

Curriculum vitae

Personal Data

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D.O.B.: September, 25, 1980



Current Position Director of Biotechnology Center, Faculty of Veterinary Medicine, Cairo University

Educational Qualification

2010 Ph.D. Degree in Biochemistry and Molecular Biology (BMB).

Title of the Ph.D. Thesis:

“Molecular Study on the Effect of Diabetic Oxidative Stress on Cardiac Proteome in OLETF Rats”

Employment History

2015 Postdoctoral fellow at Hannover Medical School (MHH), Hannover, Germany.

2011-2012 Postdoctoral fellow at United States Department of Agriculture (USDA), Maryland, USA.

2004 – 2008 Researcher at the Mitochondrial Signaling Lab, Dept. of Physiology and Biophysics, College of Medicine, Inje University, South Korea.

2003 – Present Department of Biochemistry, Faculty of Veterinary medicine - Cairo University, Egypt.

Occupation: Associate Professor of Biochemistry and Molecular Biology, Faculty of Veterinary Medicine - Cairo University.

2018-2021 Scientific Consultant at Logistics Authority, Armed Forces of Egypt.

2021 Scientific Consultant at Fayrouz Lab, National Company for Fisheries and Aquaculture, Ministry of Defense.

2021 Associate Professor of Biomedical Research, Armed Forces College of Medicine, Ministry of Defense.

Scientific and administrative activities:

- Participated in the organization of the training courses on Molecular Biology at the Biotechnology Center for Services and Research - Cairo University.

- Responsible for the implementation of the targets of the Continuous Improvement and Qualifying for Accreditation Project (CIQAP) in the Department of Biochemistry, Faculty of Veterinary Medicine - Cairo University.

- CO-PI in research projects at Laboratory of Molecular Epidemiology (LME), Faculty of Veterinary Medicine, Cairo University and Cancer Biology Department, National Cancer Institute, Cairo University.

- Teaching the biotechnology courses (specialized programs) at faculty of Science, Cairo University and Faculty of Veterinary Medicine, Benha University.

- Scientific consultation at the Veterinary Military Hospital and participation in the organization of workshops and training course at the laboratories of the Veterinary Military Hospital.

- Scientific consultation and participation in the implementation of the ISO 17025 system at the Fayrouz Laboratories at National Company of Fisheries and Aquaculture, Ministry of Defense.

