

Dr. Mohamed Nasr Fathi Shaheen

Member of the World Society for Virology



Personal information:

Date of birth	21 th January, 1982
Nationality	Egyptian
Marital status	Married
Military	Exempted
Working address	National Research Center, Environmental Research Division, Water Pollution Research Department, Environmental Virology laboratory. Al-Buhouth Street, Dokki, Giza, Egypt. P.C. 12622
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Education:

Degree	Scientific Discipline	Period	Institution
Ph.D.	Microbiology (Applied virology)	2011-2014	Microbiology Department, Faculty of Science, Al-Azhar University, Cairo, Egypt.
M.Sc.	Microbiology (Virology)	2007 – 2010	
Pre-M.Sc.	Microbiology	2005-2006	
B.Sc.	Microbiology	2001-2005	

Employment:

Position	Period	Institution
Doctoral Researcher	2015- present	National Research Center, Environmental Research Division, Water Pollution Research Department, Environmental Virology laboratory. Address: Al-Buhouth Street, Dokki, Giza, Egypt. P.C. 12622 Website: www.nrc.sci.eg
Assistant	2011–2014	
Researcher Assistant	2007–2011	

Computer skills:

- ▶ Perfect work knowledge of Microsoft office (Word, power point, excel, windows, IT, and Internet).
- ▶ International Computer Drive License (ICDL).
- ▶ Perfect working knowledge in using the Databases searching system.

Languages:

- ▶ Arabic: Native tongue.
- ▶ English: Very good

I am interested in the following topics:

- Epidemiology of environmental pathogens
- Antiviral research *in vitro* and *in vivo*
- Viral Pathogenesis and immunity
- Virus-cell interaction

Scientific Missions:

In 2011, I have traveled to institute national de la santé et de la recherché medicale (Inserm), Lyon, France for training course in the context of the HepaCute FP7 framework program. During, I have gained an excellent experience in amplification of 6.02 kb fragments of hepatitis C virus (HCV) genome using patient serum. Also, production of HCV pseudoparticles, a surrogate viral model system that allow the study the function mediated by the HCV glycoproteins E1 and E2, including HCV cell entry and humoral immune response.

The awarded PhD and Post-doctoral fellowships:

Name	Place	Purpose
The travelling Fellowships, (2016)	University of Liege - GIGA Research Center of Immunoendocrinology, Belgium	Post-Doctoral fellow
The Coimbra Group Scholarship, (2015)	Molecular Medicine Department, Padua University, Italy	Post-Doctoral fellow
INSA – JRD TATA fellowship (2014)	National Institute of Cholera and Enteric diseases, virology dept., Kolkata, India	PhD fellow
The National Scholarship Programme of the Slovak Republic, (2012)	Slovak Medical University, Faculty Of Medicine, Enteroviruses lab., Bratislava, Slovak Republic	PhD fellow

Training and Teaching:

Ten years ago, I am a member of teaching and training staff in the intensive training program for young graduates and undergraduates through the following topics:

1. Practical and Theoretical Courses in Genetic Engineering.
2. Molecular virology and tissue culture techniques.

Editor and reviewer in the following Journals:

1. Journal of HIV & Retro virus: <http://hiv.imedpub.com/editors.php>
2. International Journal of Research Studies in Microbiology and Biotechnology: <https://www.arcjournals.org/international-journal-of-research-studies-in-micro-biology-and-bio-technology/editorial-board>

3. International Research Journal of Agricultural and Food Sciences (IRJAFS): <http://prudentjournals.org/editors/irjafs/>
4. Current Pediatric Research Journal: <http://www.currentpediatrics.com/editors.php>
5. Scifed Journal of Virology: <http://scifed.com/virology-research-journal/about.php>
6. Journal of Infectious Diseases and Diagnosis : <https://www.omicsonline.org/infectious-diseases-and-diagnosis.php>
7. Annals of Infections and Antibiotics : <https://www.omicsonline.org/editorialboard-annals-infections-antibiotics.php>
8. Journal of Biochemistry and Biotechnology : <http://www.alliedacademies.org/journal-biochemistry-biotechnology/editors.php>
9. Journal of Annals of Ecology and Environmental Science : <http://www.sryahwpublications.com/annals-of-ecology-and-environmental-science/editorial-board>
10. Journal of Annals of Microbiology and Infectious Diseases: <http://www.sryahwpublications.com/annals-of-microbiology-and-infectious-diseases/editorial-board>
11. Journal of Microbes and Microbiology Techniques : <http://www.scienceinquest.org/journal-of-microbes-and-microbiology-techniques/editorial-panel.php>
12. Enzymology & Proteomic Research Journal. <http://www.heraldopenaccess.us/journals/Enzymology-&-Proteomics-Research/editorial-board.php>
13. International Journal of Innovative Studies in Medical Sciences. <http://ijisms.com/editorial-board/>
14. Virology & Immunology Journal. <https://medwinpublishers.com/VIJ/editorial-board.php>
15. Journal of Bacteriology and Infectious Diseases. <http://www.alliedacademies.org/journal-bacteriology-infectious-diseases/editors.php>
16. Journal of Virology & Microbiology Treatment. <https://www.henrypublishinggroups.Com/henry-journal-of-virology-microbiology-treatment/>
17. Journal of virology and antiviral. <http://www.heraldopenaccess.us/journals/Virology-&-Antivirals/editorial-board.php>
18. Proteomics & Bioinformatics: Current Research (PBCR). <http://www.scitcentral.Com/editorboard.php?journal=53>
19. Advanced Journal Of Scientific Research In Microbiology. <http://www.ajsrm.com/index.php/ajsrm>

