



DR. FAHAD NASSER ALMAJHDI

PROFESSOR

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PROFILE

Professor of Molecular Virology, Senior Scientist and Head of Virology Research Group at College of Science, King Saud University. Obtained PhD degree in molecular virology from Kansas State University, USA at 2002. Expert in the development of vaccines and diagnostic tools for identification and prevention of human respiratory viruses and other prevalent viruses in Saudi population. Experience and immense contribution in administrative duties. Published in leading peer-reviewed journals of virology, immunology and molecular biology. Principal Investigator of competitive local institutional grants. Collaborator and Co-investigator in a number of international grants and Co-inventor of several patent applications in molecular diagnosis.

ACADEMIC DEGREES

Ph.D.	2002	Diagnostic Medicine and Pathobiology Kansas State University, USA
M.Sc.	1997	Diagnostic Medicine and Pathobiology Kansas State University, USA
B.Sc.	1992	Microbiology King Saud University, KSA



APPOINTMENTS & OTHER PROFESSIONAL ACTIVITIES

- **Professor**, Botany and Microbiology, College of Science, KSU, 2015-present.
- **Associate Professor**, Botany and Microbiology, College of Science, KSU, 2010-2015.
- **Assistant Professor**, Botany and Microbiology, College of Science, KSU, 2002-2010.
- **Secretary General**, Botany and Microbiology, College of Science, KSU, 2002-2005.
- **Director**, Centers of Excellence Program, KSU, 2007-2013.
- **Director**, Research Central Laboratory, Botany and Microbiology, College of Science, KSU.
- **Deputy Director**, Center of Excellence in Biotechnology, KSU, 2009-2012.
- **Board member**, Center of Excellence in Biotechnology, KSU, 2007-present.
- **Member**, Biotechnology Initiative, College of Science, KSU, 2002-present.
- **Committee Member**, National Center for Assessment in Higher Education Committee, 2014-present.
- **Committee Member**, Scientific Committee of the third Saudi Science Conference, 2007.

MEMBERSHIP IN SOCIETIES

2014-Present

Australian Society for Microbiology

1997-1998

American Society for Microbiology

RESEARCH PROJECTS

1. Epidemiological characteristics and genetic factors affecting the circulation and evolution of respiratory viruses in Saudi Arabia (2015-Present). ONGOING
2. Influenza Virus Evolution (2014-Present). ONGOING
3. Development of Respiratory Viral Particulate Subunit Vaccine (2011-Present). ONGOING
4. DNA vaccination of cervical cancer patients with rearranged oncogenes of the human papillomavirus type 16 (2008-2011). COMPLETED



5. Development and validation of molecular diagnostic kit using nano- and recombinant DNA technology for: A- Mutation detection and B- Interferon monitoring (2008-2011). COMPLETED
6. Using Nano-technology Techniques for Fabrication of 3D Biodegradable Scaffolds for Tissue Engineering (2008-2015) COMPLETED.
7. Molecular Genetic Bio-Markers Associated with the Development of Viral Hepatitis in Saudi Patients (2009-2012). COMPLETED
8. Multiplex PCR for detection Respiratory Viruses in young children in Riyadh (2005-2008). COMPLETED

PUBLICATIONS

1. Amer HM, Alshaman MS, Farrag MA, Hamad ME, Alsaadi MM, **Almajhdi FN** (2016). Epidemiology of 11 respiratory RNA viruses in a cohort of hospitalized children in Riyadh, Saudi Arabia. *Journal of Medical Virology*, DOI: 10.1002/jmv.24435 (Ahead of print).
2. Al-Qudari AY, Amer HM, Abdo AA, Hussain Z, Al-hamoudi W, Alswat K, **Almajhdi FN** (2016). Surface Gene Variants of Hepatitis B Virus in Saudi Patients. *Saudi Journal of Gastroenterology*, DOI: 10.4103/1319-3767.167186. (Ahead of print).
3. Al-Yahya S, Mahmoud L, Al-Zoghaibi F, Al-Tuhami A, Amer H, **Almajhdi FN**, et al. (2015). A human cytokinome analysis for interferon response. *Journal of Virology*, 89(14): 7108-7119.
4. **Almajhdi FN** (2015). Hemagglutinin-Neuraminidase Gene Sequence-based reclassification of Human Parainfluenza Virus 3 Variants. *Intervirology*, 58(1):35-40.
5. Whitehead M, Ohlschlager P, **Almajhdi FN**, Alloza L, Marzabal P, Meyers AE, et al. (2014). Human papillomavirus (HPV) type 16 E7 protein bodies cause tumour regression in mice. *BMC cancer*. 2014;14:367.
6. **Almajhdi FN**, Senger T, Amer HM, Gissmann L, Öhlschläger P (2014). Design of a highly effective therapeutic HPV16 E6/E7-specific DNA vaccine: optimization by different ways of sequence rearrangements (shuffling). *Plos One*, 9(11): e113461
7. Latif A, Amer HM, Hamad ME, Alarifi S, **Almajhdi FN** (2014). Medicinal Plants from Saudi Arabia and Indonesia: *In vitro* cytotoxicity evaluation on Vero and HEP-2 cells. *Journal of Medicinal Plant Research*, 8(34):1065-1073.
8. Alarifi S, Ali D, Verma A, **Almajhdi FN**, Al-Qahtani AA (2014). Single-walled carbon