- Member at Faculty of Pharmacy IACUC., Ain Shams University, Egypt

Areas of interest: Genomics and Proteomics

Publications

- 1) Kim, H. K., Park, W. S., Kang, S. H., Warda, M., Kim, N., Ko, J.H., Prince, A., and Han, J. (2007). Mitochondrial alterations in human gastric carcinoma cell line. *Am J Physiol Cell Physiol*. 293(2):C761-71.
- 2) Kim, Y. N., Kim, H. K., Warda, M., Kim, N., Park, W. S., Prince, A., Jeong, D. H., Lee, D. S., Kim, K. T., and Han, J. (2007). Toward a better understanding of preeclampsia: Comparative proteomic analysis of preeclamptic placentas. *Proteomics Clin. Appl.*1(12): 1625–1636.
- 3) Jeong, D. H., Kim, H. K., Prince, A., Lee, D. S., Kim, Y. N., Han, J., and Kim, K. T. (2008). Plasma proteomic analysis of patients with squamous cell carcinoma of the uterine cervix. *J. Gynecol. Oncol.* 19 (3):173-180.
- 4) El-Sayed, A., Prince, A., Fawzy, A., Nadra-Elwgoud, Abdou, M.I., Omar, L., Fayed, A., and Salem, M., (2013). Sero-prevalence of Avian Influenza in Animals and Human in Egypt. *Pakistan Journal of Biological Sciences*, 16: 524-529.
- 5) Fawzy, A., Prince, A., Hassan, A., Fayed, A., Zschöck, M., Naga, M., Omar, M., Salem, M., El-Sayed A. (2013). Epidemiological studies on Johne's disease in ruminants and Crohn's disease in humans in Egypt. *Int. J. of Veterinary Science and Medicine*, 1:79–86
- 6) Prince, A.; Alsaedi, H., El-Hindi, H., and Amer H. (2013). Antioxidant action of barley whole grain in diabetic rats. *J. Stem Cells and Molecular Biology*, 1 (1):13-20.
- 7) Warda, M., Prince, A., Kim, H. K., Khafaga, N., Scholkamy, T., Linhardt, R. J., and Han, J. (2014). Proteomics of old world camelid (*Camelus dromedarius*): Better understanding the interplay between homeostasis and desert environment. *J Adv Res*, 5: 219-242
- 8) Prince, A.; Khan, F. H.; Matthews, B. F.; Natarajan, S. S. (2014). Transcriptome and proteome alterations during the nematode-soybean interaction. *Nematropica* 44(2):137-145.
- 9) Shokry, M. M., Prince, A., Attia, M.Z, Ibrahim, I. M., Farghalli, H. M., Tohamy A. F. and Ayman, A. (2014). Potential of camel-derived hemoglobin oxygen carriers as a blood substitute. *J. of Camelid Science*, 7: 35-47
- 10) Abo El-Yazeed, H.; Effat, M.; El-Hariri, M.; Prince, A.; Alarousy, R.; Eraqi, M.; Hanafy M. and Elsady E. (2015). Extracellular Protein Profile of *Microsporium canis* Secreted Proteolytic Enzymes (Exoantigens). *World Applied Sciences Journal* 33 (12): 1975-1980
- 11) Prince, A., Abdelbary, Gad Mostafa Abdalla, Hasani Ibrahim W., Warda Mohamad, and Elbehairy Adel (2016) Potential Therapeutic role of Mesenchymal Stem Cell in Delayed Wound Healing of Diabetic Rats, , *Der Pharmacia Lettre*, 8,(15) : 62-68.
- 12) El-Senosi, Yakout A., Prince, A., Afify Adel Fathey Tohamy, and "Atwa Hend"Ahmed El-Refaey , (2017) Development of Simple Multiplex Real-Time PCR Assays for Some Probiotics Detection.
- 13) Hussein, S.; Prince, A.; Elbehairy, A.; Kotb, N. S. and Bahaa, M.(2017). Lipopolysaccharide-induced Alterations of Immune-related Genes in Goat. *D. J. of Biomed. Res.* 4(1) pp. 001-005.
- 14) Mohamed, Shokry, Prince, A., M Attia, I Ibrahim, H Farghalli, A Tohamy, and A Mostafa (2017) Camel-Derived Haemoglobin, A New Blood Substitute and Oxygen Therapeutic, *Hematology & Hemotherapy Journal*, Volume 2, Issue 1, p.1-5.
- 15) Hoter, A.; Amiri, M.; Prince, A.; Amer, H.; Warda, M.; Naim, H.Y. (2018). Differential Glycosylation and Modulation of Camel and Human HSP Isoforms in Response to Thermal and Hypoxic Stresses. *Int. J. Mol. Sci.*, 19, 402
- 16) Rizk, H.; Tohamy, A.F; Sayed, W. and Prince, A. (2018). Ameliorative effects of bone marrow derived pancreatic progenitor cells on hyperglycemia and oxidative stress in diabetic rats. *Acta Histochemica*.120(5):412-419.

