

P.O.Box: 22452

Riyadh – 11495

Land Line: +9661-8052754

Cell Phone: +9661-502205785

[bvirk@ksu.edu.sa/](mailto:bvirk@ksu.edu.sa) virkg@hotmail.com

<https://fac.ksu.edu.sa/bvirk/home>

<https://orcid.org/my-orcid?orcid=0000-0002-4030-7651>

<https://scholar.google.com/citations?hl=en&user=VIdTVJgAAAAJ>

Date of Birth: 27th April, 1972.

Place of Birth: Gangtok, India.

Marital Status: Married.

Nationality: Indian.

Language

skills: Fluent and proficient in English and Hindi

Objective: Seeking an academic position in a progressive educational institution to leverage my 20+ years of teaching experience, research skills and student mentoring that will contribute in creating a conducive learning system in the educational realm.

WORK EXPERIENCE	<p>Currently working as an Associate Professor in the Department of Zoology, Women's Section at King Saud University, Riyadh since May 2018.</p> <p>Worked in the position of an Assistant Professor in the Department of Zoology, Women's Section at King Saud University, Riyadh from November 2007-May 2018.</p>

	<p>▪ During the tenure at KSU have taught the following courses:</p> <p>❖ <i>Doctorate level_</i></p> <ul style="list-style-type: none"> • ZOO-621 (Advanced Aquatic Fauna), • ZOO-623(Advances in nutrient requirements of Fish), • ZOO-673(Advances in Aquatic Ecology). • ZOO-671 (Advances in Animal Ecology and Pollution) • ZOO-635 (Advanced Animal Behavior) • ZOO-674(Advances in Environmental Pollution) • ZOO 622- Advances in Aquatic Vertebrates. <p>❖ <i>Master's level-</i></p> <p>❖ ZOO-521 (Aquatic biology)</p> <p>❖ ZOO-529(Fish Farming)</p> <p>ZOO-571 (Animal Ecology and Pollution)</p> <p>ZOO-572 (Animal Conservation)</p> <p>ZOO-528 (Fishery Resources)</p> <p>ZOO-573 (Advances in Animal Ecology)</p> <p>ZOO-585(Ecophysiology)</p> <p>ZOO-581(Advanced Environmental Pollution)</p> <p>❖ <i>Undergraduate level</i></p> <ul style="list-style-type: none"> • ZOO-499 (Research Methodology) • ZOO-453 (Environmental Pollution and Protection) • ZOO-374(Aquatic Ecology) • -ZOO-106 (Introduction to Zoology) • ZOO-145,109 (Introduction to Zoology){current} • ZOO- 352(Principles of Genetics) <p><u><i>New Middle East International School, Riyadh</i></u></p> <p>Worked as a Biology teacher for the I.G.C.S.E. CAMBRIDGE curriculum from May 2002 – October 2007 in Middle East International School (Asian Section) Riyadh – Saudi Arabia.</p> <p>Taught students of O' Levels and A' Levels (GCE – Edexcel)</p> <p><u><i>G.B. Pant University of Agriculture and Technology, Pantnagar, India</i></u></p> <p>Worked as a Teaching Assistant in the College of Fisheries. Taught courses in Aquaculture Engineering, Fish Disease and Diagnosis, Limnology and Marine Biology for the B.FSc. (fisheries) during the academic session –April-November, 2001.</p> <p>Punjab Agricultural University, Ludhiana, India</p>
--	--

	<ul style="list-style-type: none"> ▪ Taught practical courses for the Master's Program in Fisheries (Fish Nutrition (Fish 527) and Capture Fisheries(Fish 525) at Punjab Agricultural University, Ludhiana during 2000 – 2001. ▪ Taught a basic course in Fisheries (Fish Culture, Fish 301) for the B.S.c. Agriculture Program at Punjab Agricultural University, Ludhiana during 1999 – 2001.
EDUCATION	<ul style="list-style-type: none"> ▪ Ph.D. Fisheries – Department of Fisheries,Punjab Agricultural University, Ludhiana in November 2000 with first division. ▪ Masters in Zoology – Department of Zoology(Honours School) from Panjab University, Chandigarh in May 1995 with first division. ▪ Bachelor of Science from Maharshi Dayanand Saraswati University at Sophia Girls College, Ajmer in March 1993 with first division. ▪ Senior Secondary Certificate , Himachal Pradesh Board of School Education from St. Bede's College, Shimla in March 1990 with first division. ▪ Indian Certificate of Secondary Education (10th Grade.), New Delhi Board from St. Mary's Convent, Nainital, India in March 1988 with first division.
RESEARCH EXPERIENCE	<ul style="list-style-type: none"> ▪ Masters – 1 Year – 1995. ▪ <i>Title of Thesis: “Toxic effects of organochlorine pesticide, Endosulfan on the ovary of Heteropneustes fossilis (Bloch).”</i> ▪ Name of Supervisor: Dr. M.L. Sareen (Professor), Dept. Of Zoology, Punjab University, Chandigarh. ▪ Ph.D. – 3 Years – 1998 – 2000. ▪ <i>Title of Thesis: “Studies on the utilization of non-conventional feed resources in fish feed.”</i> ▪ Name of Supervisor: Dr. P.K. Saxena (Professor), Dept. of Fisheries, Punjab Agricultural University, Ludhiana. ▪ Research Fellow: From 24-08-1999 – 05-03-2001. ▪ Indian Council of Agricultural Research (ICAR)Scheme: <i>“Use of agro-industrial by-products in cost-effective carp feed”.</i> <p>Have been actively working in the field of Environmental Science and Aquatic Toxicology since 2012. Have mentored graduate students since 2010.</p> <p>Worked as a Co-I in a project funded by the National Plan for Science and Technology, Riyadh,Saudi Arabia, <i>'Role of Oleuropin and Hydroxytyrosol in breast cancer Prevention and Treatment'</i>from February/2011 to 2013.</p>

