

Najat A. Y. Marraiki

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EDUCATION

1. **Doctor of Philosophy (2005) in Virology.** Title of Thesis: “Recombinant virus like particles comprising hepatitis C virus (HCV) structural proteins and HCV replicon RNA”, University of Leeds, United Kingdom.
2. **Master of Science in Mycology:** “The effect of water stress on the growth of Ectomycorrhizal Fungi”, King Saud University, KSA.
3. **Bachelor of Science:** Department of Botany and Education, Scientific Departments, Girls' College, KSA.
4. Certificate of Achievement for completing Electron Microscopy Training, and its advanced Techniques, University of Leeds, United Kingdom.
5. Nanotechnology Techniques: training and research work, University of Leicester, United Kingdom.

EMPLOYMENT HISTORY

- **Present:** Associate Professor, Department of Botany and Microbiology, King Saud University, KSA.
- Assistant Professor, Department of Botany and Microbiology, King Saud University, KSA.
- Lecturer, Department of Botany and Microbiology, King Saud University, KSA.
- Demonstrator, Department of Botany and Microbiology, King Saud University, KSA.

COMMITTEE MEMBERSHIPS

- Secretary of the Scientific Research Committee
- Secretary of the Postgraduate Studies Committee
- Secretary of the Postgraduate Students Selection Committee, Botany & Microbiology Department.
- Member of Academic Evaluation & Confirmation
- Member of Microbiology Academic Plan Committee
- Member of Graduates Affairs & Employment Committee
- Member of the Demonstrators Selection Committee, Botany & Microbiology Department.

PUBLICATIONS

BOOKS AND CHAPTERS

Najat Marraiki, 2019. 'Practical Petroleum Microbiology'. King Saud University, KSA.

Sameh S. Zaghloul, **Najat Marraiki**, Mark J. D. Goodfield, 'Chapter: Raynaud's Disease and Phenomenon' published in 'Treatment of Skin Disease: Comprehensive Therapeutic Strategies. Text with Internet Access Code for Expert Consult Website' by Mark G. Lebwohl, New York, USA, Mosby (USA), ISBN-13: 9780702031212, Series: Treatment of Skin Disease, Year: 2010, Third Edition.

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Afaf El-Ansary, Hanan Balto, Soliman M. AL-Hadlaq, Sayed H. Auda, **Najat Marraiki**, (-2021). Chapter. In *Control of Antibiotic Resistance and Superinfections as a Strategy to Manage Covid-19 Deaths*, Eds. Utku Kose, Deepak Gupta, Victor Hugo C. de Albuquerque, Ashish Khanna. Volume 2.

JOURNAL ARTICLES

Identification and characterization of Capsicum mutants using biochemical, physiological and single sequence repeat (SSR) markers. Journal genetic engineering and biotechnology (in press)

Mahmoud, E.Y., Zeinab N. Hussien, Abou Ghanima S. F. Shehata, Najat Marraiki and M. A. Kamhawy. Induction and Expression of Systemic Resistance to Downy Mildew Disease in Grapevine by Chitosan. (in press)

Nidhi Sharma, Sana Choudhary, Neha Naaz, Nazarul Hasan, Najat Marraiki (2024). Induced Mutagenesis for the Development of High-Yielding Mutant Lines of Linseed (*Linum usitatissimum* L.) using caffeine and sodium azide. (in press)

Reham M. Alahmadi, Maaweya Awadalla, Najat Marraiki, Mohammed Alswayyed, Hajar A. Alshehri, Amjad Alsahli, Hatim A. Khoja, Osama T. Khojah, Rawan M. Alahmadi, Nada Alatabani, Bandar Alosaimi (2024). Gene Expression of Tumor Microenvironment Analysis Reveals Immune and Oncogenic Path-way Dysregulation in HPV-Positive Base of Tongue Squamous Cell Carcinoma. Cancers, (in press).

