

Professional Resume of

Dr. Abdullah Ijaz Hussain

Associate Professor,
Department of Chemistry,
Government College University,
Faisalabad-38000, Pakistan
Cell No: 00923007631058



Personal

Father's Name: Manzoor Hussain
Sex: Male
Teaching and Research Experience: > 8 years

Publications **62**; Impact factor > **63.6**; Citations > **759**; H-Index >**13**; I-10 Index > **19**

Academics

Post-doctorate, 2012 (one year): School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia.

Ph.D. (Chemistry), 2009: From University of Agriculture, Faisalabad, Pakistan/University of Ulster, Coleraine, UK.

Specialization: Analytical Chemistry

M.Sc (Chemistry), 2001: From University of Agriculture, Faisalabad, Pakistan in, Marks Obtained: 66.69%, GPA: 3.09, 1st division.

Specialization: Organic Chemistry

Professional Experiences

- ❖ Working as **Associate Professor** (BPS 20) in Department of Chemistry, Government College University, Faisalabad, Pakistan from October 18, 2016 to date.
- ❖ Working as **Assistant Professor** (BPS 19) in Institute of Chemistry, Government College University, Faisalabad, Pakistan from 22nd February 2010 to October 17, 2016.
- ❖ Worked as **Postdoctoral Fellow** in School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia from 28-09-2011 to 28-09-2012.
- ❖ Worked as a **Lecturer** (BPS 18) in Department of Chemistry, Government College University, Faisalabad, Pakistan from 20th August 2009 to 19th February 2010.
- ❖ **Visiting Researcher** in University of Ulster, Coleraine, UK from 5th October 2008 to 11th April 2009.
- ❖ **Research Scholar** in Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad from 27th September 2004 to 20th August 2009.

Administrative Duties

- **Director Central Hi-Tech Lab**, Government College University Faisalabad.
- **Director/Convener PARF Project (PC-1)**, Funded by HEC, Government College University Faisalabad.
- **Convener Central Purchase Committee**, Government College University Faisalabad.
- **Convener Purchase Committee**, Department of Applied Chemistry and Biochemistry, Government College University Faisalabad.
- **Convener of Logistics Committee of 1st International Conference on Applied Chemistry** Organized by Department of Applied Chemistry & Biochemistry, Government College University Faisalabad.
- **Convener Inspection Committee for Estate Care Department** of Government College University New Campus.
- **Member Board of Studies (BoS)**, Department of Applied Chemistry & Biochemistry, Government College University Faisalabad.
- **Evening Coordinator of Department of Applied Chemistry & Biochemistry**, Government College University Faisalabad for Fall Semester 2015.
- **Member of Admission Cell of Directorate of Undergraduate Studies for Faculty of Science and Technology**, for the year 2015.
- **Member Technical and Publication and Publicity Committees**, of 2nd International Conference on “Future Perspective of Food Processing Industry in Pakistan” (11-12 December, 2012), Organized by Government College University Faisalabad.
- **Member Committee for Food & Lunch for Convocation 2015**, Government College University Faisalabad.
- **Member Purchase Committee for the HEC Research Project No NRPU-20-2440** Titled “Preparation of Halloysite Polymer Composites and Study of its Industrial Applications”

Honors and Awards

- **Pakistan Council of Science and technology (PCST)** research productivity award 2013
- **Research productivity allowance** from GC University Faisalabad 2011
- **Research productivity allowance** from GC University Faisalabad 2012
- **Research productivity allowance** from GC University Faisalabad 2013
- **Research productivity allowance** from GC University Faisalabad 2014
- **HEC Approved Supervisor**
- **Affiliated member** of International Union of Pure and Applied Chemistry (IUPAC)
- **Life Member** of the Chemical Society of Pakistan (CSP)
- **Member** of American Oil Chemist’s Society (AOCS)
- **TWAS-USM Postdoctoral Fellowship** to work in School of Pharmaceutical Science, University Sains Malaysia (USM) Penang, Malaysia.
- **Six Month Foreign Scholarship:** International Research Support Initiative Program (IRSIP) sponsored by Higher Education Commission (HEC), Islamabad, Pakistan.

- **International Nutrition Foundation (INF)/Kraft Short-Term Fellowship Award** to attend the 19th International Congress of Nutrition in Bangkok, Thailand.
- **Ph. D. Scholarship:** Indigenous Ph.D. Fellowship Program (5000 Fellowships), Batch II, sponsored by Higher Education Commission (HEC), Islamabad, Pakistan.
- **HEC Travel Grant Award** to attend the Singapore International Chemistry Conference & Asia-Pacific International Symposium on Microscale Separation and Analysis.
- **HEC Travel Grant Award** to attend the International Chester Food Conference, UK.
- **HEC Travel Grant Award** to attend the International Conference for Young Chemists (ICYC) 2010, Penang, Malaysia
- **HEC Travel Grant Award** to attend the International Conference on Medicinal and Aromatic Plants, Italy
- **HEC Travel Grant Award** to attend the 5th International Congress on Aromatic & Medicinal Plants (CIPAM2014), Zarzia, Tunisia