- nanotubes induce cytotoxicity and DNA damage via reactive oxygen species in human hepatocarcinoma cells. *In Vitro Cellular and Developmental Biology-Animals*, 50(8):714-722.
9. **Almajhdi FN**, Fouad H, Khalil KA, Awad HM, Mohamed SH, Elsarnagawy T, Albarrag AM, Al-Jassir FF, Abdo HS (2014). In-vitro anticancer and antimicrobial activities of PLGA/silver nanofiber composites prepared by electrospinning. *Journal of Materials Science: Materials in Medicine*, 25(4):1045-1053.
 10. **Almajhdi FN**, Farrag MA, Amer HM (2014). Genetic diversity in the G protein gene of group A human respiratory syncytial viruses circulating in Riyadh, Saudi Arabia. *Archives of Virology*, 159:73–81.
 11. Ali G, Amer HM, **Almajhdi FN** (2014). Hemagglutinin and Neuraminidase Genes of Influenza B viruses circulating in Riyadh, Saudi Arabia during 2010-2011: Evolution and Sequence Analysis. *Journal of Medical Virology*, 86(6):1003-1016.
 12. **Almajhdi FN**, Farrag MA, Amer HM (2014). Group B strains of human respiratory syncytial virus in Saudi Arabia: molecular and phylogenetic analysis. *Virus Genes*, 48(2):252-259.
 13. Ali G, Amer HM, **Almajhdi FN** (2013). Hemagglutinin and Neuraminidase Genes of Influenza B viruses circulating in Riyadh, Saudi Arabia during 2010-2011: Evolution and Sequence Analysis. *Journal of Medical Virology*, 86:1003-1016.
 14. **Almajhdi FN**, Ali G (2013). Report on Influenza A and B Viruses: Their Coinfection in a Saudi Leukemia Patient. *BioMed Research International*. DOI: 10.1155/2013/290609.
 15. Amer HM, Abd El Wahed AA, Shalaby MA, **Almajhdi FN**, Hufert TF, Weidmann M.A. (2013) New Approach for Diagnosis of Bovine Coronavirus using Recombinase Polymerase Amplification Assay. *Journal of Virological Methods*, 193: 337-340.
 16. Hussain Z, Khan MI, Shahid M, **Almajhdi FN** (2013). S-adenosylmethionine, a methyl donor, up regulates tissue inhibitor of metalloproteinases-2 in colorectal cancer. *Genetics and Molecular Research*, 12(2):1106-1118.
 17. **Almajhdi FN**, Al-Qudari A, Hussain Z (2013). Differential expression of transforming growth factor (TGF)- β 1 and HBx enhances hepatitis B virus replication and augments host immune cytokines and chemokines. *Annals of Hepatology*, 12(3):408-415.
 18. **Almajhdi FN**, Mohammed Al-Ahdal, Ayman A Abdo, Faisal M Sanai, Mashael Al-Anazi, Nisreen Khalaf, Nisha A Viswan, Hamad Al-Ashgar, Khalid Al-Kahtani, Hind Al-