Hanan Balto , Mounir Salim Bekhit , Sayed H. Auda, Afaf Elansary , Ramesa Shafi Bhat, Najat Marraiki & Solaiman Al-Hadlaq (2024) . Synergistic effect of *Salvadora persica* and chitosan nanoparticles against oropharyngeal microorganisms. Scientific Reports | 14:12997

Reham M. Alahmadi , Najat Marraiki , Mohammed Alswayyed , Hatim A. Khoja , Abdullah E. Al-Anazi , Rawan M. Alahmadi , Meshael M. Alkusayer , Bandar Alosaimi and Maaweya Awadalla

(2023). Comprehensive Transcriptome Analysis Reveals the Distinct Gene Expression Patterns of Tumor Microenvironment in HPV-Associated and HPV-Non Associated Tonsillar Squamous Cell Carcinoma. *Cancers* , 15, 5548

Fatimah Al-Otibi, Rasha M. Al-Zahrani and Najat Marraiki (2023). Biodegradation of Selected Hydrocarbons by *Fusarium* Species Isolated from Contaminated Soil Samples in Riyadh, Saudi Arabia *J. Fungi*, 9, 216.

Rasha M. Al-Zahrani, Fatimah Al-Otibi, Najat Marraiki, RaedahI. Alharbi and Horiah A. Aldehaish (2022). Biodegradation of Petroleum Hydrocarbons by *Drechslera spicifera* Isolated from Contaminated Soil in Riyadh, Saudi Arabia. *Molecules* , 27, 6450.

Afaf El-Ansary , Hanan Balto , Solaiman M. Al-Hadlaq , Sayed H. Auda , Najat Marraiki (2022). Control of antibiotic resistance and superinfections as a strategy to manage COVID-19 deaths. Elsevier Inc. 507-529.

Solaiman M. Al-hadlaq, Hanan A. Balto, Wail M. Hassan, Najat A. Marraiki, Afaf K. El-Ansari (2022). Biomarkers of non-communicable chronic disease: an update on contemporary methods. *PeerJ* 10:e12977

J. Aravind Kumar , T. Krithiga, G. Narendrakumar, P. Prakash , K. Balasankar , S. Sathish , D. Prabu , D. Purna Pushkala , Najat Marraiki , A.G. Ramu , Dongjin Choi (2022). Effect of Ca^{2+} ions on naphthalene adsorption/desorption onto calcium oxide nanoparticle: Adsorption isotherm, kinetics and regeneration studies. *Environmental Research* 204, 112070

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Najat Marraiki, Iffat Siddiqui, H. Rizwana and A. Javaid, 2012. First Report of *Alternaria alternata* Leaf Spots on Spinach in Saudi Arabia. Journal of Animal and Plant Sciences. 22(1): 247-248.

Mona Al-Onazi, Soaad Al-Dahain, Afaf El-Ansary and **Najat Marraiki**, 'Isolation and Characterization of *Thielaviopsis paradoxa* L-alanine Dehydrogenase', Asian Journal of Applied Sciences, 4: 702-711, Year: 2011.

Hesham Khalil, **Najat A. Marraiki**, Ghadah Abusalim, Rachel J. Williams and Sean P.Nair, 'Adhesion of *Staphylococcus epidermidis* to Surgical Sutures', Biosciences, Biotechnology Research Asia, Volume 08, Number(1), Year: 2011

Hediat Salama, **Najat Marraiki**, 'Antimicrobial activity and phytochemical analyses of *Polygonum aviculare* L. (Polygonaceae), naturally growing in Egypt', Saudi Journal of Biological Sciences 17, Pages: 57–63, Year: 2010.

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Najat Marraiki, Masoud Sabouri Ghannad, Christopher McCormick, Andrew MacDonald, David Rowlands and Mark Harris, "Interferon- β Responses In Cells Expressing The Full Length Hepatitis C Virus (HCV) Polyprotein", Cellular & Molecular Biology Volume 9 (2004) Supplement 2: page 25.