	<p><u>Worked in Research groups;</u></p> <p>Research group project no. RGP-VPP-033. Research Group Project No. RGPVPP-074, from 2010-2015, funded by the Deanship of Scientific Research at King Saud University, Riyadh.</p> <p>Worked as a PI in a Research Group No.: RG-1441-311 funded by Deanship of Scientific Research at King Saud University, RIYADH.</p> <p>Co-I in a project funded by Ministry of Higher Education, Saudi Arabia. <i>Genetic changes in fish /shellfish as a result of anthropogenic activities in the Arabian Gulf and Red Sea, Kingdom of Saudi Arabia. .</i></p>
Current Research interests	<p>Most of my research over the past few years has focused on experimental studies on fish /rat model. In addition, the role of natural antioxidants/nutraceuticals in combating toxicity particularly, oxidative stress has been an integral part of the research projects. Several natural compounds such as plant extracts along with probiotics have been explored for their remedial potential. In the recent years, I have been working on the use of ‘green technology’ in nanoscience to be explored as a therapeutic approach in combating pollution. My research interests clearly map onto the following current research themes in Environmental Science;</p> <ul style="list-style-type: none"> ➤ classic, emerging, and bioactive contaminants such as in humans and the environment by target analysis, suspect and non-target screening, and effect-directed analysis investigation of the mode of action of contaminants from molecular initiating event to adverse outcomes. ➤ My envisaged future research plans include the exposure and assessment of emerging pollutants in the environment such as plasticizers, microplastics and ‘forever chemicals’; PFAs.

<p>PUBLICATIONS</p>	<p>2023</p> <p>1) Manal A. Awad, Promy Virk, Awatif A. Hendi,, Khalid Mustafa Ortashi,, Najla AlMasoud,and Taghrid S. Alomar.(2023). Role of Biosynthesized Silver Nanoparticles with <i>Trigonella foenum-graecum</i> Seeds in Wastewater Treatment. Processes 2023, 11, 2394.https://doi.org/10.3390/pr11082394</p> <p>2) Manal Qayyadh Alanazi, Promy Virk, Seham Soliman Alterary, Manal Awad, Zubair Ahmad, Abdulrehman M. Albadri, KalidM. Ortashi, Mohieldeen Mahgoub A. Ahmed, Mohamed Ismail Ali Yousef, Mai Elobeid, Ebtesam Abdullah Al-Qahtani(2023).Effect of potential microplastics in sewage effluent on Nile Tilapia and photocatalytic remediation with zinc oxide nanoparticles.Environmental Pollution,Volume 332, 121946 https://doi.org/10.1016/j.envpol.2023.121946.</p> <p>3) Awad, Manal A., Meznah M. Alanazi, Awatif A. Hendi, Promy Virk, Albandari W. Alrowaily, Taghreed Bahloul, Fatimah Al-Abbas, Fatma Aouaini, and Khalid M. O. Ortashi. 2023. "Synthesis of Nano-Crystalline Whiskers of Cheese and Their Efficacy against Cadmium Toxicity" Crystals 13, no. 7: 1013. https://doi.org/10.3390/cryst13071013</p> <p>4)Malak Abdullah Al-Qahtani, Promy Virk, Manal Awad, Mai Elobeid, Khawlah Sultan Alotaibi(2023).Attenuation of di(2-ethylhexyl)phthalate-induced hepatic and renal toxicity by naringin nanoparticles in a rat model. Green Processing and Synthesis. vol. 12, no. 1, 2023, pp. 20228122. https://doi.org/10.1515/gps-2022-8122</p> <p>5) Munira Abdullah Rashed Alqahtani, Promy Virk, Dalia Fouad(2023) Attenuating Effect of Spirulina (<i>Arthrospira platensis</i>) against Di (2-ethylhexyl) Phthalate Induced Toxicity in Wistar Rat. Environmental Pollutants and Bioavailability. 35:1, 2197154. https://doi.org/10.1080/26395940.2023.2197154</p> <p>6) Promy Virk, Manal A. Awad, Meznah M. Alanazi, Awatif A. Hendi, Mai Elobeid, Khalid M. Ortashi, Albandari W. Alrowaily, Taghreed Bahloul, Fatma Aouaini (2023) Putative anti-proliferative effect of Indian mustard (<i>Brassica juncea</i>) seed and its nano formulation" Green Processing and Synthesis.12(1), pp. 20228119. https://doi.org/10.1515/gps-2022-8119</p> <p>7) Promy Virk, Manal A. Awad, Sarah Saleh Abdu-llah Alsaif, Awatif A. Hendi, Mai Elobeid, Khalid Ortashi, Rabia Qindeel, Manal F. El-</p>
----------------------------	--

