

Parvaneh Mehrbod

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69, Influenza and Respiratory Viruses Dept., Pasteur Institute of IRAN, Tehran, IRAN,
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Field of expertise: Cell and Molecular Biology, Biotechnology, Immunology and Virology

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Education:

- **PhD:** Molecular Biotechnology, Universiti Putra Malaysia, Malaysia 2013. GPA 3.963/4
Project title: Statins modulation of influenza virus H1N1 infection in MDCK cells by molecular signaling pathways; *Under supervision of:* Prof. Dr. Aini Ideris
- **M.Sc:** Cellular & Molecular biology, University of Tehran, Tehran, Iran 2008. GPA 17.60/20
Project title: In vitro antiviral effect of "Nanosilver" on influenza virus; *Under supervision of:* A/Prof. Dr. Nasrin Motamed and A/Prof. Dr. Masoumeh Tavassoti Kheiri
- **B.Sc:** Plant Biology, Ferdowsi University of Mashhad, Mashhad, Iran 1999. GPA 18.41/20
Project title: Systematic study of the genus *Centaurea*, L. "Asteraceae" in Khorasan-IRAN; *Under supervision of:* A/Prof. Dr. Javad Ghorashi Hosseini
- **High School:** Diploma, in Natural Sciences, Narjes High school, Tehran, Iran, 1994. GPA 18.43/20

Research Experiences:

- **Active compounds investigation of *Phlomis olivieri* and *Phlomis lenkoranica* from Iranian indigenous plants on the molecular pathway of influenza virus life cycle and molecular docking** (Supervisor, Pasteur Institute of IRAN, 2019-continuing)
Supervising 1 student
- **Association of the host genetic risk factors, hypercholesterolemia and diabetes with Influenza disease** (Executor of the project, Pasteur Institute of IRAN, 2018-continuing)
Conducting whole project, molecular assay, iPLEX and Mass array, SNP analysis
- **Antiviral potential of crude extracts and fractions of some Iran local medicinal plants against influenza A virus** (Supervisor, Pasteur Institute of IRAN, 2017-2018)
Teaching and supervising 2 students
- **Interaction of local medicinal plants extracts with the molecular pathway of influenza virus life cycle with emphasis on inflammatory responses, autophagy, apoptosis and small GTPase proteins** (PostDoc fellow, University of Pretoria, South Africa, 2016-2019)
Conducting whole project

- **Evaluation of the susceptibility to influenza virus in people suffering from Hypercholesterolemia and diabetes in terms of IFITM3 polymorphism rs12252-C** (PostDoc fellow, Pasteur Institute of IRAN, 2016-2017)

Conducting whole project, molecular assay, sequencing, SNP analysis

- **Prokaryotic production and protectivity assessment of chimer protein consisting of influenza virus conserved domains of Hemagglutinin , Matrix protein (3M2e-HA2) and Nucleoprotein (NP) in mouse model** (Research assistant, Pasteur Institute of IRAN, 2015-2016)

Cooperation in cellular immunity studies

- **Evaluation of antiviral properties of edible bird nest (EBN) extract against influenza A virus (IAV) infection from new point of view of molecular mechanism of effect :(The potential of using as functional food)** (PostDoc fellow, Institute of Bioscience, Universiti Putra Malaysia, 2014-2015)

Conducting whole project and training 2 masters and 1 PhD students

- **Statins modulation of influenza virus H1N1 infection in MDCK cells by molecular signaling pathways** (PhD project, Institute of Bioscience, Universiti Putra Malaysia, 2010-2013)

Cell culture of MDCK, Vero and CrFK; Propagation of influenza virus in cell culture; Determining antiviral effects of statins different treatments on influenza A virus infected cells using viral titer detection assay (HA assay) and cell viability and proliferation assay (cytotoxicity MTT assay) and TEM viewing; Evaluating the effect of statins on total cellular cholesterol and de novo cholesterol synthesis of influenza A virus infected cells using Folch method and Amplex Red Cholesterol Assay kit (Invitrogen); Determining the anti-inflammatory properties of statins on influenza A virus infected cells using Quantitative real-time PCR and designing primers for viral and cellular genes and using ELISA kits for cytokine proteins detection; Determining statins inhibitory role on small GTPase (Rab5, Rab7 and RhoA) proteins localization on modulating endocytosis process and actin filaments polymerization in influenza A virus infected cells using protein extraction, TCA protein precipitation assay, protein quantification (Bradford assay), Casting of discontinuous polyacrylamide gel, Electrophoretic transfer and actin filaments immunofluorescent labeling and confocal laser scanning microscopy; Evaluating statins modulatory role on LC3 protein, lysosome and M2 channel activity to control macroautophagy process in influenza A virus infected cells using protein extraction, TCA protein precipitation assay, protein quantification (Bradford assay), Casting of discontinuous polyacrylamide gel, Electrophoretic transfer and lysosomes immunofluorescent labeling and confocal laser scanning microscopy and statistical analysis

- **Edible bird nest extract (EBNE) anti-cancer and virucidal properties** (Research assistant, Faculty of Veterinary Medicine, Universiti Putra Malaysia, 2012-2013)