Research Grants and Contracts

| Date | Title and status of project | Position | Funding Agency | Total Award Amount |
|-----------------|---|----------|---|--------------------|
| September, 2010 | “Exploration of biological and pharmaceutical potential of selected Lamiaceae plants ” | PI | Higher Education Commission (HEC), Islamabad. | 25,64,007/- PKR |
| August, 2013 | ”Investigative study for the treatment of dementia with selected medicinal plants of Cholistan Desert (Punjab)” | Co-PI | Higher Education Commission (HEC), Islamabad. | 5,00,000/- PKR |
| December 2015 | ”Synthesis and Enzyme Inhibition Activities of New Functionalized Un-Natural Amino Acid Derivatives Ring Opening of Epoxides” | Co-PI | Higher Education Commission (HEC), Islamabad. | 13,91,675/- PKR |

Graduate and Post Graduate Students Supervised

a) List of Research Students Supervised

M. Sc/BS (Hons) = 28

| Sr. # | Year | Degree | Name of student and title of research thesis |
|-------|------|--------|---|
| 1 | 2010 | M. Sc | Muhammad Tahir “Free Radical-Scavenging Capacity and Antioxidant Activity of Different Extracts of <i>Fagonia Arabica</i> ” |

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|----|------|------------|---|
| 2 | 2010 | M. Sc | Umar Sadat Shakir “The Flavonoid, Carotenoid and Pectin Contents of Peel extracts from Different Citrus Species, Cultivated in Pakistan” |
| 3 | 2010 | M. Sc | Zuhaib Nawaz “Proximate Analysis and Mineral Composition of five Approved Varieties of Tomato (<i>Lycopersion esculantum</i>)” |
| 4 | 2010 | M. Sc | Mazhar Abbas Khan “Antioxidant Potential of different Solvent Extracts of some Locally Grown Varieties of Tomato (<i>Lycopersion esculantum</i>)” |
| 5 | 2010 | M. Sc | Tabassum Iqbal “Effects of Different Cooking Methods on the Nutritional Attributes of Chicken” |
| 6 | 2010 | M. Sc | Dildar Hussain “Antioxidant and antimicrobial attributes of essential oil of coriander seeds from two differently adopted provenances of Punjab” |
| 7 | 2010 | M. Sc | Ghulam Murtaza “Quality assessment of commercially available brands of sunflower oil” |
| 8 | 2010 | M. Sc | Azmat Ali “Quality assessment of commercially available brands of canola oil” |
| 9 | 2010 | M.Sc | Mirza Muhammad Ikram “Antioxidant and antimicrobial activities of bark of desi keker (<i>Accacia niltoa</i>) native to saline and non-saline areas” |
| 10 | 2010 | BS (Hons.) | Tahseen Iqbal “ Phytochemical Composition, Antioxidant and Antimicrobial Activities of the Essential Oil and Different Extracts of Wild (<i>Mentha longifolia</i>)” |
| 11 | 2010 | BS (Hons.) | Hira Irshad “Total Phenolic Contents and Antioxidant Properties of some Commonly Consumed summer Vegetables Grown in Pakistan” |
| 12 | 2010 | BS (Hons.) | Tasneem Naz “Antioxidant activity of ethanol extracts from seeds of barley (<i>Hordeum vulgare</i> L.): stabilization of sunflower oil” |
| 13 | 2010 | BS (Hons.) | Sumera Noor “Effect of extraction techniques on the antioxidant activity of different extracts of peanut hulls (<i>Arachis hypogaea</i>)” |
| 14 | 2010 | BS (Hons.) | Hina Ali “Antioxidant Activity and Profile of some Summer Fruits Grown in Pakistan” |
| 15 | 2011 | M. Sc | Rozina Khalid “Antioxidant activity and free radical scavenging capacity of some edible flowers grown in Pakistan” |
| 16 | 2011 | M. Sc | Sidra Noureen “Antioxidant potential and phenolic profile of some locally grown varieties of pea” |
| 17 | 2011 | M. Sc | Muhammad Yasir Arfat “Antioxidant activity and flavonoid contents of wildy grown Ber fruits” |
| 18 | 2013 | MSc | Waqas Haider “Free radical scavenging capacity and phenolic contents of some selected spices” |
| 19 | 2013 | MSc | Waqar ul Hasan “Total phenolic contents and antioxidant activity of fresh kitchen herbs grown in Pakistan” |
| 20 | 2014 | MSc | Iqra Akram “Characterization and antioxidant and antimicrobial activities of <i>Eucalyptus camaldulensis</i> Dehnh. Essential oil” |
| 21 | 2014 | MSc | Amna Younis “Characterization an antioxidant and antimicrobial |