Supervising:

- A Ph.D. student, Faculty of Science, Al-Azhar Univ. (2015-current) Title: "Evaluation and characterization of rotavirus strains circulated in Egyptian environment for development of candidate vaccine strains

- A Ph.D. student, Faculty of medicine, Al-Azhar Univ. (2016-current) Title: "Human Papillomavirus Genotyping in External genital warts in different age groups in Egyptian patients".
- A Ph.D. student, Faculty of medicine, Al-Azhar Univ. (2016-current) Title: "Detection and genotyping of papillomavirus in non-genital warts in different age groups in Egyptian patients".
- A Ph.D. student, Faculty of science, Helwan Univ. (2017-current) Title: Quantitative detection of food and water-borne viruses by qRT-PCR in fresh produce and irrigation water.

Publications:

1. **Mohamed Shaheen** (2018). Rotavirus gastroenteritis among hospitalized children under 5 years of age in the Middle Eastern and North African Region: a review. *Eastern Mediterranean Health Journal*. In press
2. Neveen Rizk, Ahmad Al-Herrawy, Mahmoud Gad, **Mohamed Shaheen**, Elmahdy Elmahdy. Existence and removal of Rotaviruses group A and Cryptosporidium species in a wastewater treatment plant. *Polish Journal of Environmental Studies*. Accepted.
3. **Mohamed N.F. Shaheen** (2018). Burden of adenovirus, astrovirus, norovirus, and rotavirus gastroenteritis in Egyptian children, 2000-2017. *Medical Microbiology & Diagnosis*. 7: 283.
4. Rasha S. Gouhar, Ewies F. Ewies, Mohamed F. El-Shehry, **Mohamed N. F. Shaheen**, El-Mahdy M. E. Ibrahim (2018). Synthesis and utility of α,β - unsaturated ketone bearing naphthalene and benzofuran rings in the synthesis of some N-heterocycles with their antiviral and antitumor activity evaluation. *Journal of Heterocyclic Chemistry*. 55: 2368- 2380.
5. ElMahdy Mohamed ElMahdy Ibrahim a, Mohamed Azab El-Liethyb, Akebe Luther King Abiac, Bahaa Ahmed Hemdanb, **Mohamed Nasr Shaheen** (2018). Survival of E. coli O157:H7, Salmonella Typhimurium, HAdV2 and MNV-1 in River water under dark conditions and varying storage temperatures. *Science of the total environment*. 648: 1297-1304.
6. Elmahdy M.E. Ibrahim , Samy M. Abdelhamid, **Mohamed Shaheen**. Inhibitory influence of probiotic bacteria on the propagation of rotavirus *in vitro*: as a promising approach. *Egyptian Journal of Environmental Research*. 9: 31-45.
7. **Mohamed N. Shaheen*** and EL-Mahdy M. El-Mahdy (2017). Effects of temperatures, acidity, and UV on the infectivity of rotaviruses and adenoviruses in water environment. *Egyptian Journal of Environmental Research*. 7: 39-54.
8. Abdou K Allayeh, Neveen M Rizk, **Mohamed N Shaheen** (2017). Detection and Genotyping of Rotavirus and Enteric Adenovirus in Egyptian Wastewater Treatment Plant. *Egyptian Journal of Environmental Research*. 8:1-11.
9. **Shaheen M*** (2017). Viral Infections as a Cause of Foodborne Illness. *Virology & Immunology Journal*. 1(6): 000132.
10. **Shaheen* MN**, Abdel-Daim SS, Hosseney EN, Shoeib AR, Ali MA (2017). Molecular characterization of rotavirus strains causing gastroenteritis in children under 5 years in Cairo, Egypt. *MOJ Public Health*. 6(5): 00187.

4.