Cell culture of Vero and Propagation of NDV in cell culture; Cell culture of MDCK and Propagation of H5N2 in cell culture; Cell viability and proliferation assay (cytotoxicity MTT assay) and statistical analysis

- **A preliminary study on in vitro evaluation of antiviral properties of bird nest extract against animal coronavirus** (Research assistant, Faculty of Veterinary Medicine, Universiti Putra Malaysia, 2012)

Cell culture of CrFK; Cell viability and proliferation assay (cytotoxicity MTT assay) and statistical analysis

- **Development of DNA vaccine containing HN and F genes of Newcastle Disease Virus and its efficacy following in vivo and in ovo immunizations** (Research assistant, Faculty of Veterinary Medicine, Universiti Putra Malaysia, 2010-2013)

Cell culture of Vero; Cell viability and proliferation assay (cytotoxicity MTT assay); Nanoparticle characterization using Zeta potential and Nanophox and statistical analysis

- **Induction of pluripotency in stem cells from UC-MSCs in feeder layer-free condition** (Research assistant, Institute of Bioscience, Universiti Putra Malaysia, 2012-2013)

Cell culture of stem cell; Nanoparticle characterization using Zeta potential; comparing exogenous and endogenous expression using Quantitative real-time PCR and statistical analysis

- **In vitro antiviral effect of "Nanosilver" on influenza virus** (MSc project, Pasteur Institute of IRAN and University of Tehran, Tehran-IRAN, 2007-2008)

Cell culture of MDCK; Propagation of influenza virus in cell culture and embryonated eggs; Characterization of influenza virus using specific fluorescent antibody; Determining antiviral effect of Nanosilver on influenza A virus infected cells using viral titer detection assay (HA assay) and cell viability and proliferation assay (cytotoxicity MTT assay); Viral protein extraction using biochemical modified Lowry assay; Viral RNA Extraction using Trizol, RT-PCR, PCR & Gel Electrophoresis

- **Anti-influenza activity of a novel Polyoxometalate derivative (POM-4960)** (Research assistant, Pasteur Institute of IRAN, Tehran-IRAN, 2007-2008)

Cell culture of MDCK; Propagation of influenza virus in cell culture and embryonated eggs; Characterization of influenza virus using specific antibody; Determining antiviral effect of POM-4960 on influenza A virus infected cells using viral titer detection assay (HA assay) and cell viability and proliferation assay (cytotoxicity MTT assay); Viral protein extraction using biochemical modified Lowry assay; Viral RNA Extraction using Trizol, RT-PCR, PCR & Gel Electrophoresis

- **Modified procedure for purification of basic protein of Influenza virus** (Research assistant, Pasteur Institute of IRAN, Tehran-IRAN, 2007-2008)

Extraction of NP protein from influenza virus using biochemical modified Lowry assay

- **Systematic study of the genus Centaurea, L. "Asteraceae"** (BSc project, Ferdowsi University of Mashhad, Khorasan-IRAN, 1999) phylogenetic analysis of genus Centaurea from Asteraceae family

- **Various Projects and trainings:**

- ✓ Biosafety Level 3 (BSL3) training (Universiti Putra Malaysia, 2013)

- ✓ Different Workshops for Biology assays and techniques (Pasteur Institute of IRAN and Universiti Putra Malaysia, 2013)

- ✓ Handling cancer stem cells; Cloning; Isolation of lymphocytes from chicken organs (Universiti Putra Malaysia, 2013)

- ✓ Rabbit Bone Marrow sampling; culture and differentiation of stem cells; Cloning (Pasteur Institute of IRAN and Bon yakhte Company, 2008)

- ✓ Lecturer, Pasteur Institute of IRAN, Protein quantification assays, Summer School, 2015.

- **Reviewer of scientific journals since:**

Chemotherapy (2012), Cell Biology International Journal (2012-2015), International Journal of Molecular and Cellular Medicine (IJMCM) (2014-2015), Jundishapur Journal of Microbiology (2015), Vaccine Research (2016), Pharmacognosy Journal (2016), Archives of Medical Laboratory Sciences (2017), BMC Complementary and Alternative Medicine (2018), Saudi Journal of Biological Sciences (2019), Jordan Journal of Biological Sciences (2019), European Journal of Pharmacology (2019), Journal of Applied Pharmaceutical Science (2019)

- **Editor of scientific journals since:**

Vaccine Research (2016), Iranian Journal of Virology (2016), Iranian Journal of Pathology (Farname Inc.) (2018)

Books:

- Transcriptome Analysis of Feline Infectious Peritonitis Virus Infection; Coronaviruses, Methods and Protocols, series volume: 1282, Chapter 20, pp 241-250, 2015. Print ISBN: 978-1-4939-2437-0. Online ISBN: 978-1-4939-2438-7, Springer New York.
- Compilation of a book on "Medical knowledge about pregnancy", Shahidipour Publication, 1st edition: 2003 and 2nd edition: 2004.
- Compilation of a book on "The most important pregnancy knowledge", Shahidipour Publication, 1st edition: 2015.
- Translation of a book under the name of "Cell & Molecular Biol", Lodish. Edition 2004. Mashhad university press.