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|----|------|------------|--|
| | | | activities of <i>Citrus sinensis</i> essential oil native to Pakistan” |
| 22 | 2014 | MSc | Sidra “Characterization and antioxidant and anti- <i>Bacillus</i> activities of fennel (<i>Foeniculum vulgare</i> Mill.) essential oil” |
| 23 | 2015 | BS (Hons.) | Tanveer Ahmad “Traditional uses, phytochemistry and Pharmacology of <i>Fagonia arabica</i> ” |
| 24 | 2015 | BS (Hons.) | Nida Nazar “The Assessment of Bio-Resources as Economically Improtant Agent for Antioxidant and Antimicrobial Activities” |
| 25 | 2015 | BS (Hons.) | Maria Jannat “ <i>Ipomoea batatas</i> (L.): An Ancient Source of Food and Health” |
| 26 | 2015 | BS (Hons.) | Adnan Qureshi “Cytotoxicity and Anticancer Potential of Lamiaceae Essential Oils” |
| 27 | 2015 | MSc | Ulfat Rasool “Identification of Microbial Growth in Meat” |
| 28 | 2015 | MSc | Qamar Abbar “Extraction of Carotenoids from Tumeric (<i>Curcuma longa</i>) and Evaluation of Antioxidant Activity |

b) List of Research Students Supervised

M. Phil = 03

| Sr. # | Year | Degree | Name of student and title of research thesis |
|-------|------|---------|---|
| 1 | 2012 | M. Phil | Adnan Ayub “ Phytochemical composition and antioxidant and free radical scavenging activities of essential oil and extracts of different Marigold species” |
| 2 | 2013 | M. Phil | Muhammad Adnan “Characterization and antioxidant and antimicrobial attributes of essential oil and different extracts of Tulsi (<i>Ocimum sanctum</i> L.)” |
| 3 | 2014 | M.Phil | Sadique Yaseen “Bioactivity guided isolation of phenolic acids and flavonoids from <i>Ziziphus jujube</i> seeds” |

c) List of Students Supervising as Supervisor

Ph. D = 05

| Sr. # | Year | Degree | Name of student |
|-------|-----------|--------|--|
| 1 | 2013-2016 | Ph.D | Muhammad Riaz (Structural, electronic and vibrational properties of 2 nd row transition metal clusters) |
| 2 | 2013-2016 | Ph.D | Muhammad Usman (Characterization and biological activities of essential oils of some <i>Myrtaceae</i> species) |
| 3 | 2014-17 | Ph.D | Mudasir Majeed |
| 4 | 2014-17 | Ph.D | Sajid Dominic |
| 5 | 2014-17 | Ph.D | Jawad ur Rehman Bajwa |
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d) List of Students Supervised as Co-Supervisor

Co-supervised = 02
Member = 03

| Sr. # | Year | Degree | Name of student and title of research thesis |
|-------|------|--------|---|
| 1 | 2015 | Ph.D | Muhammad Muaeen “Characterization and biological activities of essential oils from different plants of Potohar Valley” |
| 2 | 2014 | Ph.D | Huma Munir “Phytochemical analysis and antioxidant potential of different extracts of plants collected from Potohar Valley” |
| 3 | 2014 | PhD | Huma Umbreen “Hyperlipidemia management through diet based modules using waste from apple and mango processing industry” |
| | | | Faisal |
| | | | Tabsum |
| | | | Mudasir zoology |
| | | | |

Book and Chapters in Book

1. Bushra Sultana, Farooq Anwar, **Abdullah Ijaz Hussain** and Zahed Mahmood (2010). Antioxidants/antimutagens in foods. In: *Comprehensive Food Fermentation and Biotechnology*. Vol. II. Pp 861-891. ISBN : 9788187680229
2. Shahzad A. S. Chatha and **Abdullah Ijaz Hussain** (2015). Experiments in Chromatography In: *Chromatography*. Edited by Muhammad Asif hanif and Haq Nawaz Bhatti. ISBN: 978-969-23074-0-6
3. Muhammad Asif Hanif and **Abdullah Ijaz Hussain** (2015). Chemistry in the Lab. International Scientific Organization. ISBN: 978-969-23074-1-3
4. Ahmad, M.N., Zahoor, A.F., Chatha, S.A.S., **Hussain, A.I.**, Mansha, M.A., (2017). Synthetic materials and the problems they pose. *Algae Based Polymers, Blends and Composites*. 33-53.
5. Ali, Q., Shahid, S., Ali, S., Javed, M.T., Iqbal, N., Habib, N., Hussain, S., Shahid, S.A., Noreen, Z., **Hussain, A.I.**, Haider, M. (2019). Trehalose metabolism in plants under abiotic stresses: Profiling and counteraction. In: *Approaches for Enhancing Abiotic Stress Tolerance in Plants*. Pp 349-364. DOI. 10-1201/9781351104722-19.