11. Abdelhamid SM, Okda AY, **Shaheen M**, Fatma AF, and El Dairouty RK (2017). Diarrheagenic Escherichia coli, shiga toxin production, relevant virulence genes, and association with other foodborne Enterobacteriaceae in retailed milk and soft cheese. *Middle East Journal of Applied Sciences*. 7(4): 663-680.
12. **Mohamed Shaheen***, Samy Mostafa, and Nagwa El-Esnawy (2017). Prevention of coxsackieviruses and rotaviruses infections in vivo with methanol extract of *Dodonaea viscosa*. *Journal of Human Virology & Retrovirology*. 5(5): 00171.
13. **Mohamed Shaheen*** (2017). Diabetes and viral infection. *MOJ Public Health*. 6(2):00165.
14. **Mohamed Shaheen***, Maria Borsanyiova, Samy Mostafa, Mamta Sarkar, Shubhada Bopegamage, and Nagwa El-Esnawy (2017). *In vitro* and *in vivo* evaluation of *Bauhinia variegata* extracts to prevent coxsackievirus B3 infection. *Journal of Proteomics & Bioinformatics*. 10(3) 73-78.
15. **Mohamed Shaheen***, Samy Mostafa (2016). The antiviral activity of Egyptian Magnolia grandiflora on Human Immunodeficiency Virus (HIV). *Journal of Pharmacology and Clinical Sciences*. 1 (1): 4-10.
16. **Mohamed Shaheen***, Samy Mostafa, and Nagwa El-Esnawy (2015). Anti-rotaviral effects of *Calliandra haematocephala* leaf extracts *in vitro* and *in vivo*. *Journal of Virology & Antiviral Research*. 4:2.
17. **Mohamed Shaheen***, Maria Borsanyiova, Samy Mostafa, Mamta Sarkar, Shubhada Bopegamage, and Nagwa El-Esnawy (2015). *In vitro* effect of *Dodonaea viscosa* extracts on the replication of coxsackievirus B3 (Nancy) and rotavirus (SA-11). *Journal of Microbiology and Antimicrobial Agents*. 1(2): 47-54.
18. **Mohamed Shaheen***, Samy Mostafa, and Nagwa El-Esnawy (2015). *In vitro* and *in vivo* anti-rotaviral activity of *C. alata* extracts. *Journal of Research in Applied Sciences*. 3: 63-71.
19. **Mohamed Shaheen***, Mamdouh El-Gamal, Adel Mousa, Samy Mostafa, and Nagwa El-Esnawy (2014). Anti-Rotaviral Effects of *Bauhinia variegata* methanolic extract in mice with rotavirus diarrhea. *Middle East Journal of Applied Sciences*. 4(3): 555-562.
20. **Mohamed Shaheen***, Mamdouh El-Gamal, Adel Mousa, Samy Mostafa, and Nagwa El-Esnawy (2014). Antiviral activity of *Bauhinia variegata* extracts against rotavirus *in vitro*. *Current Science International*. 3 (3): 172-178.
21. **Mohamed Shaheen***, Mamdouh El-Gamal, Adel Mousa, Samy Mostafa, and Nagwa El-Esnawy (2014). Inhibition of Coxsackie virus B3 in mice by methanolic extract of *Calliandra haematocephala*. *Journal of Microbiology, Biotechnology, and Food Sciences*. 4 (3): 257-262.
22. Waled Morsy El-Senousy, Mamdouh Salem El-Gamal, Adel Abd El-Baset Mousa, Shawki El-Sayed El-Hawary, Mohamed Mohamed Kamel, **Mohamed Nasr Fathi** and El-Mahdy Mohamed El Mahdy (2014). Effect of Chlorine on Noroviruses, Rotaviruses and Hepatitis E Virus in Drinking Water. *World Applied Sciences Journal*. 32 (11): 2206-2212.
23. Waled Morsy El-1 Senousy, Mamdouh Salem El-Gamal, Adel Abd El-Baset Mousa, Shawki El-Sayed El-Hawary and **Mohamed Nasr Fathi** (2014). Prevalence of Noroviruses among

detected enteric viruses in Egyptian aquatic environment. *World Applied Sciences Journal*. 32 (11): 2186-2205.

Publication submitted into international journals and under reviewing.

Mohamed N. Shaheen, EL-Mahdy M. El-Mahdy, Niveen M. Rizk (2018). Detection of hepatitis A and E in clinical and environmental samples.

Elmahdy M.E.Ibrahim; Nehal I. Ahmed; **Mohamed N.F. Shaheen**; EL-Chaimaa B. Mohamed, Samah A. Loutfy (2018). Molecular detection of human adenovirus in urban wastewater in Egypt and among children suffering from acute gastroenteritis. *Journal food and health*.