Teaching Experiences:

- ✓ Demonstrator, Faculty of Veterinary Medicine (Virology Laboratory) and Institute of Bioscience (Laboratory of Vaccine and Immunotherapeutics), Universiti Putra Malaysia, Malaysia, 2009-2014
 - Demonstrating virological methods, SDS-PAGE and Western Blotting workshop
 - Tutor for Reference manager, Endnote and Mendeley
- ✓ Executive committee member, The 4th Iranian virology congress, Pasteur Institute, Tehran-IRAN, 2007
- ✓ Demonstrator, Cellular& molecular biology laboratory, Payam-e-Noor University, Torbat-e-heidarieh-IRAN, 2004-2005
- ✓ Teacher, General biology, Yeganeh High school, Gorgan-IRAN, 1999-2000
- ✓ Teacher, General biology, Farzanegan High school, Tehran-IRAN, 2016

- **Translator:**

Cooperation in scientific document translation, Sina Official translation office, Mashhad-IRAN, 2000 to 2005

Workshops and seminars:

Title	hours	date
The viva workshop	2 days	2009
Endnote workshop	Half day	2010
Workshop in how to use MS word program for systematic compilation of thesis and dissertation	Half day	2010
Academic writing proposal workshop	Half day	2010
Carl Zeiss Confocal Laser Scanning Microscope Workshop	2 days	2010
Online database training in ISI Web of Knowledge, Web of Science	1 day	2010
Workshop for postgraduate research education	1 day	2010
Scientific writing seminar workshop	Half day	2010
Enhancing Postgraduate student experience seminar	Half day	2010
Western Blotting in a day workshop	1 day	2011
WaferGen SmartChip RealTime PCR seminar- A new paradigm workshop	1 day	2011
Resume writing and interviewee skills workshop	Half day	2011
Writing skills to avoid plagiarism seminar	Half day	2011
Managing the research journey seminar	2 days	2012
Seminar on Infrared Imaging System-the pass to quantitative, multiplexed Western Blot Detection	2 days	2012
NGS Miseq Training	3 days	2012
Virtual training in research ethics	online	2015
RealTime PCR workshop provided by Amplicon A/S	1 day	2015
Practical Training Course on DNASIS software	2 days	2016
Patent Search and Arbitration by IPC Standard	2 days	2018
Biosafety and biosecurity workshop	2 days	2018

Publication:

- 1.** **Mehrbod P**, N Motamed, M Tabatabaian, R Soleimani Estyar, E Amini, M Shahidi, M.T Kheiri (2009) In vitro antiviral effect of "Nanosilver" on influenza virus cell culture, Daru-Journal of Pharmaceutical Sciences,17(2): 88-93.
- 2.** **Mehrbod P**, Amini E, Tavassoti Kheiri M (2009) Antiviral activity of garlic extract on influenza virus, Iranian Journal of Virology, 3(1): 19-23.
- 3.** **Mehrbod P**, Ideris A, Omar AR, Hair-Bejo M, Tan SW, Kheiri MT, Tabatabaian M. (2012) Attenuation of influenza virus infectivity with herbal-marine compound (HESA-A): an in vitro study in MDCK cells, Virology Journal, 9(44):1-7.
- 4.** **Mehrbod P**, M. El Zowalaty, A.R. Omar, M. Hair-Bejo, A. Ideris (2012) Statins reduce the expression of proinflammatory cytokines in influenza A virus infected CrFK cells., Acta Virologica, 56(4): 353-355.
- 5.** **Mehrbod P**, Aini Ideris, Abdul Rahman Omar and Mohd Hair-Bejo (2012) Evaluation of antiviral effects of atorvastatin on H1N1 infection in MDCK cells, African Journal of Microbiology Research, 6(27): 5715-5719.
- 6.** Seyed Masoud Hosseini, Elham Amini, Masoumeh Tavassoti Kheiri, **Mehrbod P**, Ebrahim Zabihi (2012) Anti-influenza activity of a novel Polyoxometalate derivative (POM-4960), International Journal of Molecular and Clinical Microbiology, 1(1): 21-29.