List of International Publications (Old to latest)

- 1) **Hussain A.I.**, Anwar F., Bhatti H.N. and Rashid U. (2006). Phytochemical and In vitro Anthelmintic Screening of *Butea frondosa* and *Swertia chirata* from Pakistan. *Journal of Chemical Society of Pakistan*, 28 (1), 84-92.
- 2) Anwar F., **Hussain A.I.**, Ashraf M., Iqbal S. and Jamil A. (2006) Effect of Salinity on Yield and Quality of *Moringa oleifera* Seed Oil. *Grasas Y Aceites*, 57 (4), 394-401.
- 3) Chatha, S.A.S., **Hussain A.I.**, Bajwa J. and Sagir M. (2006). Antioxidant Activity of Different Solvent Extracts of Rice Bran at Accelerated Storage of Sunflower Oil. *Journal of Food Lipids*, 13, 424-433.
- 4) Anwar F., **Hussain A.I.**, Iqbal S. and Bhangar M.I. (2007). Enhancement in the Oxidative Stability of Some Vegetable Oils by Blending with *Moringa oleifera* Oil. *Food Chemistry*, 103, 1181-1191.
- 5) Ahmad S., Anwar F., **Hussain A.I.** Ashraf, M. and Awan A.R. (2007) Does Soil Salinity Affect Yield and Composition of Cottonseed Oil? *Journal of The American Oil Chemists Society*, 84, 845-851.
- 6) Anwar F., Chatha S.A.S. and **Hussain A.I.** (2007). Assessment of Oxidative Deterioration of Soybean Oil at Ambient and Sunlight Storage. *Grasas Y Aceites*, 58(4), 390-395.
- 7) **Hussain, A.I.**, Anwar F., Sherazi S.T.H. and Przybylski R. (2008). Chemical Composition, Antioxidant and Antimicrobial Activities of Basil (*Ocimum basilicum*) Essential Oils Depends on Seasonal Variations. *Food Chemistry*, 108, 986-995.
- 8) Akram N., Anwar F., Raza S.A., **Husain A.I.** and Saleem B. (2009). Effects of Sunlight Exposure on the Quality and Oxidative Stability of Sunflower and Soybean Oils. *Asian Journal of Chemistry*, 21 (4), 2789-2798.
- 9) Anwar F., **Hussain A.I.**, Sherazi S.T.H. and Bhangar M.I. (2009). Changes in Composition, Antioxidant and Antimicrobial Activities of Essential Oil of Fennel (*Foeniculum vulgare* Mill.) Fruits at Different Stages of Maturity. *Journal of Herbs, Spices & Medicinal Plants*, 15, 1-16.
- 10) Anwar, F., Ali, M., **Hussain, A.I.** and Shahid, M. (2009). Antioxidant and antimicrobial activities of essential oil and extracts of fennel (*Foeniculum vulgare* Mill.) seeds from Pakistan. *Flavour and Fragrance Journal*, 24, 170-176.
- 11) **Hussain A.I.**, Anwar F., Ashraf M., Przybylski R. and Shahid M. (2010). Chemical Composition, Antioxidant and Antimicrobial Activities of Essential Oil of Spearmint (*Mentha spicata* L.) from Pakistan. *Journal of Essential Oil Research*, 22(1), 79-84.
- 12) Ashraf, M., Ali, Q., Anwar, F. and **Hussain, A.I.** (2010). Composition of leaf essential oil of *Eucalyptus camaldulensis*. *Asian Journal of Chemistry*, 22(3), 1779-1786.