Khadragy, Hany M. Yehia, Mohamed Ferkry Serag EL-DIN, Hatem Ali Salama(2023).Green synthesis of *Moringa oleifera* leaf nanoparticles and an assessment of their therapeutic potential, Journal of King Saud University - Science,35(3),102576,
<https://doi.org/10.1016/j.jksus.2023.102576>

8) Awatif A. Hendi, Manal.A. Awad,Meznah M. Alanazi, **Promy Virk**, Albandari W. Alrowaily ,Taghreed Bahloul, Nada M Merghani, Fatma Aouaini, Basma Hagmusa.(2023) Phytomediated synthesis of bimetallic Ag/Au nanoparticles using orange peel extract and assessment of their antibacterial and anticancer potential. Journal of King Saud University – Science 35 (2023) 102510. <https://doi.org/10.1016/j.jksus.2022.102510>
2022

1) Manal A. Awad, Meznah M. Alanazi , Awatif A. Hendi , **Promy Virk** , Albandari W. Alrowaily ,Taghreed Bahloul , Fatehia S. Alhakami, Fatma Aouaini and Eiman Mamoun Ibrahim.(2022). Potential Role of ‘Green’ SynthesizedTitanium Dioxide Nanoparticles in Photocatalytic Applications.Crystals, 12, 1639. <https://doi.org/10.3390/cryst12111639>

2)Shahid Mahboob, Zubair Ahmed, H.F. Alkahem Al-Balawi, Khalid A Al-Ghanim, **Promy Virk**, N Al-Mulham, F. Al-Misned,Ecogenotoxicological studies for an early toxicity screening and monitoring in *Epinephalus chlorostigma* and *Scamberomorus commerson*,Journal of King Saud University - Science, 34(7),2022,102265.<https://doi.org/10.1016/j.jksus.2022.102265>.

3)**Promy Virk**, Sarah Turif Abdulhadi Alajmi, Manal Awad, Mai Elobeid, Khalid M.O. Ortashi, Atheer Mohammed Asiri, Nada M. Merghani, Dalia Fouad,(2022)Attenuating effect of Indian mustard (*Brassica juncea*) seed and its nano formulation on arsenic induced-oxidative stress and associated genotoxicity in rat,Journal of King Saud University - Science, 34(6)2022,102134,
<https://doi.org/10.1016/j.jksus.2022.102134>.

4) **Promy Virk**, Manal A. Awad, Mai Elobeid, Khalid M.O. Ortashi, Nada M. Merghani, Manal F. El-Khadragy,Anti-proliferative and biocidal effect of watermelon (*Citrullus lanatus*) seed extract and its nanoformulation,Materials Letters, 325,2022,132809,
<https://doi.org/10.1016/j.matlet.2022.132809>.

5) Hendi AA, **Virk P**, Awad MA, Elobeid M, Ortashi KMO, Alanazi MM, Alkallas FH, Almoneef MM, Abdou MA. In Silico Studies on Zinc Oxide Based Nanostructured Oil Carriers with Seed Extracts of *Nigella sativa* and *Pimpinella anisum* as Potential Inhibitors of 3CL Protease of SARS-CoV-2.Molecules.20224;27(13):4301.
[doi:10.3390/molecules27134301](https://doi.org/10.3390/molecules27134301).PMID:35807545;PMCID: MC9268682.