- 17) Abo Norag MA, El-Shenawy AM, Fadl SE, Abdo WS, Gad DM, Rashed MA, Prince A. (2018). Effect of phytase enzyme on growth performance, serum biochemical alteration, immune response and gene expression in Nile tilapia. *Fish Shellfish Immunol.* 31;80:97-108.
- 18) Ali, A.; Mistry, B. V.; Ahmed, H. A.; Abdulla, R.; Amer, H. A.; Prince, A.; Alazami, A. M.; Alkuraya, F. S.; and Assiri, A. (2018). Deletion of DDB1- and CUL4- associated factor-17 (Dcaf17) gene causes spermatogenesis defects and male infertility in mice. *Scientific Reports*, 8:9202| DOI:10.1038/s41598-018-27379-0
- 19) Alsaedi, Haidar, Prince, A., Quraishi Dhuha, and Ali Mohamad (2019) Gene expression alterations in delayed wound healing in diabetic rats treatment of stem cells and platelet-rich plasma, *Biochemical and Cellular Archives*, 19 (1), 1783-1790.
- 20) Jorob, Tareq H., Prince, A., El-Gendy Saad M., and Houseini Motawa El E. (2019) Novel potential therapeutic role of Interleukins 2&12 and taurine combination against human hepatoma cells propagated EX-Vivo, *J Adv Pharm Edu Res*, Volume 9 , Issue 3, p.136-144.
- 21) Ezzat, M.; OKBA, M.; AHMED, S.; El-Banna, H.; Prince, A.; Mohamed, S. and Ezzat, S. (2020). In-depth hepatoprotective mechanistic study of Phyllanthus niruri: In vitro and in vivo studies and its chemical characterization. *PloS one*, 15;1: p.e0226185.
- 22) Abdelatty, A. M., Mandouh M. I., Al-Mokaddem A. K., Mansour H. A., Khalil H. M. A., Elolimy A. A., Ford H., Farid O. A. A., Prince, A., Sakr O. G., (2020) Influence of level of inclusion of Azolla leaf meal on growth performance, meat quality and skeletal muscle p70S6 kinase α abundance in broiler chickens, *Animal*, p.1-100.
- 23) Ibrahim, E.; El-Baghdady, K.; Abdelall S.; Warda M.; Prince, A. and Ibrahim M. (2020). Prevalence of multidrug resistance in the Egyptian methicillin-resistant Staphylococcus aureus isolates. *African Journal of Biological Sciences*. 16;1:43-52.
- 24) Fadl, S.; El-Gammal, G.; Sakr O.; Salah A.; Atia A.; Prince A., and Hegazy A. (2020). Impact of dietary Mannan-oligosaccharide and β -Glucan supplementation on growth, histopathology, E-coli colonization and hepatic transcripts of TNF- α and NF- KB of broiler challenged with E. coli O78. *BMC Veterinary Research*, 16:204
- 25) Awad, Els. T., Abdelaziz S. A., Prince, A., and I. M. Ahmed Hussein (2020) Protective Role Of Onion Juice And Gingko Biloba Leaf Extract Against Potassium Oxonate Induced Acute Nephrotoxicity (Hyperuricemia) In Rats, *RJPBCS*, 11(3), 144-150.
- 26) Khalil, S., Al-Sagan, A., Abdellatif, H., Prince, A., and El-Banna R. (2021) Effects of guanidinoacetic acid supplementation on zootechnical performance and some biometric indices in broilers challenged with T3-Hormone, *Italian Journal of Animal Science*, 20,1, 611-622.
- 27) A.M. El-Nokrashy, Banna R.A.El-, B.M.Edrise, M.M.Abdel-Rahim, M.Jover-Cerdá, A.Tomás-Vidal, and Prince, A. (2021) Impact of nucleotide enriched diets on the production of gilthead seabream, Sparus aurata fingerlings by modulation of liver mitochondrial enzyme activity, antioxidant status, immune gene expression, and gut microbial ecology, *Aquaculture*, p.535.
- 28) M. Attia, Marwa, Elgendy Mamdouh Y., Prince, A., El-Adawy Mahmoud M., and Abdelsalam Mohamed (2021) Morphomolecular identification of two trichodinid coinfections (Ciliophora: Trichodinidae) and their immunological impacts on farmed Nile Tilapia , *Aquaculture Research*.
- 29) Fathy, M., Abdel-moein K., Osman W., Erfan M., Prince, A., Hafez A., and HossamEldin (2021) Performance of Different Laboratory Methods for Detection of Clostridium difficile in Animal Samples, *Advances in Animal and Veterinary Sciences*, 9, 1, 132-136.
- 30) Eissa, Alaa E., Abou-Okada M., Alkurdi A. M., Zlitne R., Prince, A., and Abdelsalam M. (2021) Catastrophic mass mortalities caused by Photobacterium damsela affecting farmed marine fish from Deeba Triangle, Egypt, *Aquaculture Research*, p. <https://doi.org/10.1111/are.15284>