- 13) Anwar, F., Qayyum, H.M.A. **Hussain, A.I.** and Iqbal, S. (2010). Antioxidant activity of 100% and 80% methanol extracts from seeds of barley (*Hordeum vulgare* L.): stabilization of sunflower oil. *Grasas Y Aceites*, 61(3), 237-243.
- 14) **Hussain, A.I.**, Anwar F., Chatha, S.A.S., Jabbar, A., Mahboob, S. and Nigam, P.S. (2010). *Rosmarinus officinalis* essential oil: Antiproliferative, antioxidant and antibacterial activities. *Brazilian journal of Microbiology*. 41: 1070-1078.
- 15) **Hussain, A.I.**, Anwar, F., Nigam, P.S., Ashraf, M. and Gilani, A.H. (2010). Seasonal Variation in Content, Chemical Composition and Antimicrobial and Cytotoxic activities of Essential Oils from Four Mentha Species. *Journal of the Science of Food and Agriculture*. 90, 1827-1836.
- 16) Mudasir, M., Chatha, S.A.S., **Hussain, A.I.**, Asi, M.R., Shahid, M. and Yousaf, M. (2010). Inter-varietal variation in proximate composition and antioxidant potential of dry peas (*Pisium sativum* L.). *Journal of Chemistry and Chemical Engineering*. 4, 7-15.
- 17) **Hussain, A.I.**, Anwar, F., Nigam, P.S., Sarker, S.D., Moore, J.E., Rao, J.L and Mazumdar, A. (2011). Antibacterial activity of some Lamiaceae essential oils using resazurin as an indicator of cell growth. *LWT: Food Science and Technology*. 44: 1199-1206.
- 18) Chatha, S.A.S., **Hussain, A.I.**, Bajwa, J.R., Sherazi, S.T.H. and Shaukat, A. (2011). Wheat bran extract: a potent source of natural antioxidants for the stabilization of canola oil. *Grasas Y Aceites*, 62(2): 190-197.
- 19) Khosa, M.K.K., Chatha, S.A., Riaz, H. and **Hussain, A.I.** (2011). Spectrophotometric Quantification of Antioxidant Phytochemicals in Juices from Four Different Varieties of *Citrus limon*, Indigenous to Pakistan. *Journal of The Chemical Society of Pakistan*. 33(2): 188-192 .
- 20) **Hussain A.I.**, Anwar F., Iqbal, T. and Bhatti, I.A. (2011). Antioxidant attributes of four Lamiaceae essential oils. *Pakistan Journal of Botany*, 43(2), 1315-1321.
- 21) Chatha, S.A.S., **Hussain, A.I.**, Asi, M.R., Majeed, M. and Iqbal, H.M.N. (2011). Evaluation of antioxidant potential of different citrus peel extracts. *Journal of The Chemical Society of Pakistan*, 33(6), 863-867.
- 22) Latif S., Anwar F., **Hussain, A.I.** Shahid M. (2011). Aqueous Enzymatic Process for Oil and Protein Extraction from *Moringa oleifera* Seed. *European Journal of Lipid Science and Technology*, 113, 1012-1018.
- 23) **Hussain A.I.**, Anwar F., Rasheed S., Nigam P. S., Janneh O., Sarker S.D. (2011). Composition and bioactivities of the essential oils from two *Origanum* species growing in Pakistan. *Revista Brasileira de Farmacognosia (Brazilian Journal of Pharmacognosy)*, 21(6), 943-952.
- 24) Kamal, G.M., Anwar, F., **Hussain, A.I.**, Sarri, N. and Ashraf, M.Y. (2011). Yield and chemical composition of Citrus essential oils as affected by drying pretreatment of peels. *International Food Research Journal*, 18(4), 1275-1282.

- 25) Anwar, F., Sulman, M., **Hussain, A. I.**, Sarri, N., Iqbal, S. and Rashid, U. (2011). Physicochemical composition of hydro-distilled essential oil from coriander (*Coriandrum sativum* L.) seeds cultivated in Pakistan. *Journal of Medicinal Plants Research*, 5, 3537-3544.
- 26) Chatha, S.A.S., **Hussain, A.I.**, Zubair, M. (2011). Analytical Characterization of Rice (*Oryza Sativa*) Bran and Bran Oil from Different Agro-Ecological Regions. *Pakistan Journal of Agricultural Science*, 48(3), 257-263.
- 27) Chatha, S.A.S., Asgher, M., Ali, S. and **Hussain, A.I.** (2012). Biological color stripping: A novel technology for removal of dye from cellulose fibers. *Carbohydrate Polymers*, 87(2), 1476-1481.
- 28) **Hussain, A. I.** Chatha, S.A.S. Noor, S. Arshad, M. U., Ali, Z., Rathore, H. A. and Sattar, M. Z. A. (2012). Effect of extraction techniques and solvent systems for the extraction of antioxidant components from peanut (*Arachis hypogaea* L.) hulls. *Food Analytical Methods*. 5, 890-896.
- 29) Naqvi, S.A.R., Ishfaq, M.M., Khan, Z.A., Nagra, S.A., Bukhari, I.H., Hussain, A.I., Manmood, N., Shahzad, S.A., Haque, A. and Bokhari, T.H. (2012). ^{99m}Tc labeled levofloxacin as an infection imaging agent: a novel method for labeling levofloxacin using cysteine. HCl as co-ligand and in vivo study. *Turkish Journal of Chemistry*, 36, 267-277.
- 30) Efstratiou, E., **Hussain, A. I.**, Nigam, P. S., Moore, J. E., Ayub, M.A. and Rao, J.L. (2012). Antimicrobial activity of Calendula officinalis petal extracts against fungi, as well as Gram-negative and Gram-positive clinical pathogens. *Complementary Therapies in Clinical Practice*, 18(3), 173-176.
- 31) Chatha, S.A.S., Arshad, M. U., Arshad, W., **Hussain, A.I.**, Saif, M.J. and Majeed, M. (2012). Effect of Extraction Regimes on Antioxidant Potential of Rice (*Oryza sativa*) Bran Extracts. *Journal of the Chemical Society of Pakistan*, 34 (5), 1290-1294.
- 32) **Hussain, A.I.**, Anwar, F., Chatha, S.A.S., Latif, S., Sherazi, A.T.H., Ahmad, A. and Sarker, S. D. (2013). Chemical composition and bioactive studies of the essential oils from two Thymus species from the Pakistani flora. *LWT: Food Science and Technology*, 50, 185-192.
- 33) **Hussain, A. I.**, Rathore, H. A., Sattar, M. Z.A., Chatha, S.A.S., Ahmad, F., Ahmad, A. and Johns, E. J. (2013). Phenolic profile and antioxidant activity of various extracts from *Citrullus colocynthis* (L.) from the Pakistani flora. *Industrial Crops and Products*, 45, 416-422.
- 34) **Hussain, A.I.**, Chatha, S.A.S., Iqbal, T., Arshad, M.U., Zahoor, A.F. and Afzal, S. (2013). Comparative study of different cooking methods on nutritional attributes and fatty acid profile of chicken meat. *Journal of the Chemical Society of Pakistan*, 34(3), 678-684.
- 35) Yousaf, M., Pervaiz, M., Zahoor, A.F., **Hussain, A.I.**, Khosa, M.K.K., Ashraf, S., Sagir, M., Zaman, A. and Shehzad, K. (2013). Synthesis, characterization and biological studies

