

Dr. Raed Alkowni

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Professor (Associate)

Department of Biology and Biotechnology - Faculty of Science
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Areas of Interest

Environmental biotechnology; Phytosanitary; genetic diversities; Rhizobacteria in Phytoremediation.

Biography

- Ph.D. University of Bari, Bari, Italy 2001 Molecular Plant Virology
- M.Sc. CIHEAM/IAM-B, Valenzano, Italy 1997 Plant Virology
- D.S.P.G. CIHEAM/IAM-B, Valenzano, Italy 1996 Protection of Mediterranean Fruit Tree Crops
- B.Sc. University of Jordan, Amman, Jordan 1992 Plant Protection

Awards/Grants

1. An-Najah Research Excellence and the Quality of Publication Reward 2018
2. An-Najah Research Excellence and the Quality of Publication Reward 2016
3. Erasmus⁺ KA107 Program for Teaching Staff Mobility Grant", 2017. University of Pavia (Italy). Pavia, Italy.
4. Water Research Fellowship Program", 2016. MEDRC Water Research and Palestinian Water Authority.
5. Erasmus⁺ Program for Teaching Staff Mobility Grant", 2016. University of Pavia (Italy). Pavia, Italy.
6. Zamala fellowship for Academic Development", 2014. Bari University, Italy
7. An-Najah Research Excellence and the Quality of Publication Reward 2011
8. International Teaching Fellow Honor awards", 2011, from Searle Center for Teaching Excellence. Northwestern University, Evanston, Illinois, USA
9. The Engineer Zuhair Hijjawi Award for Scientific Research in the natural Sciences and Biotechnology"2009.
10. IDB Merit Scholarship Program" 1427H/2007 from Islamic Development Bank (IDB), Jeddah Saudi Arabia. Scholarship Office (OSP), Islamic Development Bank (IDB), P.O. Box 5925, Jeddah 21432, Saudi Arabia; Tel: (00966-2) 646-6884; Fax: (00966-2) 646-6887; e-mail: swafa@isdb.org
11. Testimonial Certificate for the Best Master Thesis"1997. (IAMB/CIHEAM). Bari, Italy.

Working Experience

- Dean, Faculty of Science. An-Najah National University/Nablus, West-Bank, Palestine (2017-2018)
- Professor (Associate), Department of Biology and Biotechnology - Faculty of Science. An-Najah National University/Nablus, West-Bank, Palestine (2009-2017)
- Researcher, Bari University- CNR, Italy, Rewarded by the Zamala fellowship (2014)
- Associate Professor, Department of Biology and Biotechnology - Faculty of Art and Science. The Arab American University - Jenin (AAUJ), Palestine (2007-2009)
- Researcher, UC-Davis (Junior Specialist), California, Rewarded by the IDB merit scholarship (2007-2008)
- Head, Biology and Biotechnology Department - Faculty of Art and Science. The Arab American University - Jenin (AAUJ), Palestine (2003-2007)
- Postdoctoral Fellow, Department of Plant Pathology, University of California at Davis, California, USA (2001-2003)
- Professional Assignment, The Mediterranean Agronomic Institute of Bari (IAM-B), The International Center for Advanced Mediterranean Agronomic Studies (CIHEAM). Bari, Italy (2000-2001)
- Teaching assistant, UNESCO Biotechnology Educational and Training Center, Bethlehem University, Palestine. (1997)
- Staff Agronomist & Technical Supervisor, Palestinian Agriculture Relief Committees (PARC), Jerusalem, Palestine (1993-1995)

Skills

1. Biotechnological diagnosis of plant viruses.
2. DNA fingerprinting for assessments of genetic diversities.
3. Phytosanitary actions and measurements for production of healthy propagating materials.
4. PGPRs for Phytoremediation improvement
5. Biotechnology for Medicinal Plants conservation
6. Curriculum & course design with high cognition level skills for Advancing in teaching and learning
7. Fluently speaking of Arabic, English and Italian languages