Mohamed NF Shaheen, ELMahdy M. ElMahdy, Mamta Chawla-Sarkar (2018). Quantitative detection of human adenovirus, rotavirus, hepatitis a virus, and genogroup I norovirus by RT-qPCR in fresh produce and surface water used for irrigation.

Mohamed NF Shaheen, Nehal I. Ahmed, Elmahdy M.E. Ibrahim (2018). Environmental surveillance of astrovirus, norovirus, hepatitis A virus, and enterovirus in urban wastewater and sewage sludge

Conferences:

- 1. Mohamed Shaheen***, Sahar S. Abdel-Daim, Ebtessam N. Hosseney, Mohamed A. Ali. Comparison of three diagnostic assays for detection of rotavirus in stool from children with acute gastroenteritis in Cairo, Egypt. (The 3rd International Conference of Biotechnology and Environmental Safety, National Research Center, Cairo, Egypt; 2017).
- 2. Mohamed Shaheen***, Sahar S. Abdel-Daim, Ebtessam N. Hosseney, Mohamed A. Ali. Distribution of rotavirus VP7 and VP4 genotypes circulating in Egypt from 2015 to 2016.
- 3. Mohamed Shaheen***, Maria Borsanyiowa, Samy Mostafa, Shubhada Bopegamage, and Nagwa El-Esnawy. Inhibitory effect of *Calliandra haematocephala* extracts on the replication of coxsackievirus B3 in vitro. (The 3rd International Conference of Biotechnology and Environmental Safety, National Research Center, Cairo, Egypt; 2017). *The best poster award*.
- 4. Mohamed Shaheen***, Samy Mostafa, and Nagwa El-Esnawy. Inhibition of coxsackievirus B3 and rotavirus SA-11 replication in mice by methanol extract of *D. viscosa*. (The 3rd International Conference of Biotechnology and Environmental Safety, National Research Center, Cairo, Egypt; 2017). *The best poster award*.
- 5. Mohamed Shaheen***, Maria Borsanyiowa Samy Mostafa, Shubhada Bopegamage, Nagwa El-Esnawy (2015). Antiviral activity of *Cassia alata* extracts against cardiac coxsackievirus B3 infections *in vitro* and *in vivo*. (5th World Congress on Virology (Virology 2015), Atlanta, USA).
- 6. Waled M. El-Senousy, Mamdouh S. El-Gamal, Adel A. Mousa, Mohamed Shaheen, El-Mahdy M. E.I-Mahdy** (2010). Chlorin inactivation of noroviruses, rotaviruses, and hepatitis E virus in drinking water. (The 4th International Conference of Environmental Science and technology, National Research Center, Cairo, Egypt).
- 7. Waled M. El-Senousy, Mamdouh S. El-Gamal, Adel A. Mousa, Mohamed Shaheen, El-Mahdy M. E.I-Mahdy** (2010). Development of real time-RT-PCR for quantification of

noroviruses in agriculture products and irrigation water. (The 4th International Conference of Environmental Science and technology, National Research Center, Cairo, Egypt).

Workshops:

How to write a competitive proposal for Framework 7 programme in Egyptian Academy of Scientific Research and Technology (Jan., 2009).

Research Projects:

Member and head of virology team in the project titled: Improving environmental and health conditions for workers in abou-Rawash waste water treatment plant and remediation of pollution resources at El-Rahawy Drain (Fuded by Academy of Scientific Research and Technology (ASRT). (2017-2019).

Principle investigator (PI): Determination the effects of probiotic and Histo-blood group antigen-like substances of human enteric bacteria on rotavirus infection *in vitro* and *in vivo*. (2016-2019). Funded by National Research Center, Cairo, Egypt.

Co-Principle investigator (Co-PI): Prebiotic synergistic effect and antimicrobial, antiviral activity of some plant extracts in food area. (2016-2019). Funded by National Research Center, Cairo, Egypt.

Member in the project titled: Investigating the role of Acanthamoeba species in the transmission of some human enteric viruses through Egyptian drinking water distribution system. (2016-2019). Funded by National Research Center, Cairo, Egypt.

the project titled: Investigating the role of Acanthamoeba species in the transmission of some human enteric viruses through Egyptian drinking water distribution system. (2018-2019). Funded by National Research Center, Cairo, Egypt.

Member in the project titled: Investigation of the antiviral activity of some Egyptian medicinal plants against some enteric viruses *in vitro* and *in vivo*. (2011-2014). Funded by National Research Center, Cairo, Egypt.

Member in the project titled: Epidemiological Surveillance of Noroviruses in aquatic environments and hospitalized children with a cute diarrhea (2008-2010). Funded by National Research Center, Cairo, Egypt.