of *Bis*-{ μ -2,2'-[ethane-1,3-diyl-*bis* (nitrilomethylidyne)] dicopper (II) using triple component solvent system. *Asian Journal of Chemistry*, 25(1), 521-524.

- 36) Iqbal, T., **Hussain, A.I.**,* Chatha, S.A.S., Naqvi, S.A.R., and Bokhari, T.H. (2013). Antioxidant activity and volatile and phenolic profiles of essential oil and different extracts of wild mint (*Mentha longifolia*) from the Pakistan Flora. *Journal of Analytical Methods in Chemistry*,
- 37) Kamal, G.M., Ashraf, M.Y., **Hussain, A.I.**, Shahzadi, A. and Chughtai, M.I. (2013). Antioxidant potential of peel essential oils of three Pakistani citrus species: *Citrus reticulata*, *Citrus sinensis* and *Citrus paradisi*. *Pakistan Journal of Botany*, 45(4), 1449-1454.
- 38) Afzal, S., Sattar, M.A., Rathore, H.A., **Hussain, A.I.**, Ahmad, A., Javeed A., Ahmad, F., Johns, E.J. and Akhtar, S. (2013). Adiponectin versus thiazolidinediones and angiotensin receptor blockers. *European Scientific Journal*, 24(9), 100-129.
- 39) Hussain, Z., Khan, Z.A., Naqvi, S.A.R., Shahzad, S.A., Muhammad, Y., **Hussain, A.I.**, Chatha, S.A.S., Mahmood, N. and Khan, K.M. (2013). Facile synthesis and herbicidal evaluation of 2-aryl-4*H*-3, 1-benzoxazin-4-ones. *Journal of the Chemical Society of Pakistan*, 35(2), 449-451.
- 40) Naqvi, S.A.R., Waseem, R., Mahmood, N., Hussain, Z., Khan, Z.A., Shahzad, S.A., Yar, M., Amin, R., Bukhari, S.A., Zahoor, A.F., Javed, S. and **Hussain, A.I.**, (2013). Phenolic acid content, antioxidant properties, and antibacterial potential of flowers and fruits from selected Pakistani indigenous medicinal plants. *Scienceasia*, 39(5), 340-345.
- 41) Bokhari, T.H., Hussain, M., Hina, S., Zubair, M., Rasool, N., Riaz, M., Iqbal, M., Bukhari, I.H., **Hussain, A.I.**, Shafiq, M. and Shahid, M. (2013). Antioxidant, antimicrobial, cytotoxic studies of methanolic extract, fractions and essential oil of curry patta (*Chalcas koeingii*) from Pakistan. *Journal of the Chemical Society of Pakistan*, 35 (2), 468-475.
- 42) **Hussain, A.I.**,* Rathore, H.A., Sattar, M.Z.A., Chatha, S.A.S., Sarker, S.D., Gilani, A.H., (2014). *Citrullus colocynthis* (L.) Schrad (Bitter apple fruit): A review of its phytochemistry, pharmacology, traditional uses and nutritional potential. *Journal of Ethnopharmacology*, 155, 54-66.
- 43) Munir, H., Sarfraz, R.A., **Hussain, A.I.**, Shahid, M. and Sultana, B. (2014). Antioxidant and antimicrobial activities of different solvent extracts of *Asphodilus tenifolius*. *Oxidation Communications*, 37(3), 741-745.
- 44) Bokhari, T.H., Aslam, A., Rizivi, N.B., Rasool, N., Saif, M.J., Bukhari, I.H., Zubair, M., Jabbar, M., Riaz, M., Hina, S., Iqbal, M. and **Hussain, A.I.** (2014). Antioxidant, antimicrobial and minerals analysis studies of *Corchorus depressus* stem. *Oxidation communications*, 37(2), 483-491.