Committees and Memberships

- Coordinator of An-Najah National University / FAO project
- Founder Member of the ECOPAL-Forum
- Coordinator of An-Najah National University for FP7/H2020 Program
- Founder Member of the Conference of Biotechnology Research and its Applications in Palestine
- General Supervisor of Environment Friends Association (EFA)
- Member (Elected) for the Council of the Faculty of Science – 2016, An-Najah National University
- Member of the Scientific Committee of Graduate Studies for Water and Environmental Sciences - Najah University
- Team Member of the Center of Excellence in Learning and Teaching “CELT”, An-Najah National University

Selected Publications

- 1) Alkowni R., Alabdallah O., Fadda Z. (2019). Molecular identification of tomato brown rugose fruit virus in tomato in Palestine. *Journal of Plant Pathology*; 101 (3): 719–723
- 2) Alkowni R., Jodeh S., Hamed R. Samhan S., and Daraghme H. (2019). The impact of *Pseudomonas putida* UW3 and UW4-strains on photosynthetic activities of selected field crops under saline conditions. *International Journal of Phytoremediation*; 21(10): 944-952
- 3) Zyoud A., Alkowni R., Yousef O., Salman M., Hamdan S., Helal M., Jaber S., Hilal H. (2019). Solar light-driven complete mineralization of aqueous Gram-positive and Gram-negative bacteria with ZnO photocatalyst. *Solar Energy, Solar Energy* 180: 351–359
- 4) Eid A M, Jaradat N. A., Elmarzugi A., Alkowni R, Hussein F., Abu Ayyash L., Sawafta M., Danaa H. (2019). Development of *Nigella Sativa* Oil Colloidal Emulgel Using Heat Inversion Technique and Evaluation of Its Anti-Bacterial Activity. *Letters in Drug Design & Discovery*. 16 (4): 408 – 416.
- 5) Samara R., Alkowni R., Qubbaj T., AbuQauod H., Jarrar S. (2018). Plant diseases associated with olive bark midge in West-Bank, Palestine. *Research On Crops Journal*, 19 (4) : 712-719 (2018)
- 6) Deghles A., Abu-Obaid A., Alkowni R., Salman M.T. (2018). Adsorption of Heavy Metals by Reed (*Phragmites australis*) as a Potential Clean Water Technology. *Journal of Environment and Earth Science*, 8(12):159-171
- 7) Alkowni R, Jodeh S., Hussein F., Jaradat N. (2018). Phytochemical Screening and Antibacterial Activity of (*Cyclamen Persicum* Mill) Tuber Extracts. *Pak. J. Pharm. Sci.*,31(1):187-192
- 8) Shawarb N., Jaradat N., Abu-Qauod H., Alkowni R. and Hussein F. (2017). Investigation of antibacterial & antioxidant activity for methanolic extract from different edible plant species in Palestine. *Moroccan Journal of Chemistry*. 5 (4):573-579
- 9) Salameh R., Alkowni R., Jodeh S., Samhan S. (2017). Detection of pathogenic waterborne bacteria in potable water of Tubas district-Palestine. *The Second Palestinian International Graduate Conference*, April 20th, ANU, p23
- 10) Alkowni R., Solyman E., and Abu Qauod H. (2017). Introducing some of threatened *Thymus* species to in vitro tissue culturing as an approach for their conservation. *Pakistani Journal of Botany*, 49(1):259-264
- 11) Alkowni R., (2017). Phytoviruses in Palestine: Status and Future Perspectives. *An - Najah Univ. J. Res. (N. Sc.)* 31(1):11-34
- 12) Alkowni R.; AbuQauod H.; Jarrar S.; Samara R. (2016). Reporting Olive bark midge *Resseliella oleisuga* Targ. (Diptera: Cecidomyiidae) infesting olive trees in North Palestine. *The Third International Conference on olive in Palestine (ICOP 3rd): December 7th- 8th, 2016. The Palestine Technical University – Kadoorie (PTUK), Tulkarm, Palestine. p16*
- 13) Alaoui S M, Salghi R, Alkowni R; Abouatallah A, Ayoub M, Jodeh S (2016). Performance of four greenhouse tomato cultivars grown in soilless culture in Souss Massa region *Der PharmaChemica*, 8(18):336-344
- 14) Elbouchtaoui M. C. , Ben Hmamou D., Jodeh S., Salghi R. , Alkowni R. , Chebli B. , Kharoubi M. (2016). Chitin as a Corrosion Inhibitor of Carbon Steel in HCl Solution. *Der PharmaChemica*, 8(18):350-358
- 15) Alkowni R., (2016). The use of biotechnology in conservation of plant genetic resources. *Scientific conference on Palestinian plant genetic resources, September 21st , 2016, p7*
- 16) Alkowni R. (2016). Rhizobacteria for enhancement of plant growth. In: “The 4th Conference on Biotechnology Research and Application in Palestine”. March, 21st,2016 AAUJ-Palestine. p5
- 17) Mahmoud M. and Alkowni R. (2016). Detection of Fig viruses in Northern part of west bank. In: “The 4th Conference on Biotechnology Research and Application in Palestine”. March, 21st,2016 AAUJ-Palestine. p34