6) S. Mahboob, Z. Ahmed, M. Farooq Khan, **Promy Virk**, N. Al-Mulhm, Almohannad A.A. Baabbad,(2022)Ecogenotoxicological studies for an early toxicity screening and monitoring in *Epinephalus chlorostigma* and *Scamberomorus commerson*, Saudi Journal of Biological Sciences, <https://doi.org/10.1016/j.sjbs.2021.12.064>

7)Shahid Mahboob, Zubair Ahmed, Muhammad Farooq Khan, **Promy Virk**, N. Al-Mulhm, Almohannad A.A. Baabbad,(2022)Assessment of heavy metals pollution in seawater and sediments in the Arabian Gulf, near Dammam, Saudi Arabia, Journal of King Saud University - Science,34(1).Volume 34, Issue 1. <https://doi.org/10.1016/j.jksus.2021.101677>

8) Mai A. Elobeid, Manal A. Awad, **Promy Virk**, Khalid M. Ortashi, Nada M. Merghani, Atheer M. Asiri, and Emadeldin Abdeljabar Ali Bashir.(2022)Synthesis and characterization of noble metal/metal oxide nanoparticles and their potential anti-diabetic effect on biochemical parameters and wound healing. Green Processing and Synthesis, 11(1106-115). <https://doi.org/10.1515/gps-2022-0010>

2021

1)Asiri, A.M., Elobeid, M., **Virk, P.** et al. (2021)Ameliorative effect of resveratrol and its nano-formulation on estrogenicity and apoptosis induced by low dose of zearalenone in male Wistar rats. Journal of Materials Research. <https://doi.org/10.1557/s43578-021-00425-w>

2)Al-Ghamdi, Nouf Abdallah Mreat, **Virk Promy**, Hendi, Awatif, Awad, Manal and Elobeid, Mai. "Antioxidant potential of bulk and nanoparticles of naringenin against cadmium-induced oxidative stress in Nile tilapia, *Oreochromis niloticus*: " Green Processing and Synthesis, vol. 10, no. 1, 2021, pp. 392-402

3)**Promy Virk**, Manal A. Awad, Mai Elobeid, Khalid M.O. Ortashi, Atheer Mohammed Asiri, Azza Hagmusa,(2021)A facile encapsulated nanofabrication of desert locust and its therapeutic benefits, Materials Letters,291:129503

2020

1)**P.Virk**,N.A.Al-mukhaizeem,S.HamadBinMorebah,D.Fouad, M.Elobeid.(2020) Protective Effect of Resveratrol Against Toxicity Induced by the Mycotoxin, Zearalenone in a Rat Model.Food and Chemical Toxicology 146:111840. <https://doi.org/10.1016/j.fct.2020.111840>

2)A. Mohmmad Monadi Al-Enazi, **P. Virk**, A. Hindi, M.Elobeid, R.Qindeel.(2020) Protective effect of probiotic bacteria and its nanoformulation against cad-mium-induced oxidative stress in male Wistar rat, Journal of King Saud University – Science,(In press) <https://doi.org/10.1016/j.jksus.2020.08.011>

3) Nada E. Eisa, Shaffa Almansour, Ibtessam A. Alnaim, Amira M. Ali, Eman Algrafy, Khalid M. Ortashi, Manal A. Awad*, **Promy Virk**, Awatif A. Hendi, and Fahd Z. Eissa(2020). Eco-synthesis and characterization of titanium nanoparticles: Testing its cytotoxicity and antibacterial effects. Green Processing and Synthesis, 9(1):462–468. <https://doi.org/10.1515/gps-2020-0045>

2019

1) Nouf Alharbi, Mai Elobeid and **Promy Virk** (2019). Protective Effect of Quercetin Treatment against Cadmium-Induced Oxidative Stress in a Male Rat Model. Pakistan J. Zool., 51(6) 2287-2296.

2) Manal A. Awad , Nada E. Eisa ,**Promy. Virk**., Awatif A. Hendi , Khalid M.O.O. Ortashi , AbdAlla S.A. Mahgoub., Mai A. Elobeid , Fahd Z. Eissa (2019). Green synthesis of gold nanoparticles: Preparation, characterization, cytotoxicity, and anti-bacterial activities. Materials Letters. 256, 126608.

2018

1) **Promy Virk** (2018). Antidiabetic Activity of Green Gold - Silver Nanocomposite with Trigonella foenum graecum L. Seeds Extract on Streptozotocin-Induced Diabetic Rats. Pakistan Journal of Zooogy, 50(2), pp 711-71.

2) Awatif A. Hendi1, Manal A. Awad, **P. Virk**, Khalid Ortashi, and Fatheah Hakami. Potential of Gold Nanoparticles as Antioxidants in Diabetic Mice. Journal of Computational and Theoretical Nanoscience. 15(4), 1307-1311.

2017

1) **Promy Virk**, Mai Elobeid, Manal A Awad, Awatif A Hendi, Khalid MO Ortashi, Muzammil Iqbal Siddiqui (2017). Characterization of Nanorosemary and Encapsulated Rosemary Nanoparticles and their Effect on the Lead Induced Toxicity in Wistar Rats. Journal of Environmental Biology. 38(6):1333-1340.