- 31) Attia, M., Marwa, M.Y., Abdelsalam M., Hassan, A., Prince, A., and Younis N.A. (2021) Morpho-molecular identification of Heterophyes heterophyes encysted metacercariae and its immunological and histopathological effects on farmed Mugil cephalus in Egypt, *Aquacult Int.*, <https://doi.org/10.1007/s10499-021-00708-3>
- 32) Al-Mulhim, F., Alqosaibi, A., Al-Muhanna, A., Farid, K., Abdel-Ghany, S., Rizk, H., Prince, A., Isichei, A. and H. Sabit, (2021) CRISPR/Cas9-mediated activation of CDH1 suppresses metastasis of breast cancer in rats, *Electronic Journal of Biotechnology*, 53: 54-60.
- 33) El Meqanen, S., Badawy, M., Prince, A., El-Desouky, M., Gheait, M. (2021) Biomedical Activity of Egyptian Hibiscus sabdariffa L. as Modulator of Alzheimer's Beta-Amyloid1-42 Secretion in a Human Neuroglioma Model. *Egyptian Journal of Chemistry*; doi: 10.21608/ejchem.2021.73716.3659
- 34) Eissa, A., Mamdouh, E., Ismail A., Sabry N., Prince, A., Mahmoud, A., El-Demerdash, O., Abdelsalam M. and Derwa M. (2021) Streptococcus, Centrocestus formosanus and Myxobolus tilapiae concurrent infections in farmed Nile tilapia (Oreochromis niloticus), *Microbial Pathogenesis*, 158, p.<https://doi.org/10.1016/j.micpath.2021.105084>, (2021)
- 35) Abdelatty, A.M., Mandouh, M.I., Mousa, M.R., Mansour, H.A., Ford, H., Shaheed, I.B., Elolimy, A.A., Prince, A., El-Sawy, M.A., AboBakr, H.O. and M. Bionaz (2021) Sun-dried Azolla leaf meal at 10% dietary inclusion improved growth, meat quality, and increased skeletal muscle Ribosomal protein S6 kinase β 1 abundance in growing rabbit. *Animal*, 5(10), 100348
- 36) Eissa, A., Abdelsalam M., Attia M., Ismail G., Qorany R. and Prince, A. (2021) Morphological, molecular and clinical assessment of different Anisakis species infecting horse Mackerel Trachurus trachurus from South Mediterranean, *Egyptian Journal of Aquatic Biology & Fisheries*, 25 (4), 1085-1098.
- 37) Sherif, A.H, Prince, A., Adel Seida, A., Saad Sharaf, M. Eldessouki, E.A. and M.A. Harfoush (2021) Moringa oleifera mitigates oxytetracycline stress in Oreochromis niloticus, , *Aquaculture Research*, p.10.1111/are.15707.

Collaboration in Scientific Projects

Proteomics projects:

Sponsored by Grants R05-2006-000-00413-0 of the Korea Science and Engineering Foundation and the Research Project on the Production of Bio-organs, Ministry of Agriculture and Forestry, Korea, through the Biohealth Products Research Center (BPRC) of Inje University.

A) Cancer biomarkers discovery project

The purpose of the work was to disclose and characterize the potential cancer biomarkers in plasma form cervical cancer patient.

B) Pre-eclampsia project. To figure out the clinical target proteins that can be used as therapeutic target for prevention and/or treatment of this illness.

C) Ischemic heart disease Project:

Using animal model we aim to figure out the up and down regulated proteins that contribute in the development of the cardiac protection. This will afford a good chance for better approach towards new safeguarded interference against many cardiac illnesses.

D) Proteomic analysis of HCV associated hepatocellular carcinoma

Sponsored by Grants of Cairo University through Cancer Biology Department, National Cancer Institute, Cairo University. The main goal is the identification of proteomic profile in Egyptian HCV-associated hepatocellular carcinoma.

Genomics projects:

Sponsored by Grants of the Academy of Scientific Research and Technology (ASRT), Egypt, through the Laboratory of Molecular Epidemiology (LME), Faculty of Veterinary Medicine, Cairo University.

A) *Mycobacterium Avium Paratuberculosis (MAP) Project*

The purpose of the work is to determine the incidence of MAP in different animal species using the molecular tools and to develop a protocol for rapid screening from field samples.