- 7.** Nasibeh Daneshvar, Rasedee Abdullah, Fatemeh T. Shamsabadi, Chee Wun How, M. Aizat MH, **Mehrbod P** (2013) PAMAM dendrimer roles in gene delivery methods and stem cell research, Cell Biology International, 37(5): 415-419.
- 8.** **Mehrbod P**, Aini I., Amini E., Eslami M., Torabi A., Bande F., Kheiri M.T. (2013) Assessment of direct immunofluorescence assay in detection of antiviral effect of garlic extract on influenza virus, African Journal of Microbiology Research, 7(21): 2608-2612.
- 9.** Elham Maroufyan, Azhar Kasim, Goh Yong Meng, Mahdi Ebrahimi, Loh Teck Chwen, **Mehrbod P**, Behnam Kamalidehghan, Abdoreza Soleimani Farjam (2013) Effect of dietary combination of Methionine and fish oil on cellular immunity and plasma fatty acids in infectious bursal disease challenged chickens, The Scientific World Journal, 2013, ID 531397, 9 pages.
- 10.** Zahra Ajdari, Maaruf Abd Ghani, Mazlin Bin Mokhtar, **Mehrbod P**, Dniel Ajdari, Saadi Bayat, Sahar Abbasiliasi and Arbakariya B. Ariff (2014) Hypocholesterolemic activity of Monascus fermented product in the absence of monacolins with partial purification for functional food application, The Scientific World Journal, 2014, ID 252647, 12 pages.
- 11.** Oi Kuan Choong, **Mehrbod P**, Bimo Ario Tejo, Abdul Rahman Omar (2014) In vitro antiviral activity of circular triple helix forming oligonucleotide RNA towards feline infectious peritonitis virus replication, BioMed Research International, 2014, ID 654712, 8 pages.
- 12.** **Mehrbod P**, Aini Ideris, Abdul Rahman Omar and Mohd Hair-Bejo (2014) Prophylactic effect of HESA-A on influenza A virus infectivity, BMC Complementary and Alternative Medicine, 14 (131):1-4.
- 13.** **Mehrbod P**, Mohd Hair-Bejo, Tengku Azmi Tengku Ibrahim, Abdul Rahman Omar, Mohamed El Zowalaty, Zahra Ajdari, Aini Ideris (2014) Simvastatin modulates cellular components in influenza A virus-infected cells, International Journal of Molecular Medicine, 34(1):61-73.
- 14.** **Mehrbod P**, Abdul Rahman Omar, Mohd Hair-Bejo, Amin Haghani, Aini Ideris (2014) Mechanisms of action and efficacy of statins against influenza, BioMed Research International, 2014, ID 872370, 8 pages.
- 15.** Nasibeh Daneshvar, Peyman Ghorashizadeh, Mohadeseh Hashemborojjerdi, Shradha Raikar, **Mehrbod P**, (2014) Optimizing transfection of umbilical cord mesenchymal stem cells utilizing minicircle plasmid/lipofectamine LTX complex, Journal of Applied Biotechnology Reports, 1(3):111-116.
- 16.** Rahman HS, Rasedee A, How CW, Zeenathul A, Chartrand MS, Yeap SK, Abdul AB, Wei TS, Othman HH, Ajdari Z, Namvar F, Arulselvan P, Fakurazi S, **Mehrbod P**, Daneshvar N, Begum H (2015) Antileukemic effect of zerumbone-loaded nano-structured lipid carrier in WEHI-3B cell-induced murine leukemia model, International Journal of Nanomedicine, 2015(10):1649-1666.
- 17.** Shuid AN, Safi N, Haghani A, **Mehrbod P**, Haron MS, Tan SW, Omar AR (2015) Apoptosis transcriptional mechanism of feline infectious peritonitis virus infected cells, Apoptosis, 20(11):1457-1470.
- 18.** Nasibeh Daneshvar, Raseede Abdullah, Fatemeh Tash Shamsabadi, Hassan Moeini, **Mehrbod P**, Heshu Sulaiman Rahman, Mohadeseh hashem Borojjerdi, Shalini Vellasamy (2015) Induction of

Pluripotency in Human Umbilical Cord Mesenchymal Stem Cells in Feeder Layer-Free Condition, *Tissue and Cell*, 46(6):575-582.

19. Masoumeh Firouzamandi, Hassan Moeini, Davood Hosseini, Mohd Hair Bejo, Abdul Rahman Omar, **Mehrbod P**, Aini Ideris (2016) Improved immunogenicity of Newcastle disease virus inactivated vaccine following DNA vaccination using NDV HN and F genes, *Journal of Veterinary Science*, 17(1):21-26.

20. Masoumeh Firouzamandi, Hassan Moeini, Davood Hosseini, Mohd Hair Bejo, Abdul Rahman Omar, **Mehrbod P**, Mohamed Ezzat El Zowalaty, Aini Ideris (2016) Preparation, characterization and in ovo vaccination of dextran-spermine nanoparticle DNA vaccine co-expressing the fusion and hemagglutinin genes against Newcastle disease, *International Journal of Nanomedicine*, 2016 (1):259-267.

21. Asghar Abdoli, Hoorieh Soleimanjahi, Abbas Jamali, **Mehrbod P**, Shima Gholami, Zahra Kianmehr, Neda Feizi, Maryam Saleh, Fariborz Bahrami, Talat Mokhtari-Azad, Mohsen Abdoli, Masoumeh Tavassoti Kheiri (2016) Comparison between MDCK and MDCK-SIAT1 cell lines as preferred host for cell culture-based influenza vaccine production, *Biotechnology Letters*, 38(6):941-948.

22. Amin Haghani, **Mehrbod P**, Nikoo Safi, Nur Ain Aminuddin, Azadeh Bahadoran, Abdul Rahman Omar, Aini Ideris (2016) In Vitro and in vivo mechanism of immunomodulatory and antiviral activity of Edible Bird's Nest (EBN) against influenza A virus (IAV) infection, *Journal of Ethnopharmacology*, 5(185):327-340.

23. **Mehrbod P**, Fotouhi F, Irani Mokhtari G, Mohammadpour A, Farahmand B (2016) Comparison of Vero and MDCK cell lines transfected with human sialin gene for conversion to suspension culture, *Vaccine Research*, 2 (4):69-73.

24. T. Shamsabadi Fatemeh; Akbari Eidgahi Mohammad Reza; **Mehrbod P**; Daneshvar nasibeh; Nazariah Allaudin Zeenathul; Yamchi Ahad; Shahbazi Majid (2016) Survivin, a promising gene in cancer treatment, *Asian Pacific journal of cancer prevention*, 17(8):3711-3719.