2) Manal A Awad, Awatif A Hendi, **P Virk**, Khalid MO Ortashi, Mai A Elobeid, Nada M Merghani, Muzzammil I Siddiqui and EM Ibrahim(2017). Preparation, characterization and antibacterial effects of eco-friendly gold nanorods. Tropical Journal of Pharmaceutical Research February 2017; 16 (2): 1319-1326.

2016

1) Aminah Ali Al-Sakran, **Promy Virk**, Sherifa Shaker Hamad, Mai Elobeid, Muzammil Iqbal Siddiqui, Sawson Omer, Nada Mohammed Mirghani (2016). Histopathological Effects on the Testis and Liver of Adult Male Carp, Cyprinus carpio carpio exposed to graded concentrations of waterborne Bisphenol A. Tropical Journal of Pharmaceutical Research. 15 (1): 73-80

2015

1) Abeer A. Al-habash, Khadiga G. Adham, **Promy Virk** (2015) Bioaccumulation and Ecological Risk Assessment of Heavy Metals in the Soil and Wild Rats in Riyadh, Saudi Arabia. Journal of Life Sciences Research. 2(4):86-92.

2) Khadiga G. Adham, Manal H. Farhood, Maha H. Daghestani, Nadia A. Aleisa, Ahlam A. Alkhalifa, Maha H. El Amin, **Promy Virk**, Mai A. Al-Obeid and Eman M. H. Al-Humaidhi (2015). Metabolic Response To Subacute And Subchronic Iron Overload In A Rat Model. Acta Biologica Hungarica 66(4): 361–373.

3) Wedaad Saeed AlQahtani and **Promy Virk** (2015). Effect of calcium supplementation on lead-induced genotoxicity and bioaccumulation in suckling Wistar rats. Toxicological & Environmental Chemistry. DOI: 10.1080/02772248.2015.1070853. To link to this article: <http://dx.doi.org/10.1080/02772248.2015.1070853>

4) Weddad Refaiea Al-Otaibi, **Promy Virk**, Mai Elobeid (2015). “Ameliorative potential of stem bromelain on lead-induced toxicity in Wistar rats” Acta Biologica Hungarica 66 (2): 149-160.

5) Maryam El-Enazy, **Promy Virk**, Mai Elobeid and Muzammil Iqbal Siddiqui (2015) Ameliorative effects of Rosmarinus officinalis leaf extract and Vitamin C on Cadmium-Induced Oxidative Stress in Nile Tilapia, Oreochromis niloticus. Journal of Environmental Biology 36:1401-1408.

2014

1) **Promy Virk**, Amena Ali M Al-Sakran, Mai A Elobeid. Effect of Bisphenol A on the Levels of Vitellogenin and Metallothionein in Adult Male Carp, *Cyprinus carpio carpio* Linnaeus, 1758. Tropical Journal of Pharmaceutical Research. 13 (7): 1107-1112.

2013

1) **Promy Virk**, Mai A. Elobeid, Sherifa Hamad, Zainab Korany, Maha Al-Amin, Maha Daghestani, Sawsan Omer, Ebtisam AlOlayan, Muzammil Iqbal Siddiqui and Nada Mohammed Mirghani. 2013. Ameliorative effects of Embilica officinalis and Rosmarinus officinalis on cadmium-induced oxidative stress in Wistar rats. Journal of Medicinal Plants Research. 7(14), 805-818.

2) Zeinab K Hassan, Maha H Elamin, Sawsan Omer, Maha Daghestani, Ebtisam Al-Olayan, Mai A Elobeid, **Promy Virk**. 2013. Oleuropein induces apoptosis via p53 pathway on breast cancer cells. Asian Pacific J Cancer Prev, Asian Pac J Cancer Prev, 14 (11):6739-6742.

3) Maha El Amin, **Promy Virk**, Mai A Elobeid, Zainab Mohammed Almarhoon, Zeinab Korany Hassan, Sawsan Ali Omer, Nada Mohammed Merghani, Maha