- 18) Khudiesh N. and Alkowni R. (2016). Potato Viruses Y incidences in West Bank. In: "The 4th Conference on Biotechnology Research and Application in Palestine". March, 21st, 2016 AAUJ-Palestine. p39
- 19) Jodeh S., Amarah J., Radi S., Hamed O., Warad I., Salghi R., Chetouni A., Samhan S., Alkowni R. (2016). Removal of methylene blue from industrial wastewater in Palestine using polysiloxane surface modified with bipyrazolotripodal receptor. *Mor. J. Chem.* 4 (1):140-156.
- 20) Alkowni R. and Abu-Qaoud H. (2016). Field survey and molecular detection of Potato viruses in Northern fields of Palestine. *An - Najah Univ. J. Res. (N. Sc.)*. 30:127-140
- 21) Jodeh S., Alkowni R., Hamed R. and Samhan S. (2015). The study of electrolyte leakage from barley (*Hordeumvulgare L*) and Pearl millet using plant growth promotion (PGPR) and reverse osmosis. *Journal of Food and Nutrition Research*, 3(7): 422-429
- 22) Alkowni R., Chiumenti M, Minafra A. and Martelli GP (2015). A survey for fig-infecting viruses in Palestine. *Journal of Plant Pathology*. 97 (2), 383-386
- 23) Alkowni R, (2014). The first molecular detection of Fig mosaic virus in Palestine. In: "Food Security Prospective and Challenges Conference". October 30th, 2014. An-Najah National University. Nablus, Palestine. p24
- 24) Alkowni R., Hamed R.; Jodeh S. (2014). Plant Growth Promoting Rhizobacteria (PGPR) for increase Plant salt tolerances. In: "Food Security Prospective and Challenges Conference". Oct. 30th, 2014. An-Najah National University. Nablus, Palestine. p28
- 25) Solyman E. and Alkowni R. (2014). RAPD for Assessment of Thymes Genetic Diversity in Palestine. *Palestine Technical University Research Journal*, 2(2), 01-08
- 26) Amro S., Alkowni R. and Hamdan A. (2014). Molecular and Biological Tools for Assessment of TYLCV Resistant Tomato Cultivars Commercially Grown in Southern Palestine. *An-Najah University Journal for Research (N. Sc.)*. 28: 85-108
- 27) Solyman I. and Alkowni R. (2012). Molecular Genetic Assessment of Selected Palestinian Thyme Species Using RAPD. "The 3rd Conf. on Biotech. Research and Appl. in Palestine". October 20th, 2012. Al-Quds University. Palestine. p36
- 28) Alkowni R. and Solyman I. (2012). Micropropagation of Selected Thyme Species in Palestine The 3rd Conf. on Biotech. Research and Appl. in Palestine". October 20th, 2012. Al-Quds University. Palestine. p61
- 29) Alkowni R. and Sawalha K. (2012). Biotechnology for Conservation of Palestinian Medicinal Plants. *Journal of Agricultural Technology*. 8(4): 1285-1299