- 45) Chatha, S.A.S., Mallhi, A.I., **Hussain, A.I.**, Asgher, M. and Nigam, P.S. (2014). A biological approach for color-stripping of cotton fabric dyed with C.I. reactive black 5 using fungal enzymes from solid state fermentation. *Current Biotechnology*, 3(2), 166-173.
- 46) Chatha, S.A.S., **Hussain, A.I.**, Asad, R., Majeed, M. and Aslam, N. (2014). Bioactive components and antioxidant properties of *Terminalia arjuna* L. extracts. *Food Processing and Technology*, 5(2), 298-302.
- 47) Bokhari, T.H., Aslam, M.A., Hina, S., Rizvi, N.B., Rasool, N., Saif, M.J., Zubair, M. **Hussain, A.I.**, Chatha, S.A.S. and Raiz, M. B. (2014). Mineral composition, phenolic profile, antioxidant and antimicrobial activities of *Corchorus depressus* roots extracts. *Bulgarian Chemical Communications*, 46(4), 788-794.
- 48) Saif, M.J., Zia, K.M., Rehman, F., Usman, M., **Hussain, A.I.**, Chatha, S.A.S. (2015). Removal of heavy metals by adsorption onto activated carbon derived from Pine cones of *Pinus roxburghii*. *Water Environment Research*, 87(4): 291-297.
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- 70) Hassan, B., Chatha, S.A.S., **Hussain, A.I.**, Akhtar, N. (2018). Recent advances on polysaccharides, lipids and protein based edible films and coatings: A Review. International Journal of Biological Macromolecules, 109, 1095-1107.
- 71) Hussain, S.M., Arsalan, M.Z., Javid, A., **Hussain, A.I.**, Aslam, N., Ali, Q., Hussain, M., Rehan, M.M., Shahzad, M.M., Khalid, A. and Riaz, D. (2018). Replacement of fish meal with *Moringa oleifera* leaf meal (MOLM) and its effect on growth performance and nutrient digestibility in *Labeo rohita* fingerlings. Pakistan Journal of Zoology, 50(5), 1815-1823.
- 72) Zubair, M., Anwar, F., Zafar, M.N., Faizan, M.N. Hussain, A.I. and Mughal, E.U. (2018). Effect of Ultrasonic extraction regimes on phenolics and antioxidant attributes of rice (*Oryza sativa* L.) cultivars. Iranian Journal of Chemistry and Chemical Engineering, 37(1) 109-119.
- 73) Shahzad, M.M., Hussain, S.M., Jabeen, F., **Hussain, A.I.**, Javid, A., Asrar, M. and Arsalan, M.Z. (2018). Improvement in mineral digestibility and whole body composition of *Catla cala* fingerlings fed phytase supplemented MOSM based diet. Pakistan Journal of Zoology, 50(5), 1909-1920.
- 74) Akhtar, M.N., Mushtaq, Z., Ahmad, N., Khan, M.K., Ahmad, M.H., **Hussain, A.I.** and Inmran, M. (2019). Optimal ultrasound-assisted process extraction, characterization and functional product development from flaxseed meal derived polyscharide gum. Processes, 7, DOI. 10.3390/pr7040189.

Conferences /Events Organized

- Organizer in **3rd International Conference on Functional Food & Nutraceuticals** (Nutricon-2013), GC University Faisalabad, Pakistan, December, 4-5, 2013.
- Organizer in **1st International Conference on Applied Chemistry**, GC University Faisalabad, Pakistan, November 18-20, 2013.
- Organizer in **New Horizon & Recent Advances in Chemical and Biological Sciences**, GC University Faisalabad, Pakistan, February 14, 2013.
- Organizer in **2nd International Conference on Future Prospective of Food Processing Industry in Pakistan and Food and Nutrition Expo**, GC University Faisalabad, Pakistan, December, 11-12, 2012.

Participation in International & National Conferences/Symposia

- 1) **10th International Conference on Natural Product Chemistry**, January 6-9, 2006, HEJ Research Institute of Chemistry, University of Karachi, Pakistan.
- 2) **Mini Symposium on Nanochemistry**, January 8-9, 2006, HEJ Research Institute of Chemistry, University of Karachi, Pakistan.
- 3) **16th All Pakistan Food Science Conference**, January 25, 2006, Institute of Food Science and Technology, University of Agriculture, Faisalabad, Pakistan.
- 4) **International Symposium on Strategies for Crop Improvement against Abiotic Stresses**, September 18-20, 2006, Department of Botany, University of Agriculture, Faisalabad, Pakistan.
- 5) **1st International Chemistry Conference on Recent Challenges in Chemistry**, November 1-3, 2006, Department of Chemistry, Govt. College University Faisalabad, Pakistan.
- 6) **International Nutrition Conference-2007**, February 23-24, 2007, Institute of Animal Nutrition and Feed Technology, University of Agriculture, Faisalabad, Pakistan.
- 7) **2nd International Seminar on Analytical Sciences**, September 6-8, 2007, National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan.
- 8) **Singapore International Chemistry Conference & Asia-Pacific International Symposium on Microscale Separation and Analysis**, December 16-19, 2007, Suntec Singapore International Convention & Exhibition Centre, Singapore.
- 9) **18th National Chemistry Conference**, February 25-27, 2008, Institute of Chemistry, University of the Punjab, Lahore, Pakistan.
- 10) **19th International Congress of Nutrition (ICN 2009)**, October 4-9, 2009, BITEC, Bangkok, Thailand.
- 11) **3rd International Conference for Young Chemists (ICYC) 2010**. June 23-25, 2010, Organized by School of Chemical Sciences, Universiti Sains Malaysia, Pinang, Malaysia.

