ۱۲- Hashemi, M, **Ghorashi, S.A.**, Parivar, K, Dizaji, A., Shamsara, M., Doustar, Y., Bakhshayesh, F. (۲۰۰۶) Cloned gene-related protein VP<sub>۲</sub> of Infectious Bursal Disease Virus- induced apoptosis in human B cell lymphoma in vitro. Islamic Azad Medical Journal ۴: ۱۹۱-۱۹۹
- ۱۳- Pashmi, M., Qanbari, S., **Ghorashi, S.A.**, Salehi, A. (۲۰۰۷) PCR based RFLP genotyping of bovine lymphocyte antigen DRB<sup>۳,۲</sup> in Iranian Holstein population. Pakistan Journal of Biological Sciences ۱۰ (۳): ۳۸۳-۳۸۷
- ۱۴- Parnian, M., **Ghorashi, S.A.**, Salehi, A.R., Pashmi, M., Mollasalehi, M.R., (۲۰۰۷). Polymorphism of Bovine Lymphocyte Antigen DRB<sup>۳,۲</sup> in Holstein Bulls of Iran Using PCR-RFLP. Iranian Journal of Biotechnology ۴ (۳): ۱۹۷-۲۰۰
- ۱۵- **Ghorashi, S.A.**, Daliri Joupari, M., Morshedi, D., Hajian, T., Lotfi, M. (۲۰۰۸). Detection of pestivirus contamination in cell cultures by nested-PCR. Journal of Veterinary Research ۶۳ (۱): ۱۷-۲۲
- ۱۶- Bahari, A., Marquardt, O., **Ghorashi, S.A.**, Taghipour Bazargani, T., Bokaei S. (۲۰۰۷) Application of nested-PCR in detection of foot-and-mouth disease viral sequences in tonsil of slaughtered cattle with clinically normal appearance in Iran. Veterinariski Arhiv ۷۷ (۴) ۲۹۹-۳۰۶
- ۱۷- Bahari, A., **Ghorashi, S.A.**, Marquardt, O., Taghipour Bazargani, T. (۲۰۰۶) Detection of a genetic variation within foot-and-mouth disease virus type A using sequencing analysis of VP<sub>۱</sub> gene. Journal of Faculty of Veterinary Medicine University of Tehran Vol. ۱ (۶۱): ۵۷-۶۱
- ۱۸- Alamdari, M., **Ghorashi, S.A.**, Ahmadi, M., Salehi Tabar, R. (۲۰۰۶) Detection of foot-and-mouth disease virus and identification of virus serotypes in East Azarbaijan province of Iran. Veterinariski Arhiv ۷۶ (۵): ۴۲۱-۴۲۷
- ۱۹- Sadeghi, M.R., **Ghorashi, S.A.**, Kargar Moakhar, R., Morshedi, D., Salehi Tabar, R. and Ghaemmaghami, S.S.. (۲۰۰۶) Polymerase Chain Reaction for the detection and differentiation of Marek's disease virus strains MDV-۱ and HVT. Iranian Journal of Veterinary Research ۷ (۱) : ۱۷-۲۱
- ۲۰- Bahari, A.A., Bazargani, T.T., **Ghorashi, S.A.**, Hematzadeh, F., Bokaei, S., Keyvanfar, H., Sedighi Moghadam, R., Ghadimi, M. (۲۰۰۶) A survey on frequency of foot- and-mouth disease virus (FMDV) carriers in slaughtered cattle at Zeyran abattoir. Journal of Faculty of Veterinary Medicine University of Tehran Vol. ۴ (۶۱): ۴۰۱-۴۰۶