- Humaidan, Riham Al-Swayeh, Zahid Hussain, Saud Alarifi, Majid Al-Okail, Ahmed Al-Qahtani., (2013). Single nucleotide polymorphisms in CXCR1 gene and its association with hepatitis B infected patients in Saudi Arabia. *Annals of Hepatology*, 12 (2), 220-227.
19. **Almajhdi FN**, Alshaman MS, Amer HM., (2012). Molecular Characterization and Phylogenetic Analysis of Human Parainfluenza Virus Type 3 Isolated From Saudi Arabia. *Journal of Medical Virology*, 84: 1304-1311.
 20. **Almajhdi FN**, Alshaman MS, Amer HM (2012). Human Parainfluenza Virus Type 2 Hemagglutinin-Neuramindase Gene: Sequence and Phylogenetic Analysis of the Saudi Strain Riyadh 105/2009. *Virology Journal*, 9:318.
 21. Al-Qahtani, A., Al-Ahdal, M., Abdo, A., Sanai, F., Al-Anazi, M., Khalaf, N., Viswan, N. A., Al-Ashgar, H., Al-Humaidan, H., Al-Suwayeh, R., Hussain, Z., Alarifi, S., Al-Okail, M., **Almajhdi, F. N.**, (2012). Toll-like receptor 3 polymorphism and its association with hepatitis B virus infection in Saudi Arabian patients. *Journal of Medical Virology*, 84: 1353-1359.
 22. Al-Qahtani, A., Alarifi, S., Al-Okail, M., Hussain, Z., Abdo, A., Sanai, F., Al-Anazi, M., Khalaf, N., Al-Humaidan, H., Al-Ahdal, M., **Almajhdi, F.**, (2012). RANTES gene polymorphisms (-403G > A and -28C > G) associated with hepatitis B virus infection in a Saudi population. *Genetics and Molecular Research*, 11: 855-862.
 23. **Almajhdi, F. N.**, Alshaman, M. S., Amer, H. M., (2012). Molecular characterization and phylogenetic analysis of human parainfluenza virus type 3 isolated from Saudi Arabia. *Journal of Medical Virology*, 84: 1304-1311.
 24. Amer, H. M., **Almajhdi, F. N.**, (2011). Development of a SYBR Green I based real-time RT-PCR assay for detection and quantification of bovine coronavirus. *Molecular and Cellular Probes*, 25: 101-107.
 25. Hussain, Z., Husain, S. A., **Almajhdi, F. N.**, Kar, P., (2011). Immunological and molecular epidemiological characteristics of acute and fulminant viral hepatitis A. *Virology Journal* 8: 254.
 26. Mahmoud, L., Al-Saif, M., Amer, H. M., Sheikh, M., **Almajhdi, F. N.**, Khabar, K.S., (2011). GFP Reporter system with transcriptional sequence heterogeneity for monitoring interferon response. *Cytokine*, 56: 47.
 27. Mahmoud, L., Al-Saif, M., Amer, H. M., Sheikh, M., **Almajhdi, F. N.**, Khabar, K. S., (2011). Green Fluorescent Protein Reporter System with Transcriptional Sequence



- Heterogeneity for Monitoring the Interferon Response. *Journal of Virology*, 85: 9268-9275.
28. **Almajhdi, F. N.**, (2010). The identification of the first isolate of influenza B virus using a duplex RT-PCR DNA sequencing in Saudi Arabia (B/Riyadh/01/2007). *African Journal of Microbiology Research*, 4: 697- 703.
 29. **Al-Majhdi, F.**, Al-Jarallah, A., Elaeed, M., Latif, A., Gissmann, L., Amer, H. M., (2009). Prevalence of Respiratory Syncytial Virus Infection in Riyadh During the Winter Season 2007-2008 and Different Risk Factors Impact. *International Journal of Virology*, 5: 154-163.
 30. **Al-Majhdi, F. N.**, (2009). A report on the association of influenza B Virus with respiratory tract infection of hospitalized children in Saudi Arabia. *Saudi Biological Society*, 16: 109-111.
 31. **Al-Majhdi, F.**, Alarifi, S. A., Mohammed Mubark, M., (2007). Sequential Ultrastructural Changes of WISH Cells infected with Encephalomyocarditis Virus. *Journal of Medical Science*, 7: 42-50.
 32. **Al-Majhdi, F. N.**, (2007). Structure of the Sialic Acid Binding Site in Influenza A Virus: Hemagglutinin. *Journal of Biological Sciences*, 7: 113-122.
 33. Kim, J. K., **Fahad, A. M.**, Shanmukhappa, K., Kapil, S., (2006). Defining the cellular target(s) of porcine reproductive and respiratory syndrome virus blocking monoclonal antibody 7G10. *Journal of Virology*, 80: 689-696
 34. Al-Yousif, Y., **Al-Majhdi, F.**, Chard-Bergstrom, C., Anderson, J., Kapil, S., (2000). Development, characterization, and diagnostic applications of monoclonal antibodies against bovine rotavirus. *Clinical and Diagnostic Laboratory Immunology*, 7: 288.
 35. Shanmukhappa, K., **Majhdi, F.**, Kapil, S., (2000). Production, characterization, and uses of monoclonal antibodies against porcine reproductive and respiratory syndrome virus 3' untranslated region and nucleoprotein RNA binding proteins. *Hybridoma*, 19: 263-267.
 36. **Majhdi, F.**, Minocha, H. C., Kapil, S., (1997). Isolation and characterization of a coronavirus from elk calves with diarrhea. *Journal of Clinical Microbiology*, 35: 2937-2942.