	<p>Hassan Daghestani and Ebtisam Mohammed Al Olayan. 2013. Anti-diabetic effect of <i>Murraya koenigii</i> (L) and <i>Olea europaea</i> (L) leaf extracts on streptozotocin induced diabetic rats. Pak. J. Pharm. Sci. 26 (2), 359-365.</p> <p>4) Maha H. Elamin, Maha H. Daghestani, Sawsan A. Omer, Mai A Elobeid, Promy Virk, Ebtisam M. Al-Olayan, Zeinab K. Hassan, Osama B. Mohammed, Abdelilah Aboussekhra. 2013. Olive oil oleuropein has anti-breast cancer properties with higher efficiency on ER-negative cells. Food and Chemical Toxicology. 53:310-316.</p> <p>5) Maha H. Elamin, Zeinab K. Hassan, Sawsan A. Omer, Maha H. Daghestani, Ebtisam M. Al-Olayan, Promy Virk, Mai A Elobeid and Osama B. Mohammed. 2013. Apoptotic and antiproliferative activity of olive oil hydroxytyrosol on breast cancer cells. Journal of Medicinal Plants Research. 7 (32), 2420-2428.</p> <p><u>2012</u></p> <p>1) Zeinab K Hassan, Maha H Elamin, Maha H Daghestani, Sawsan A Omer, Ebtisam M Al-Olayan, Mai A Elobeid, Promy Virk, Osama B Mohammed. 2012. Oleuropein Induces Anti-metastatic Effects in Breast Cancer. Asian Pacific J Cancer Prev. 13(9), 4555-4559.</p> <p>2) Mai A Elobeid, Zainab M Almarhoon, Promy Virk, Zeinab K Hassan, Sawsan Ali Omer, Maha ElAmin, Maha H. Daghestani, Ebtisam AlOlayan. 2012. Biphenol A Detection in Various Brands of Drinking Bottled Water Using Gas Chromatography Mass Spectrometer in Riyadh, Saudi Arabia. Tropical Journal of Pharmaceutical Research. 13(3), 455-459.</p> <p>3) Sawsan A. Omer, Mai A. Elobeid, M.H. Elamin, Z K. Hassan, P. Virk, M.H. Daghestani, Ebtisam Al-Olayan, Nadia A. Al-Eisa, Z M Almarhoon. 2012. Toxicity of Olive Leaves (<i>Olea europaea</i>) in Wistar Albino Rats. Asian Journal of Animal and Veterinary Advances. 7(11), 1175-1182.</p> <p>4) Zeinab K. Hassan, Mai A. Elobeid, Promy Virk, Sawsan A. Omer, Maha ElAmin, Maha H. Daghestani, and Ebtisam M. AlOlayan. 2012. Bisphenol A Induces Hepatotoxicity through Oxidative Stress in Rat Model. Oxidative Medicine and Cellular Longevity. 2012, 194829-194835. doi:10.1155/2012/194829.</p> <p>5) Sawsan A. Omer, Mai A. Elobeid, Dalia Fouad, Maha H Daghestani, Ebtisam Al-Olayan, Maha H. Elamin, Promy Virk, Ameera El-Mahassna. 2012. Cadmium Bioaccumulation and Toxicity in Tilapia Fish (<i>Oreochromis niloticus</i>). Journal of Animal and Veterinary Advances. 11(10), 1601-1606.</p> <p>6) Maha Hasan Daghestani, Promy Virk and Ayman EL-Meghawry EL-Kenawy.(2012) Metabolic and Histological Effects of Different Polyunsaturated Fat Types in the Diet: Omega-3 and Omega-6.Pak. J. Nutr., 11 (4): 313-321</p> <p><u>2011, 2004, 2003</u></p>
--	---

	<ul style="list-style-type: none"> ➤ May Naser Joma, Promy Virk, and Mai A Elobeid. (2011). Cytochrome P450 as a Biomarker of Benzo-a-Pyrene Pollution in Tilapia (<i>Oreochromis niloticus</i>) and Catfish (<i>Pangasius sutchi</i>). International Journal of Environmental Science and Engineering Research. 2 (1), 15-22. ➤ Dhawan ,A., Kaur, V .I and Virk,P (2004) Non-conventional fish feed resources: An overview . The International Collective in Support of Fishworkers (ICSF) 23: 10 - 11. January-February. ➤ Virk,P. and Saxena,P.K (2003) Potential of Amaranthus seeds in supplementary feed and its impact on growth in some carps.Bioresource Technology 86(2003) 25-27.
PATENTS- PUBLISHED / FILED IN THE US PATENT OFFICE	<p>1) Fabrication of probiotics nanowhiskers using cheese. 31-12- 2019 Promy Virk, Manal Ahmed Gasmelseed Awad, Mai Abdelrahman Elobeid, Khalid Mustafa Osman Ortashi, Awatif Ahmed Hendi. Patent number: 10517905. https://patents.justia.com/patent/10517905</p> <p>2) Synthesis of probiotic nanoparticles. 30-7-2019. Promy Virk, Manal Ahmed Gasmelseed Awad, Amnah El-Enazy, Awatif Ahmed Hendi, Mai Abdelrahman Elobeid Wagealla, Rabia Qindeel. Patent number:10363218. http://patft.uspto.gov/netacgi/nph.</p> <p>2) Synthesis of mustard seed nanoparticles 3-9-2019. Manal Ahmed Gasmelseed Awad, Promy Virk, Rabia Qindeel, Khalid Mustafa Osman Ortashi, Mai Abdelrahman Elobeid. Patent number: 10398744. http://patft.uspto.gov/netacgi/nph.</p> <p>3) Fish food composition. 7-2-2017. Muzzammil Iqbal Siddiqui, Promy Virk, Mohammad Iqbal Siddiqui. Patent number: 9560866. http://patft.uspto.gov/netacgi/nph.</p> <p>4)Synthesis of Naringenin Nanoparticles. 28-4-2016. Promy Virk, Nouf Abdullah Mureet Al-Ghamdi, Manal Ahmed GasmAl-Seed Awad, Mai AbdelRahman Elobeid Wagealla, Awatif Ahmed Hindi, Lulwah Saleh Mohammed Al-Hassan. Patent number: 9622984. http://www.google.com/patents/US9622984</p>