Najat Marraiki, Christopher J. McCormick, David J. Rowlands, "Transmission of HCV Replicons to Naïve Huh7 Cells by Lysates of Replicon Bearing Cells Transduced with Baculovirus Expressing HCV Structural Proteins", 10th International Symposium on Hepatitis C Virus and related viruses. Kyoto, Japan, 2003.

POSTERS

Najat Marraiki and Asmaa Al-Shammari, 'Evaluating the Antiviral Activity of Some Medical Plant Extracts against TMV Infection in Tomato and Bell Pepper Plants', American Society of Microbiology, Annual General Meeting, 2013.

Najat Marraiki, Rehab Al-Hajjar, Ekram Abdulmoty, 'A Comparative Study Investigating the Antimicrobial Activities of two different types of TiO₂ Nanoparticles against the Pathogenic Strain of Escherichia coli', Canadian Society of Microbiology Annual Conference, Vancouver, Canada, June 2012.

Nagwa Aref, Nour Al-Houry and **Najat Marraiki**, 'The Interaction of Silver Nano-Particles (Ag NPs) With Virus-Bacteriolytic Activity', The International Workshops on Advanced Materials (IWAM), Ras Al Khaimah, UAE, from February 20-22, 2011.

PENDING PhD AND MSc SUPERVISIONS

-
- 2021.' Evaluating the efficacy of bacteriophages in resisting respiratory tract infections bacteria'. Najat Marraiki.
 - 2021: The Effect of Powder and Liquid Bacteriophage Formulations against some Bacteria Isolated from Sewage Water – Riyadh.
 - 2022; Molecular genotyping and gene profiling associated with the immunopathology of noncervical HPV-related cancers. Najat Marraiki.
 - 2022; The efficacy of bacteriophages isolated from sewage water against bacterial biofilm from soft tissue infection. Najat Marraiki.
 - 2023; The inhibitory effect of red sea brown algae against tobacco mosaic virus (TMV). Najat Marraiki.

COMPLETED PhD SUPERVISIONS

- 2019. 'Biosynthesis of Silver Nanoparticles using Plant Extracts and their Phytochemical Activity against Selected Human Pathogenic Bacteria Analysed using Next Generation Sequencing Technologies'.
- 2024. Molecular Genotyping and Gene Profiling Associated with The Immunopathology of Non-Cervical HPV-Related Cancers , Najat Marraiki.

COMPLETED MSc SUPERVISIONS

- 2020 - 'Evaluation of crude oil biodegradation using fungi isolated from oil-spilled soils in the Kingdom of Saudi Arabia – Riyadh'. Fatmah Alotibi and Najat Marraiki.
- 2016. 'Effect of Rhizobium Strains Isolated from Various Legume Plants on the Formation of Nodules Under Medicinal Plant Extract and Nanoparticles'. Najat Marraiki
- 2010. – 'The Effect of Biological Diversity of Different Host Plants on the Resistance of Cucurabita pepo viruses. Nagwa Mohammad Aref and Najat Marraiki.
- 2015. 'Evaluation of the degree of response of the Hepatitis B disease patients to treatment in relation to their different genotypes in the Kingdom of Saudi Arabia'. (Main Supervisor) Najat Marraiki.
- 2014. 'Evaluating the efficiency of bacteriophages in the eradication of bacterial contaminated sea food'. (Main Supervisor) Najat Marraiki and Nagwa Mohammad Aref.
- 2013. 'The control of viral infection in some cereal crops using the environmentally friendly gold Nano Particles (GNPs)'. Nagwa Mohammad Aref and Najat Marraiki
- 2013 – 'Comparing the efficiency of TiO₂ Nanoparticles and bacteriophages in the purification of contaminated water evaluated by molecular markers'. Najat Marriki
- 2012 – 'The Effect of Microbial Contamination Induced during the Preservation of Ova via Vitrification (Open System)' – Najat Marraiki.
- 2012 – 'Evaluating the Efficiency of Some Medical Plant Extracts (*Lamiaceae*, *Artemisia*) on the Viral Inhibition of Solanaceae' – Najat Marraiki.
- 2010- 'The sue of antibacterial lytic phages as natural additive in food industrial biotechnology. Nagwa Mohammad Aref and Najat Marraiki.