- 30) Alkowni R., Zhang Y-P., Rowhani A., Uyemoto J. K.; and Minafra A. (2011). Biological, Molecular, and Serological Studies of a Novel Strain of Grapevine Leafroll-associated Virus 2. *Virus Genes*. 43(1): 102-110
- 31) Alkowni R. (2011). Advanced Molecular Techniques For Detection And Identification Of Olive-Infecting Viruses. In: First International Conference of olive in Palestine (ICOP): "Status and Challenges" February 8th-10th, 2011. The Palestine Technical University – Kadoorie (PTUK), Tulkarm, Palestine. p27
- 32) Mahmoud S. and Alkowni R. (2011). The Spread of Mistletoe in Olive Trees. In: First International Conference of olive in Palestine (ICOP): "Status and Challenges" February 8th-10th, 2011. The Palestine Technical University – Kadoorie (PTUK), Tulkarm, Palestine. p52
- 33) Alkowni R., Zhang Y-P., Rowhani A., Uyemoto J. K.; and Minafra A. (2010). Molecular Characterization and detection of Redglobe-Isolated Closterovirus. In: "The Second Conference on Biotechnology Research and Application in Palestine". September 26th-27th, 2010. An-Najah National University. Nablus, Palestine. p33
- 34) Alkowni R. and Sawalha K. (2010). Conservation of Palestinian Biodiversity by In vitro culture. In: "The Second Conference on Biotechnology Research and Application in Palestine". September 26th -27th, 2010. An-Najah National University. Nablus, Palestine. p77
- 35) Alkowni R. (2009). The importance of scientific research and technology transfer to agricultural sector in Palestine. The 1st conference of education and agricultural vocational training in Palestine. July 28th 2009. Arroub, Nablus, Palestine. p73 [In Arabic]
- 36) Alkowni R. and Srouji F. (ed) (2009). Food Security and Viral Diseases (in Fruit Trees). Palestine Economic Policy Research Institute (MAS). Ramallah-Palestine. [In Arabic]
- 37) Lima M., Alkowni R, Uyemoto J. K., and Rowhani A. (2009). Genomic Study And Detection Of A New Variant Of Grapevine Rupestris Stem Pitting Associated Virus In Declining California Pinot Noir Grapevines. *Journal of Plant Pathology*. 91 (1): 153-160.
- 38) Alkowni, R. (2009). Complete nucleotide sequence, genome organization and phylogenetic analysis of eight open reading frames of grapevine leafroll associated virus. In: "The First Conference on Biotechnology Research and Application in Palestine". April 3rd -4th, 2009. Bethlehem University-Palestine. p23
- 39) Amro S.; Alkowni R. and Hamdan A. (2009). Biological and molecular studies on most economical Palestinian tomato cultivars infected with TYLCV in Southern Highlands of West Bank. In: "The First