25. Farahmand B, Akbari A, Akbari Kh, Fotouhi Chahouki F, **Mehrbod P**, Jalili N (2016) Cloning, expression and purification of hemagglutinin conserved domain (HA2) of influenza A virus, to be used in broad-spectrum subunit vaccine cocktails, *Vaccine Research*, 3(8): 69-75.

26. Amin Haghani, **Mehrbod P**, Abdul Rahman Omar, Nikoo Safi, Fadzilah A'ini Abd Kadir, Aini Ideris (2017) Edible bird's nest modulate intracellular molecular pathways of influenza A virus infected cells, *BMC Complementary and Alternative Medicine*, 17(22):1-13.

27. Asghar Abdoli, Nina Radmehr, Azam Bolhassani, Akram Eidi, **Mehrbod P**, Fatemeh Motevalli, Zahra Kianmehr, Mohsen Chiani, Mehdi Mahdavi, Shaghayegh Yazdani, Mehdi Shafiee Ardestani, Mohammad Reza Kandi, Mohammad Reza Aghasadeghi (2017) Conjugated anionic PEG-citrate G2 dendrimer with multi-epitopic HIV-1 vaccine candidate enhance the cellular immune responses in mice, *Artificial Cells, Nanomedicine, and Biotechnology*, 45 (8):1762-1768.

28. Neda Feizi, **Mehrbod P**, Bizhan Romani, Hoorieh Soleimanjahi, Taravat Bamdad, Amir Feizi, Ehsan Ollah Jazaeri, Abbas Jamali, Maryam Saleh, Hadiseh Shokouhi Targhi, Fatemeh Fotouhi, Reza

Nasrollahi Nargesabad, Asghar Abdoli (2017) Autophagy induction regulates influenza virus replication in a time-dependent manner, Journal of Medical Microbiology, 66 (4):536-541.

29. Mehrbod P, Sana Eybpoosh, Fatemeh Fotouhi, Hadis Shokouhi, Vahideh Mazaheri, Behrokh Farahmand (2017) Association of IFITM3 rs12252 polymorphisms, BMI, diabetes, and hypercholesterolemia with mild flu in an Iranian population, Virology Journal, 14(218):1-8.

30. Khateri M, Abdoli A, Motevalli F, Fotouhi F, Bolhassani A, Arashkia A, Jazaeri EO, Shahbazi S, Mehrbod P, Naziri H, Aghasadeghi MR (2018) Evaluation of autophagy induction on HEV 239 vaccine immune response in a mouse model: Autophagy effect on vaccine immunogenicity, IUBMB Life, 70 (3):207-214.

31. Asghar Abdoli, Mehrdad Alirezaei, Mehrbod P, Faezeh Forouzanfar (2018) Autophagy: the multi-purpose bridge in viral infections and host cells, Reviews in Medical Virology, e1973.

32. Mehrbod P, Muna A Abdalla, Emmanuel M Njoya, Aroke S Ahmed, Fatemeh Fotouhi, Behrokh Farahmand, Dorcas A Gado, Mansoureh Tabatabaian, Olubunmi G Fasanmi, Jacobus N Eloff, Lyndy J McGaw, Folorunso O Fasina (2018) South African medicinal plant extracts active against influenza A virus, BMC Complementary and Alternative Medicine, 18(112): 1-10.

33. Mehrbod P, Muna A Abdalla, Fatemeh Fotouhi, Masoumeh Heidarzadeh, Abimbola O Aro, Jacobus N Eloff, Lyndy J McGaw, Folorunso O Fasina (2018) Immunomodulatory properties of quercetin-3-O- α -L-rhamnopyranoside from *Rapanea melanophloeos* against influenza A virus, BMC Complementary and Alternative Medicine, 18 (184): 1-10.

34. Alikhani Mehdi, Behzadian Farida, Mehrbod P, Khosravi Node Fatemeh, Hadiseh Shokouhi Targhi, Farahmand Behrokh (2018) Polyclonal antibody against recombinant nucleoprotein of the influenza A virus (H1N1); production and purification, Iranian Journal of Virology, 11(2): 36-42.

35. Somayeh Zamani, Fatemeh Fotouhi Chahouki, Mehrbod P, Saeideh Sadeghi Neshat, Behrokh Farahmand (2018) Production and evaluation of polyclonal antibody against influenza A virus matrix 2 conserved protein for research and diagnosis purposes, Iranian Journal of Virology, 11(4): 31-38.

36. Motlhatlego K.E., Mehrbod P, Fotouhi F, Abdalla M.A, Eloff J.N, McGaw L.J (2018) Antiviral activity against influenza H1N1 virus of myricetin-3- O -rhamnoside isolated from *Newtonia buchananii* and its mechanism of action, South African Journal of Botany, 115:301

37. Mehrbod P, Sudharsana R. Ande, Javad Alizadeh, Shahrzad Rahimizadeh, Aryana Shariati, Hadis Malek, Mohammad Hashemi, Kathleen K. M. Glover, Affan A. Sher, Kevin M. Coombs, Saeid Ghavami (2019) The roles of apoptosis, autophagy and unfolded protein response in arbovirus, influenza virus and HIV infections, Virulence, 10(1): 376-413.