COMPLETED PhD EXAMINATIONS

- 2023. SARS-CoV2 infection and high risk of thrombosis: association between virus mutations, anticoagulation abnormalities, and Heparin induced thrombocytopenia (HIT).
- 2021. Improvement of enteric viruses' surveillance via metagenomics application to control water quality and public health issues.

COMPLETED MSc EXAMINATIONS

- 2022. Genetic Diversity and Evolutionary Kinetics of Non-H1N1 Influenza A Virus Subtypes Circulating in Riyadh Province.
- 2021. Molecular detection and spike gene characterization of Middle East Respiratory Syndrome MERS CoV and Dromedary camel Coronavirus DcCoV UAE HKU23 from dromedaries in Riyadh.
- 2020. 'Association between High-Risk Human Papillomaviruses (HPVs) and *Chlamydia Trachomatis* Co- Infection in Cervical Dysplasia.
- 2015. 'Antifungal Susceptibility of Clinical Candida species isolates, Saudi Arabia'.
- 2015. 'Prevalence of community – acquired methicillin – resistant Staphylococcus aureus (CA-MRSA) infection and association with Panton-Valentine Leukocidin (PVL) genes in children of outpatient clinics and emergency in Riyadh region, Kingdom of Saudi Arabia'.
- 2014. 'Modulation of Ochratoxins A-Induced Genotoxicity in Phaseolus vulgaris L., by Multi-walled Carbon Nanotubes'.
- 2014. 'Effect of silver and gold nanoparticles on germination and growth of some crop and wild plants'.
- 2013. 'Biosynthesis and characterization of Silver nanoparticles by using fungi and their applications'.
- 2012. 'Morphological and Molecular Cytogenetic Studies on some Angiosperms Threatened species in Saudi Arabia'.

PARTICIPATIONS

- Member of the Panel of Judges in the National Olympiad for Scientific Creativity (Mawhiba), Saudi Arabia, Riyadh, since 2010.
- Member of the Panel of Judges in the National Olympiad for Scientific Creativity (Mawhiba), Saudi Arabia, Hail, since 2010.
- Participated in the Workshop on Analysis of Strength, Weakness Factors, Available Opportunities and threats to King Saud University on 15/3/2008.
- Participated in the activities of the 1st Child culture Festival, Ministry of Culture & Information, King Abdulaziz Public Library from 3-8 May 2008.

TEACHING

Courses at King Saud University

Bachelor	Master	PhD
Module 211	Module 511	Module 611
Module 230	Module 561	Module 612
Module 250	Module 566	Module 692
Module 330	Module 591	Module 651
Module 335	Module 600	Module 662
Module 345		Module 700
Module 450		

Module 461
Module 466
Module 488
Module 492
Module 493
Module 498
Module 499

Courses Outside King Saud University

Advanced Virology (Hail University in cooperation with King Saud University).

SPEAKER INVITATIONS

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- 'Antibacterial Nano-Metals', King Abdullah Institute for Nanotechnology, 10.8.2017. •
'Antibacterial Nano-Metals', King Abdullah Institute for Nanotechnology, 18.7.2016.
 - 'Antibacterial Nano-Metals', King Abdullah Institute for Nanotechnology, 18.7.2015.
 - 'Antibacterial Nano-Metals', King Abdullah Institute for Nanotechnology, 28.01.2013.
 - 'Antibacterial Nano-Metals', King Abdullah Institute for Nanotechnology, 18.11.2012.