- ۲۱-Shamsara M., **Ghorashi S.A.**, Ahmadian G. (۲۰۰۶) Cloning and nucleotide analysis of the VP<sub>2</sub> gene of a very virulent infectious bursal disease virus isolate from Iran. *Acta Virologica* Vol. ۵۰: ۲۲۹-۲۳۴
- ۲۲-Baratchi S., **Ghorashi S.A.**, Hosseini M., Pourbakhsh S.A., (۲۰۰۶) Differentiation of Virulent and Non-virulent Newcastle Disease Virus Isolates by RT-PCR. *Iranian Journal of Biotechnology*. Vol. ۴ No. ۱: ۶۱-۶۳
- ۲۳-Pashmi, M., **Ghorashi, S.A.**, Salehi, A.R., Moini, M., Javanmard, A., Qanbari, S., Yadranji-Aghdam, S. (۲۰۰۶) Polymorphism of Bovine Lymphocyte Antigen DRB<sub>3</sub> Alleles in Iranian Native Sarabi Cows. *Asian-Australian Journal of Animal Science* Vol. ۱۹ No. ۶: ۷۷۵-۷۷۸
- ۲۴-**Ghorashi, S.A.** and Hajian, T. (۲۰۰۶) Detection of avian infectious bronchitis virus and Massachusetts serotype by RT-PCR. *Journal of Faculty of Veterinary Medicine University of Tehran* Vol. ۱ No. ۶۲: ۶۵-۶۸
- ۲۵-**Ghorashi, S.A.** and Hajian, T. (۲۰۰۵) Differentiation between field isolates and vaccine strains of infectious bursal disease virus using RT-PCR and RFLP. *Journal of Pajuhesh and Sazandegi*. ۱۶ (۳): ۶۵-۶۹
- ۲۶-Beladi, S.P., **Ghorashi, S.A.**, Morshedi, D. (۲۰۰۵). Using nested-PCR for detection of avian influenza virus. *Journal of Acta Veterinaria Brno* ۷۴: ۵۱۳-۵۱۷
- ۲۷-Kargar, R., **Ghorashi, S.A.**, Sadeghi, M.R., Morshedi, D., Massoudi, S., and Pourbakhsh, S.A. (۲۰۰۳) Detection of different Iranian isolates of Bovine Herpesvirus Type-۱ (BHV-۱) using polymerase chain reaction. *Archives of Razi*. ۵۵: ۱۱-۱۸
- ۲۸-**Ghorashi, S.A.**, Hajian, T., Daliri, M., Banoei, M.M. and Alvandi, A.R. (۲۰۰۱) Detection of foot and mouth disease virus in clinical samples by RT-PCR. *Journal of Pajuhesh and Sazandegi*, ۱۴ (۴): ۱۰-۱۲

## ۲. Conference presentations:

- ۱- Bahari, A., Taghipour Bazargani, T., **Ghorashi, S.A.**, Keyvanfar, H., Bokaei, S. (۲۰۰۷) A survey on frequency of foot-and-mouth disease virus carriers in slaughtered cattle in Iran. ۱۵<sup>th</sup> International Congress of Mediterranean Federation for Health and Production of Ruminants ۱۵-۱۹ May Turkey
- ۲- **Ghorashi S.A.**, Varshovi H.R., Salehi-Tabar R. (۲۰۰۶) Detection and differentiation of Orf virus and sheep poxvirus by Multiplex-PCR. ۴<sup>th</sup> International Veterinary Vaccines and Diagnostics Conference, ۲۵-۲۹ June, Oslo, Norway
- ۳- **Ghorashi S.A.**, Sadeghi M.R., Ghaemmaghami S.S., Ezi A., Bahari A.A., Salehi-Tabar R. (۲۰۰۶) Diagnosis of Marek's disease virus in broiler chickens by histopathology and

Nested-PCR. 4<sup>th</sup> International Veterinary Vaccines and Diagnostics Conference, 25-29 June, Oslo, Norway

- ξ- **Ghorashi, S.A.**, Morshedi, D., Hajian, T., Lotfi, M. Sadeghi, M.R. (2005) Using nested-PCR for detection of cell culture contaminations with pestiviruses. 7<sup>th</sup> European Society for Veterinary Virology Pestivirus Symposium, 13-16 September, Thun, Switzerland
- ο- Salehi Tabar, R., **Ghorashi, S.A.**, Memari, B. (2005) Reverse Transcription-Polymerase chain reaction assay for the detection of Avian Pneumovirus. 14<sup>th</sup> World Veterinary Poultry Congress, Istanbul, Turkey
- ζ- **Ghorashi, S. A.**, Sadeghi, M.R., Salehi Tabar, R., Kargar, R. M., Morshedi, D., and Ghaemmaghami. (2004) Differentiation of pathogenic and non-pathogenic strains of Marek's disease virus type-1 by using nested-PCR. 4<sup>th</sup> International Symposium on Marek's disease 10-14 July 2004, St. Catherine's College, Oxford, United Kingdom
- υ- **Ghorashi, S.A.**, Morshedi, D., Tokhmafshan, M., Pourgholam, R., and Rezvani, S. (2003) Detection of white spot syndrome virus by PCR. 7<sup>th</sup> Annual Meeting of European Society for Clinical Virology, Aug. Lyon, France
- λ- **Ghorashi, S.A.**, Torkmanzahi, A., Hassani, A., and Abbasi, A.H. (2003) Polymorphism in the growth hormone and growth hormone receptor genes of Iranian Holstein cattle and their association with milk production traits. XIX International Congress of Genetics, July, Melbourne, Australia
- ϑ- **Ghorashi, S.A.**, Hajian, T., Morshedi, D. (2002). Detection of infectious bursal disease virus in clinical samples by RT-PCR and differentiation of field isolate from vaccine strains by RFLP The 24<sup>th</sup> World Veterinary Congress, Tunisia
- 10- **Ghorashi, S.A.**, Hajian, T. and Morshedi, D. (2002) First report on detection and Molecular characterization of a very virulent infectious bursal disease virus in Iran. The 3<sup>rd</sup> International Iran and Russia Conference of Agriculture and Natural Resources, Moscow, Russia

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