Conferences, Training courses and Workshops

- 1) General Secretary of the International Conference on *Biotechnology and Personalized Medicine* that was held at Cairo University April, 2019.
- 2) Trainer and organizer in the workshop organized by Unit of Diagnosis and Treatment of Poultry Diseases in collaboration with *Biotechnology Center for Services and Research* entitled: *PCR: molecular tool for diagnosis of viral diseases* June, 2013
- 3) General Secretary of *the International Conference on Molecular Biology and Stem Cells* that was held at Ain Shams University May, 2013.
- 4) Trainer and organizer in the workshop the was held at German University in Cairo (GUC) entitled: *Gene Expression Analysis* April, 2013
- 5) Participation in the workshop organized by the *United States Department of Agriculture (USDA)*, Maryland, USA entitled *Laboratory Biosafety and Bloodborne Pathogens* July, 2012.
- 6) Participation in the workshop organized by the National Center for Biotechnology Information (NCBI) entitled *The NCBI Discovery Workshops* May, 2012.
- 7) Lecturer and organizer in the first training course entitled *Proteomics: Post-genomic Era of Molecular Biology* organized by Faculty of Pharmacy and Biotechnology, German University in Cairo (GUC) July, 2011.
- 8) Organizer in the Second Symposium organized by *Biotechnology Program, Faculty of Science, Cairo University* entitled: *Biotechnology Symposium of Unique Life (SOUL)* March, 2013
- 9) Lecturer and organizer in the first training course entitled *Western Blotting* organized by *Biotechnology Center for Services and Research (BCSR)*, Faculty of Veterinary Medicine, Cairo University May, 2011.
- 10) Actively participated in the workshop on *Molecular Biology, Bioinformatics and Proteomics, from DNA to Gene Function* organized by Fayoum University 9-18 January, 2011 .
- 11) Lecturer and organizer in the first training course entitled *Molecular Biology Techniques and its Applications in Biotechnology* organized by Menoufyia University July, 2010.
- 12) Instructor and organizer in the first training course entitled *Principals and Applications of Biotechnology* organized by the National Research Centre of Egypt (NRC) October, 2009.
- 13) Oral presentation in the *9th International Congress on Cell Biology (ICCB) 2008* Seoul, South Korea.
- 14) Poster presentation in the *HUPO 7th Annual World Congress Amsterdam 2008* Netherlands 16 - 20 August 2008.
- 15) Poster presentation in the *8th International Proteomics Conference, KHUPO* Jeju, South Korea May, 2008.
- 16) Poster presentation in the *International Conference on Pharmacogenomics* BEXCO, Busan, South Korea April, 2008.
- 17) Participation in the international symposium organized by the catholic University of Korea which entitled *Integrated Signal Networking of Metabolic Dysfunction* March, 2008.
- 18) Organization of the *2nd Symposium of Korean Society for Mitochondrial Research and Medicine* November, 2007.
- 19) Actively participated in the 1st International Conference of the Faculty of Veterinary Medicine, Cairo University which entitled *Emerging Zoonotic Diseases and Human Health* April, 2007.
- 20) Actively participated in the work shop entitled *Principle and applications of Real Time- qPCR* organized by Pharma tech Ltd. Regional office in South Korea September, 2006.
- 21) Actively participated in the *6th International Proteomics Conference, KHUPO* March, 2006.
- 22) Actively participated in the work shop entitled *2D Electrophoresis and Image analysis* organized by GE healthcare biosciences Ltd. Regional office (Amersham biosciences formerly) March, 2006.

Fellowships

- *Pharmaco and Toxicogenomics Institute, Medical School of Hannover, (MHH)*, Germany
- *United States Department of Agriculture (USDA)*, Maryland, USA.
- *Mitochondrial Signaling Lab.*, Inje University, Korea.
- *Biotechnology Center for Services and Research (BCSR)*, Faculty of Veterinary Medicine, Cairo University.
- *Lab of Molecular Epidemiology (LME)*, Faculty of Veterinary medicine, Cairo University.

Other Skills

- Computer:**
- Microsoft Word, Microsoft PowerPoint, Microsoft Excel, Adobe Photoshop
 - Chemdraw (for molecular designing and modeling)
 - (Image Master 2D Platinum; Amersham Bioscience, (The software for 2DE gel analysis)
 - Multiguage Program (for Expression analysis).
 - Image J Program for measuring the size and relative percentages.
 - Origin 6 professional and SPSS programs for statistical analysis.
 - FlexControl, Biotools for MALDI-TOF

Biotechnology Techniques:

- Nucleic acid Extraction, conventional and Real-time PCR
- Gene cloning
- Polyacrylamide, Agarose Gel Electrophoresis and Western blotting
- Protein purification and Isoelectric Focusing
- Mass Spectrometry (MALDI-TOF) Bruker Ultraflex II

Memberships

1. *Human Proteome Organization (HUPO)*
2. *Egyptian Society for Biochemistry and Molecular Biology (ESBMB)*
3. *Egyptian Veterinary Medical Society (EVMS)*
4. General Secretary of *Arab Society of Stem Cells & Molecular Biology (ASSCMB)*

References (On Request)