Conference on Biotechnology Research and Application in Palestine". April 3rd -4th, 2009. Bethlehem University-Palestine. p24

- 40) Jaradat S.; Abo-Alrob K.; Modallal Y.; and Alkowni R. (2009). In vitro propagation of Palestinian most economically important medicinal plants. In: "The First Conference on Biotechnology Research and Application in Palestine". April 3rd -4th, 2009. Bethlehem University-Palestine. p 29
- 41) Sbaihat L. and Alkowni R. (2009). Micropropagation of *Gundelliatournefortii* (A'kkub) in vitro. In: "The First Conference on Biotechnology Research and Application in Palestine". April 3rd -4th, 2009. Bethlehem University-Palestine. p30
- 42) Alkowni R. (2008). Detection of Genomic Variations in Grapevine *Rupestris* Stem Pitting Associated Virus, leading for identification of new virus isolates and Developing of Molecular Tool for their Specific detection. Hebron University Research Journal. 3 (2): 36-48.
- 43) Lima M. F., Alkowni R, Uyemoto J. K., Golino D, Osman F, and Rowhani A. (2006). Molecular analysis of a California strain of *Rupestris* stem pitting associated virus isolated from declining Syrah grapevines. *Archive of Virology* 151 (9): 1889-1894.
- 44) Alkowni R. (2006). Comparative Analyses of the Coat Protein of Newly Discovered Ampelovirus Using Computer-Assisted Phylogenetic Reconstruction and Analysis: An Approach for Classification and Characterization. *Hebron University Research Journal*. 2 (2): 16-26.
- 45) Lima, M. F.; Alkowni, R.; Uyemoto, J. K.; and Rowhani, A. (2006). Molecular analysis of a Californian strain of *Rupestris* stem pitting associated virus from Pinot Noir grapevine. In: 25th Annual Meeting of American Society for Virology, 2006, Madison-WI (USA). p259
- 46) Alkowni, R. (2005). Establishment of a Center for Biotechnological Application. In: Expert Group Meeting On Modern Biotechnology; Technical and policy Implications. ESCWA-FAO United Nations House, Beirut, Lebanon. p14
- 47) Alkowni, R. (2005). The role of biotechnology in preserving the plant biodiversity. In: The role of governmental and non-governmental institutions in protection and improvement of local seed varieties: toward establishing of national strategy to improve the biodiversity in seeds of Palestine workshop, 2005. BERC, (Til-Nablus). p44
- 48) Alkowni R. (2005). Biodiversity and Biotechnology. Chapter 5. In: Sawalha, Kh (ed.). *Plant Biodiversity*. ISBN. 9950-338-00-X. Al-Quds University. [In Arabic]. p81-87
- 49) Alkowni R., Rowhani A., Daubert S. and Golino D.A., (2004). Partial Characterization of a New Ampelovirus Associated with Grapevine Leafroll Disease. *Journal of Plant Pathology*. 86 (2): 122-132
- 50) Lima, M. F.; Alkowni, R.; Golino, D.; Uyemoto, J. K.; Rowhani, A. (2004). Characterization of Two New Strains of Grapevine *Rupestris* Stem Pitting- Associated Virus. In: American Phytopathological Society Annual Meeting, 2004, Anaheim-CA. *Phytopathology* (Supplement to n° 94):S61.
- 51) Sim S.T., Rowhani A., Alkowni R., and Golino D.A., (2003). Experimental transmission of Grapevine leafroll-associated virus 5 and 9 by longtailed mealybugs. In: 14th Meeting of the International Council for the Study of Virus and Virus-like Diseases of the Grapevine (ICGV), 2003. Locorotondo (Bari), Italy. p211
- 52) Alkowni R., Rowhani A., and Golino D.A., (2002). Partial nucleotide sequence and molecular detection of a putative new grapevine leafroll associated virus. *Phytopathology*. 92 (supplement to n°6): S3.
- 53) Grieco, F., Alkowni, R., Saponari, M., Pantaleo, V., Savino, V. and Martelli, G.P. (2002). Molecular detection of olive-infecting viruses. *Acta Hort. (ISHS)*. 586:737-740
- 54) Saponari, M., Alkowni, R., Grieco, F., Driouech, N., Hassan, M., Di Terlizzi, B., Digiario, M., Pantaleo, V., Savino, V. and Martelli, G.P. (2002). Detection of olive-infecting viruses in the Mediterranean basin. *Acta Hort. (ISHS)*. 586:787-790
- 55) Alkowni R., Grieco F. and Martelli G.P., (2001). Complete nucleotide sequence of RNA-2 of Olive latent ringspot virus. *Archives of Virology*, 146 (1): 117-125.
- 56) Grieco F., Alkowni R., Saponari M., Savino V. and Martelli, G.P. (2000). Molecular detection of olive-infecting viruses. *Bulletin OEPP/EPPO Bulletin* 30,469-473
- 57) Alkowni R., Digiario M., and Savino V., (1998). Viruses and virus diseases of grapevine in Palestine. *EPPO Bulletin*, 28, 189-195.
- 58) Abu Qauod H. and Alkowni R., (1995). Measuring and increasing the percentage of germination of *Gundelia tournefortii* seeds. *An-Najah Journal Research*. 3(9):58-72.