38. Mohsen Keshavarz, Haideh Namdari, Mohammad Farahmand, Mehrbod P, Talat Mokhtari-Azad, Farhad Rezaei (2019) Association of polymorphisms in inflammatory cytokines encoding genes with influenza A/H1N1 and B in an Iranian population, Virology Journal, 16(79):1-10.

39. Sepideh Yamini, Zohre Eftekhari, Mohammad Reza Mokhber Dezfouli, Babak Beikzadeh, Mehrbod P (2019) Exogenous lung surfactant decreases interleukin-8 production and increases leukocytes population and total immunoglobulins in rabbits, Medical Laboratory Journal, 13 (6): 17-22.

40. **Mehrbod P**, Samad Nejad Ebrahimi, Fatemeh Fotouhi, Fatemeh Eskandari, Jacobus N Eloff, Lyndy J McGaw, Folorunso O Fasina (2019) Experimental validation and computational modeling of anti-influenza effects of quercetin-3-O- α -L-rhamnopyranoside from indigenous south African medicinal plant *Rapanea melanophloeos*, BMC Complementary and Alternative Medicine, 19 (346): 1-11.

41. Shayan Amiri, Sanaz Dastghaib, Mazaher Ahmadi, **Mehrbod P**, Forough Khadem, Hamid Behrooj, Mohammad Reza Aghanoori, Filip Machaj, Mahdi Ghamsari, Jakub Rosik, Andrzej Hudecki, Abbas Afkhami, Mohammad Hashemi, Marek J Los, Pooneh Mokarram, Tayebeh Madrakian, Saeid Ghavami (2019) Betulin and its Derivatives as Novel Compounds with Different Pharmacological Effects, Biotechnology Advances, (Accepted)

Conferences and Seminars:

- **Mehrbod P**, N. Motamed, M. Tabatabaian, R. Soleimani Estiar, E. Amini, Y. Panahi (2007) Antiviral effect analysis of "Nanosilver" on influenza virus cell culture, Abstract presented on 4th Iranian Congress of Virology, Pasteur Institute of IRAN, Tehran-Iran. (Poster)
- Elham Amini, **Mehrbod P**, Masoumeh Tavassoti Kheiri (2007) Inactivation analysis of Polyoxometalateon influenza virus, Abstract presented on 4th Iranian Congress of Virology, Pasteur Institute of IRAN, Tehran-Iran. (Poster)
- Y. Panahi, R. Saghiri, R. Soleimani Estyar, B. Farahmand, R. Bashar, M. Tabatabaeian, **Mehrbod P** (2007) Extraction & analysis of NP protein extracted from influenza vViruses; Abstract presented on 4th Iranian Congress of Virology, Pasteur Institute of IRAN, Tehran-Iran. (Poster)
- **Mehrbod P**, Yasin Panahi, Elham Amini, Nasrin Motamed, Masoumeh Tavassoti Kheiri (2007) Biochemical and molecular analysis on antiviral effect of Nanosilver, Abstract presented on 9th Iranian congress of Biochemistry and the 2nd International congress of Biochemistry and Molecular Biology, Medical University of Shiraz, IRAN. (Poster)
- Y. Panahi, R. Saghiri, R. Soleimani Estyar, B. Farahmand, R. Bashar, M.Tabatabaeian, **Mehrbod P** (2007) Modified procedure for purification of basic protein (Nucleoprotein) of influenza virus, Abstract presented on 9th Iranian congress of Biochemistry and the 2nd International congress of Biochemistry and Molecular Biology, Medical University of Shiraz, IRAN. (Poster)
- E. Amini, **Mehrbod P**, M. Tavassoti Kheiri (2008) Evaluation of antiviral effect of garlic extract on Influenza Virus, Abstract presented on 2nd International Congress of Clinical Microbiology, Medical University of Shiraz, IRAN. (Poster)
- Elham Amini, **Mehrbod P**, Masoumeh Tavassoti Kheiri (2009) Inhibitory affect of garlic extract on influenza A virus by immunofluorescent, Abstract presented on 5th Iranian Congress of Virology & 1st Congress of Vaccine, Razi Vaccine & Serum Reseach Institute, IRAN. (Poster)
- **Mehrbod P**, Aini I., Omar A.R., Hair-Bejo M.(2011) Effects of Atorvastatin on H1N1 infection in MDCK cells, Abstract presented on 1st Iranian Students Scientific Conference in Malaysia, Universiti Putra Malaysia, Malaysia. (Poster)
- **Mehrbod P**, Aini I., Omar A.R., Hair-Bejo M., Ahmadi A. (2011) Evaluation of antiviral effect of HESA (herbal-marine compound) on influenza virus cell culture in different exposures, Abstract presented on 1st National Postgraduate Conference in Molecular Medicine, Universiti Sains Malaysia, Malaysia. (Poster)
- **Mehrbod P**, Aini I., Omar A.R., Hair-Bejo M., Tengku Azmi T.I. (2012) Attenuation of influenza virus infectivity with herbal-marine compound (HESA-A): an in vitro study in MDCK cells, Abstract presented on Design and Innovation Research Exhibition (PRPI), Universiti Putra Malaysia, Malaysia. (Poster)
- Derwin MDSA, Arshad SS, **Mehrbod P**, Kamaruddin AI, Bande F, Jalila A and Fadzilah-A'ini AK (2012) A Preliminary study on in vitro evaluation of antiviral properties of bird nest extract

against animal coronavirus, Abstract presented on Edible Bird Nest Industry Conference- EBNIC 2012, Malaysia Agriculture Research and Development Institution (MARDI), Malaysia. (Poster)