	<p>5) Synthesis of Hesperetin Nanoparticles. 10-5-2016. Mai AbdelRahman Elobeid Wagealla, Lulwah Saleh Mohammed AlHassan, Manal Ahmed GasmAlSeed Awad, Nouf Abdullah Mureet Al-Ghamdi, Promy Virk, Awatif Ahmed Hindi, Patent Law Building, Manassas, VA, USA. Patent number: 9700512. http://ipv4.google.com/patents/US9700512</p> <p>6) Method of preparing Rosemary Nanoparticles and Encapsulated Rosemary Nanoparticles. 28-5-2015. Manal Ahmed GasmAlSeed Awad, , Awatif Ahmed Hindi, Promy Virk, , Mai AbdelRahman Elobeid Wagealla. Patent number: 9480656. https://www.google.com/patents/US9480656</p> <p>7) Synthesis of Nanoparticles of Metals Metal Oxide using Plant Seeds Extract. 28-9-2015. Manal Ahmed GasmAlSeed Awad, Awatif Ahmed Hindi, Mai AbdelRahman Elobeid Wagealla, Khalid Mustafa Osman Ortashi, Promy Virk. Patent number: 9428399.https://www.google.com/patents/US9428399</p> <p>8) Method of Treating Diabetic Wounds using Biosynthetic Nanoparticles. 7-10-2015. Manal Ahmed GasmAlSeed Awad, Awatif Ahmed Hindi, Mai AbdelRahman Elobeid Wagealla, Promy Virk, Khalid Mustafa Osman Ortashi. Patent number: 9974749 https://patents.google.com/patent/US20170100338A1/en</p>
MENTORING of Graduate Students	<p><u>SUPERVISED the following theses/dissertations</u></p> <p><u>Theses</u></p> <ul style="list-style-type: none"> ❖ Master's thesis titled <i>“Effect of Bisphenol A on the levels of Vitellogenin and Metallothionein in Adult Male Carp, Cyprinus carpio carpio”.</i> ❖ Master's thesis titled <i>‘Ameliorative Potential of Ascorbic Acid and Rosemary Leaf Extract on Cadmium-Induced Oxidative Stress in Nile Tilapia, Oreochromis niloticus’.</i> ❖ Master's thesis <i>‘An Assessment of the Estrogenic Potency of the Effluent from a Saudi Sewage Treatment Plant and its Reproductive Effects on freshwater fish, Koi carp (Cyprinus carpio carpio)’.</i> ❖ Master's thesis <i>‘Antioxidant Potential of Bulk and Nanoparticles of Naringenin Against Cadmium-Induced Oxidative Stress in Nile Tilapia, Oreochromis niloticus’.</i>