CONFERENCES AND ABSTRACTS

1. Ninth Annual ImVacS The immunotherapies and Vaccine Summit, August 11-14, 2014, Boston, MA, USA.
2. OMICS Group 5th World Congress on Biotechnology, June 25-27, 2014, Valencia, SPAIN. A cross-sectional surveillance study for respiratory viruses in hospitalized children at Riyadh, Saudi Arabia (Almajhdi FN, Amer HM).
3. 12th Asia-Pacific Bioinformatics Conference, January 17-19, 2014, Shanghai, CHINA. Group B Strains of Human Respiratory Syncytial Virus in Saudi Arabia: Molecular and Phylogenetic Analysis (Almajhdi FN, Farrag MA, Amer HM).
4. International Conference on Environmental, Biological and Ecological Sciences, and Engineering, March 14-15, 2013, Rio de Janeiro, BRAZIL. Epidemiology and Molecular Characteristics of the Principal Respiratory Viruses Circulating Among Saudi Population (Almajhdi FN, Amer HM).
5. Australian Society for Microbiology Annual Scientific meeting 2013, July 7-10, 2013, Adelaide, AUSTRALIA. Human Respiratory Viruses in Saudi Arabia: Epidemiological, Molecular and Phylogenetic Analysis (Almajhdi FN, Amer HM).
6. 4th International Conference of Virology, November 14-16, 2012, Sharm El Sheikh, EGYPT. Cell-based Screening of Cytotoxic and Antiviral Activities of Selected Medicinal Plants from Saudi Arabia, (Latif A, Amer HM, Almajhdi FN).
7. 27th International Papillomavirus Conference And Clinical Workshop, September 17-22, 2011, Berlin, GERMANY.
8. The 2nd International Conference on Bioinformatics and Biomedical Technology (ICBBT 2010), April 17-20, 2010, Chengdu, CHINA.
9. 26th International Papillomavirus Conference, July 4-9, 2010, Montreal, CANADA
10. International meeting of "Human Virology", 2003, Baltimore, USA.
11. Proceedings of the VIIIth International Symposium on Nidoviruses, 2000, Split Rock, Pennsylvania, USA. Interactions of cellular proteins with the positive strand of 3' untranslated RNA and the nucleoprotein gene of porcine reproductive and respiratory syndrome virus (Majhdi FN, Kapil S).
12. Proceedings of the VIIth international symposium on Nidoviruses, 2000, Split Rock, Pennsylvania, USA. Production, characterization and use of monoclonal antibodies against porcine reproductive and respiratory syndrome virus 3' untranslated region and nucleoprotein RNA binding proteins (Shanmukhappa K, Majhdi FN, Kapil S).
13. American Society for Virology – Annual Meeting, 1999, University of Massachusetts, Amherst, Massachusetts, USA. Interactions of cellular proteins with the positive strand of 3'-untranslated region RNA and the nucleoprotein gene of porcine reproductive and respiratory



syndrome virus (Majhdi FN, Kapil S).

14. 79th Annual Meeting, Conference of Research Workers in Animal Diseases, 1998, Chicago, IL, USA. Development, characterization, and diagnostic applications of monoclonal antibodies against porcine reproductive and respiratory syndrome virus and bovine rotavirus, (Al-Majhdi F, Al-Yousif Y, Birney J, Chard-Bergstrom C, and Kapil, S).
15. Conference of Research Workers in Animal Diseases, 1997, Chicago, IL, USA.
16. Characterization of a coronavirus from elk calves with diarrhea (Majhdi F, Minocha HC, Kapil, S).
17. Conference of Research Workers in Animal Diseases - 224, 1996, Chicago, IL, USA. Molecular characteristics of an elk coronavirus (Fahad A, Minocha HC, Kapil S).
18. Conference of Research Workers in Animal Diseases - 77, 1996, Chicago, IL, USA. Typing of bovine coronavirus isolates on the basis of relative susceptibility to Hygromycin B (Fahad A, Minocha HC, Kapil, S).