- **Mehrbod P**, Aini Ideris, Abdul Rahman Omar, Mohd Hair Bejo (2013) Statins as antiviral drugs against influenza virus, Abstract presented on 3rd Annual International Conference on Advances in Biotechnology, BIOTECH 2013, Global Science & Technology Forum (GSTF), Singapore. (Oral)

- Aini Ideris, Seyed Davoud Hosseini, **Mehrbod P**, Shima Azizabadi, Abdul Rahman Omar (2013) Nanoparticle-based rapid detection of RNA viruses, Abstract presented on Livestock Asia Expo & Forum 2013, Malaysia. (Poster)

- Masomeh Firouzamandi, Mohd Hair Bejo, Abdul Rahman Omar, **Mehrbod P**, Aini Ideris (2013) In-ovo vaccination against Newcastle Disease Virus using DNA vaccine, Abstract presented on World Poultry Scientific Association (Malaysia Branch), Malaysia. (Poster)

- **Mehrbod P**, Aini I., Omar A.R., Hair-Bejo M. (2013) Statin modulation on influenza A virus-infected cells, Abstract presented on 2nd Malaysia-Thailand Graduate Forum in Life Science, Food Science and Agriculture (MTGF) 2013, Malaysia. (Oral)

- **Mehrbod P**, Hair-Bejo, M., Omar, A.R., Ideris, A.(2013) Statin modulation on influenza A virus-infected cells, Abstract presented on 18th Biological Sciences graduate Congress, BSGS, University Malaya, Malaysia. (Poster)

- **Mehrbod P**, Amin Haghani, Nikoo Safi, Nur Ain Aminuddin, Abdul Rahman Omar, Aini Ideris (2014) Evaluation of antiviral properties of edible bird nest (EBN) extracts on Influenza A virus (IAV) attenuation, Abstract presented on OMICS group 4th World Congress on Virology, San Antonio, TX, USA. (Poster)

- Amin Haghani, **Mehrbod P**, Nikoo Safi, Abdul Rahman Omar, Aini Ideris (2014) Evaluation of antiviral properties of edible bird nest (EBN) extracts on influenza A virus (IAV) attenuation, Abstract presented on 32nd Symposium of the Malaysian Society for Microbiology (MSM2014), Terengganu Equestrian, Malaysia. (Poster)

- Amin Haghani, **Mehrbod P**, Nikoo Safi, Abdul Rahman Omar, Aini Ideris (2014) The effects of edible bird nest (EBN) extracts on autophagy pathway against influenza A virus, Abstract presented on Edible Bird Nest Industry Conference - EBNIC 2014, Malaysia Agriculture Research and Development Institution (MARDI), Malaysia. (Poster)

- Amin Haghani, **Mehrbod P**, Nikoo Safi, Abdul Rahman Omar, Nur Ain Aminuddin, Aini Ideris (2015) Edible Bird Nest (EBN) can inhibit influenza A virus by affecting autophagy pathway, Abstract presented on International Symposium of Health Sciences, UKM, Malaysia. (Poster)

- **Mehrbod P**, Fatemeh Fotouhi, Vahideh Mazaheri, Mansoureh Tabatabaian, Mahboubeh Ramezannia, Khadijeh Akbari, Behrokh Farahmand (2015) Vero and MDCK cell lines transfection by human SIAT7e gene - a new approach for cell-culture-based vaccine production, Abstract presented on the 9th International Congress of Clinical Microbiology (ICCM9), Medical University of Shiraz, IRAN. (Oral)

- **Mehrbod P**, Fatemeh Fotouhi, Behrokh Farahmand (2016) Evaluation of the susceptibility to influenza virus in people suffering from hypercholesterolemia and diabetes in terms of IFITM3 polymorphism rs12252-C, Abstract presented on the 2nd Global summit on Virology, Malaysia. (Oral)

- **Board of Pharmaceutical Biotechnology Industry Panel** (2017) Vero and MDCK cell lines transfection by human SIAT7e gene - a new approach for cell-culture-based vaccine production, Oral presentation on the Conference of New Attitude on Biotechnology and Life Style, Shahid Beheshti University. (Oral)

- **Mehrbod P**, Ali Abdalla Muna, Fotouhi Fatemeh, Nicolaas Eloff Jacobus, J. McGaw Lyndy, Fasina Folorunso Oludayo (2017) Antiviral potential against influenza A virus of crude extracts from five South African medicinal plants, Abstract presented on the 65th international conference and annual meeting of the society for medicinal plants and natural product research (GA), Basel, Switzerland. (Poster)