	<ul style="list-style-type: none"> ❖ Master's thesis, <i>Protective Effect of Probiotic Bacteria and its Nanoformulation against Cadmium-Induced Oxidative Stress in Male Wistar Rat</i> ❖ <i>Attenuating Effect of Puerarin on the Microplastic-Induced Toxicity in a Rat Model.</i> ❖ <i>Putative Effects of Microplastics in Wastewater Effluent on Bioaccumulation and Biochemical Status in the Freshwater fish, Nile Tilapia (Oreochromis niloticus) and its Potential Remediation with Zinc Oxide Nanoparticles.</i> <p><u>Dissertations</u></p> <ul style="list-style-type: none"> ❖ Effect of calcium supplementation on lead-induced genotoxicity and bioaccumulation in suckling Wistar rats. ❖ Ameliorative potential of stem bromelain on lead-induced toxicity in Wistar rats. ❖ Protective Effect of Resveratrol Against Toxicity Induced by the Mycotoxin, Zearalenone in a Rat Model. ❖ Attenuating Effect of <i>Spirulina platensis</i> against Di (2-ethylhexyl) Phthalate Induced Toxicity in Wistar Rat. ❖ Attenuating effect of Phytochemicals in Indian mustard (<i>Brassica juncea</i>) seed and its Nano formulation on Arsenic induced-oxidative stress, genotoxicity and neurotoxicity in Rat. ❖ Attenuating Effect of Naringin Nanoparticles against Di (2-ethylhexyl) phthalate Induced toxicity in Albino Rat. <p><u>Co-Supervision</u></p> <ul style="list-style-type: none"> ❖ Co-supervised Ph.D thesis; <i>'Ameliorative Role of Resveratrol and its Nanoformulation against Zearalenone Induced Toxicity in Male Wistar Rat.'</i> ❖ Co-supervised Master's theses ❖ <i>'Effect of benzo-a-pyrene on the cytochrome p450 oxidase activity in Nile tilapia'.</i> ❖ <i>'Physiological Response of the Wild Rat, Rattus rattus to Metal Pollution'.</i> ❖ <i>'Effects of Prenatal Exposure to Different Doses of Bisphenol A on Fertility of Male Rats.'</i> ❖ <i>'Comparative Study on the Protective Effect of Hesperetin against Lead Induced Stress in Wistar Rat'.</i>
--	---

	<p>❖ <i>Protective Effect of Phycocyanin on Ochratoxin A-Induced Nephrotoxicity in male Albino rats</i></p> <p><u>Currently supervising Ph.D theses;</u></p> <ul style="list-style-type: none"> ➤ Effect of probiotics incorporated in different low fishmeal diet on growth, biochemical parameters and digestive enzyme activity in Nile tilapia (<i>Oreochromis niloticus</i>). ➤ Efficacy of <i>Bacillus subtilis</i> and Selenium nanoparticles against Microplastic induced Hepatotoxicity in male Rats ➤ Biological efficacy of <i>Bifidobacterium</i> spp in alleviating microplastic induced toxicity in Human Kidney epithelial cell line <p>Biodegradative and Antioxidative efficacy of <i>Aspergillus</i> species against Microplastic induced toxicity in male rat</p> <p><i>Co- supervision;</i></p> <ul style="list-style-type: none"> ➤ Potential interactive effect of Fungal Hispidin and Magnesium Nanoparticles against Zearalenone induced Polycystic Ovarian Syndrome and associated toxicity in Female Rat. ➤ Toxicological effects of <i>Citrullus colocynthis</i> extract from different regions of the Kingdom of Saudi Arabia on diabetic male rats. ➤ The efficacy of Chitosan extracts against neurobehavioral changes results from toxic effect of preservative Tert-butylhydroquinone (TBHQ) induced in female Rats
SEMINARS / SYMPOSIA	<p>❖ Oral talk at the National Symposia on Fish Health Management and Sustainable Aquaculture. G.B. Pant University of Agriculture and Technology, Pantnagar, November 2000.</p> <p>❖ Oral talk ,’’Effect of Calcium Supplementation on Lead-Induced Genotoxicity and Bioaccumulation in Suckling Wistar Rats’’ in The 7th International Conference on Environmental Science and Technology,2014, Houston, Texas, USA, June 9-13, 2014.</p> <p>➤ Also chaired a session on Human Exposure in the same conference.</p>
AWARDS / MERITS	<p>➤ University Merit Fellowship during 1997 – 1999.</p> <p>Certificate of Appreciation for paper presentation in the National Symposium on Fish Health management and Sustainable Aquaculture at G.B. Pant University of Agriculture and Technology, Pantnagar, India.</p>
WORKSHOPS	<p>▪ <u>Conducted the following Workshops in the Department of Zoology, King Saud University :</u></p>

	<ul style="list-style-type: none"> ▪ Conducted a workshop for the graduate students from the Faculty of Science, King Saud University, Riyadh on “ Green synthesis of nanoparticles” in January 2019. ▪ Conducted a lecture during the workshop on “Basics of Nano Technology” for Princess Nora University students held at the Department of Zoology, Faculty of Science, King Saud University. 20/4/2015. ▪ <u>Workshop on</u> ▪ Assessment of Water Quality Parameters- 29th January 2013 ▪ Analytical Techniques and Environmental Samples Analysis- 30th January 2013
PROFESSIONAL SKILLS	<ul style="list-style-type: none"> ▪ Proficient in analytical lab techniques and statistical analyses. ▪ Proficient with MS Word, Excel, and PowerPoint.
OTHERS	<ul style="list-style-type: none"> ❖ Have been actively working as a Rapporteur/ Member of the following Department Committees: <ul style="list-style-type: none"> • Accreditation Committee • ISO Committee • Examination Committee • Statistics Committee • Lab maintenance and Purchase • Cultural and Information • Lab Safety Committee