PATENTS

Pub. No.	<u>WO/2012/143020</u>	International Application No.	<u>PCT/EP2011/002029</u>
Publication Date	<u>26.10.2012</u>	International Filing Date	<u>20.04.2011</u>
Applicants	<u>King Faisal Specialist Hospital And Research Centre King Saud University</u>		
Inventors	<u>KHABAR, KHALID S. A.; (SA). AL-MAJHDI, FAHAD NASSER; (SA)</u>		
Title	<u>Multiple Interferon And Virus Response Element Cell-Based Fluorescence System</u>		



Pub. No.	<u>WO/2013/083287</u>	International Application No.	<u>PCT/EP2012/005075</u>
Publication Date	<u>13.06.2013</u>	International Filing Date	<u>06.12.2012</u>
Applicants	DEUTSCHES KREBSFORSCHUNGSZENTRUM STIFTUNG DES ÖFFENTLICHEN RECHTES [DE/DE]; KING SAUD UNIVERSITY [SA/SA];		
Inventors	GISSMANN, Lutz; (DE).ÖHLSCHLÄGER, Peter; (DE). ENGER, Tilo; (DE). AL-MAJHDI, Fahad; (SA). KAUFMANN, Andreas; (DE). KLEINSCHMIDT, Jürgen; (DE).NIETO, Karen; (DE)		
Title	(EN) HPV DERIVED POLYNUCLEIC ACIDS FOR THERAPY		

CREATIVE WORKS

1. First isolation of Influenza B virus (B/Riyadh/01/2007) from Saudi Arabia Patient
2. First isolation of human respiratory syncytial virus Type A from Saudi Arabia Patient
3. First isolation of Human Parainfluenza Virus Type 3 from Saudi Arabia Patient

GENBANK

MERS Coronavirus [16]

ORF1ab gene: KT624236, KT624237, KT624238, KT624239

S gene: KT624240, KT624241, KT624242, KT624243

ORF3 gene: KT624244, KT624245, KT624246, KT624247

ORF4b gene: KT624248, KT624249, KT624250, KT624251



Influenza B viruses [14]

HA gene: JQ771075, JQ771077, JQ771079, JN663826, KC709818

NA gene: JQ771076, JQ771078, JN663827, KC709817, KC709819

NS-2 gene: GU135839

Polymerase genes: KC709814, KC709814, KC709816

Respiratory syncytial viruses [27]

G gene: JF714705, JF714706, JF714707, JF714708, JX131637, JX131638, JX131639, JX131640, JX131641, JX131642, JX131643, JX131644, JX131645, KC791694, KC791695, KC791696, KC791697, KC763335, KC763337, KC763339

F gene: JF714709, JF714710, JF714711, JF714712, KC763334, KC763336, KC763338

Parainfluenza viruses [7]

HPIV-3 (HN): HM460886, HM460887, JX131646, JX131647, JX131648, JX131649

HPIV-2 (HN): HM460888

Hepatitis B virus [42]

X-gene: KF018196, KF018197, KF018198, KF018199, KF018200, KF018201, KF018202, KF018203, KF018204, KF018205, KF018206, KF018207, KF018208, KF018209, KF018210, KF018211, KF018212

Core/pre-core gene: KF018176, KF018177, KF018178, KF018179, KF018180, KF018181, KF018182, KF018183, KF018184, KF018185, KF018186, KF018187, KF018188, KF018189, KF018190, KF018191, KF018192, KF018193, KF018194, KF018195.

Surface gene: KF018213, KF018214, KF018215, KF018216, KF018217.

Human Metapneumovirus [25]

F gene: KT032157, KT032158, KT032159, KT032160, KT032161, KT032162, KT032163, KT032164, KT032165, KT032166, KT032167, KT032168, KT032169, KT032170, KT032171, KT032172

G gene: KT032173, KT032174, KT032175, KT032176, KT032177, KT032178, KT032179, KT032180, KT032181