- K.E. Motlhatlego, **Mehrbod P.**, F. Fotouhi, M.A. Abdalla, J.N. Eloff, L.J. McGaw (2018) Antiviral activity of myricetin-3-O-rhamnoside against H1N1 influenza virus, Abstract presented on the 44th Annual Conference of the South African Association of Botanists (SAAB2018), South Africa. (Oral)
- D. A. Gado, **Mehrbod P.**, M. Ali Abdalla, A. S. Ahmed, F. O. Fasina, F. Fotouhi, L. J. McGaw (2018) Assessment of in vitro anti-influenza potential and cytotoxicity of crude extract and fractions of *Loxostylis alata*, Abstract presented on the SOT 57th Annual Meeting and ToxExpo, San Antonio, USA. (Poster)
- Mohammad Reza Aghasadeghi, Abdoli A, Arashkia A, Fotoohi F, Motevalli F, Hamidi-Fard M, Bolhassani A, Amiran MR, Naziri H, **Mehrbod P.**, Khateri M (2018) Expression of HEV 239 ORF2 protein with Beclin-1 as new adjuvant, Abstract presented on the 8th Global Summit on Microbiology and Infectious Diseases, Paris, France. (Poster)
- **Speaker at Biotechnology Panel** (2018) My recent progress on Flu and Biotechnology, Abstract presented on the 1st AUT International Academic Partnership Platform, AmirKabir University, Iran (Oral)
- **Mehrbod P.**, Muna Ali Abdalla, Fatemeh Fotouhi, Jacobus Nicolaas Eloff, Lyndy J. McGaw, Peyvand Biglari, Siavash Javaherizadeh, Folorunso Oludayo Fasina (2018) Molecular evaluation of anti-influenza activity of quercetin-3-O- α -L-rhamnopyranoside from *Rapanea melanophloeos*, Abstract presented on the International Conference on Virology, Bacteriology and Infectious Diseases, Infectious Disease, 2018, Rome, Italy (Oral)
- Maryam Saleh, Jamileh Nowrouzi, Fatemeh Fotouhi, Vahideh Mazaheri, **Mehrbod P.**, Behrokh Farahmand (2019) Evaluation of the structural changes in the aluminum salt adjuvant antigen-based vaccine in influenza virus, Abstract presented on the The 12th International & 17th National Congress on Quality Improvement in Clinical Laboratories, 2019, Tehran, Iran. (Poster)
- **Mehrbod P.**, Fatemeh Fotouhi, Jacobus Nicolaas Eloff, Lyndy J. McGaw, Folorunso Oludayo Fasina (2019) Immunomodulatory evaluation and computational modeling of quercetin-3-O- α -L-rhamnopyranoside from *Rapanea melanophloeos* against influenza A virus, Abstract presented on the 20th International Congress of Microbiology of Iran, Kerman, Iran (Poster)
- Behrokh Farahmand, Fatemeh Fotouhi, **Mehrbod P.**, Fatemeh Eskandari, Mehdi Alikhani, Ali Torabi, Vahideh Mazaheri (2019) Anti-whole influenza A/H1N1 virus polyclonal antibody for passive immunization against influenza, Abstract presented on the 20th International Congress of Microbiology of Iran, Kerman, Iran (Poster)

Computer Knowledge:

- Microsoft Office Software (Word, Excel, PowerPoint, OneNote, Publisher...)
- Statistics Software: SPSS and GraphPad
- Reference manager Software: Endnote and Mendeley
- Some bioinformatics software

Awards and honors:

- Ranked 26 among 8584 participants for Master entrance exam and ranked 1st among those accepted for Cellular and Molecular Biology Course, held by the Iran Ministry of Science, Research and Technology in the Nationwide Universities (2006)
- Awarded Bronze medal for presenting “Attenuation of Influenza Virus Infectivity with Herbal-Marine Compound (HESA-A): an in vitro Study in MDCK Cells” on Design and Innovation Research Exhibition (PRPI), Universiti Putra Malaysia, Malaysia (2013)
- Awarded travel grant for 3rd Annual International Conference on Advances in Biotechnology, BIOTECH 2013, Global Science & Technology Forum (GSTF), Singapore (2013)
- Awarded postdoctoral fellowship to conduct project: “Evaluation of antiviral properties of edible bird nest (EBN) extract against influenza A virus (IAV) infection: molecular mechanism. (The

potential of using as functional food)” and training Master and PhD researchers in Universiti Putra Malaysia, Malaysia (2014)

- Awarded postdoctoral fellowship to conduct project: “Evaluation of the susceptibility to influenza virus in people suffering from Hypercholesterolemia and diabetes in terms of IFITM3 polymorphism rs12252-C” in Pasteur Institute of IRAN, IRAN with support of National Elite Foundation (2016)
- Awarded postdoctoral fellowship to conduct project: “Interaction of local medicinal plants extracts with the molecular pathway of influenza virus life cycle with emphasis on inflammatory responses, autophagy, apoptosis and small GTPase proteins” in University of Pretoria, South Africa with support of National Research Foundation (2016-2019)
- Awarded Research Grant to conduct project: “Phytochemical investigation of Iranian indigenous plants and evaluation of active compounds effects on the molecular pathway of influenza virus life cycle and molecular docking” in Pasteur Institute of IRAN, IRAN with support of Iran National Science Foundation (2019- continue)
- Iran National Elite foundation member

Language:

Persian (Mother Tongue), English

TOEFL (PBT) Score: 553

Reading: 61 Listening: 52 Structure: 53 Writing: 3

References:

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