- 12) **26th Scientific Meeting of Malaysian Society of Pharmacology & Physiology (MSPP 2012)**. May 18-20, 2012, Organized by School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia.
- 13) **2nd International Conference on Future Perspectives of Food Processing Industry in Pakistan & 2nd Food and Nutrition Expo** 11-12th December, 2012. Organized by Department of Food Science, Government College University Faisalabad, Pakistan.
- 14) **Workshop on Water Pollution and its Mitigation** (19-20th December, 2012). Organized by Department of Zoology, Government College University Faisalabad, Pakistan.
- 15) **New Horizons & Recent Advances in Chemical and Biological Sciences Symposium** 14th February, 2013. Organized by Department of Applied Chemistry & Department of Bioinformatics and Biotechnology, Government College University Faisalabad, Pakistan.
- 16) Seminar on **Halal Foods** 30th July, 2013. Organized by Department of Food Science, Nutrition and Home Economics, Government College University Faisalabad, Pakistan.
- 17) **Parenting Experience** (23rd August, 2013). Organized by Department of Food Science, Nutrition and Home Economics, Government College University, Faisalabad, Pakistan.
- 18) **12th International & 2th National Chemistry Congress** 28-30th October, 2013. Organized by the Institute of Chemical Sciences and the Chemical Society of Pakistan, Bahauddin Zakariya University Multan, Pakistan.
- 19) **1st International Conference on Applied Chemistry** 18-20th November, 2013. Organized by Department of Applied Chemistry & Biochemistry, Government College University Faisalabad, Pakistan.
- 20) **International Conference of Biochemical and Chemical Sciences (ICBCS-2014)**, February 24-26, 2014, Organized by Department of Chemistry and Biochemistry, University of Agriculture Faisalabad, Pakistan.
- 21) **5th International Congress on Aromatic & Medicinal Plants (CIPAM2014)**, Zarzia, Tunisia. March 17-20, 2014.
- 22) **25th National and 13th International Chemistry Conference (Silver Jubilee Event of the Chemical Society of Pakistan)**, October 20-22, 2014, Organized by Institute of Chemistry, University of the Punjab, Lahore, Pakistan.
- 23) **Hussain A.I. (2017)**. Bitter apple fruit: Phytochemistry, pharmacology, traditional uses and nutritional potential. Presented as Keynote Lecture at 2nd Global Summit on Pharmaceutics and Drug Delivery Systems, Singapore, June 29-30, 2017.

Workshops/Seminars/Trainings Completed/Attended

- 1) Workshop on **Developing Literature Review**, January 1, 2010, COMSATS, Lahore, Pakistan.
- 2) Workshop on **HPLC, HPTLC**, November 17, 2011, Ixora Hotel, Perai, Penang, Malaysia.
- 3) Workshop on **Intellectual property Right**, November 6, 2015, Government College University Faisalabad.

Papers Presented/Abstracted at Various Conferences/Symposia

- 1) **Hussain, A.I.**, Anwar, F., Latif, S., and Rashid, U., Phytochemical and *In-vitro* Anthelmintic Screening of *Butea frondosa* and *Swertia chirata* from Pakistan., (2006) **Presented as Poster** at 10th International Conference on Natural Product Chemistry, January 6-9, 2006, HEJ Research Institute of Chemistry, University of Karachi, Pakistan. Abstract Book P.182
- 2) Latif, S., Anwar, F., **Hussain, A.I.** and Rashid, U., Utilization of Corn Cobs for the Production of Furfural and Active Carbon., (2006) **Presented as Poster** at 10th International Conference on Natural Product Chemistry, January 6-9, 2006, HEJ Research Institute of Chemistry, University of Karachi, Pakistan. Abstract Book P.219
- 3) Anwar, F., **Hussain A.I.**, and Ashraf M. Effect of Salinity on Yield and Quality of *Moringa oleifera* Seed Oil., (2006) **Abstracted as Poster** at Ninth Symposium on Analytical and Environmental Chemistry, July 24-26, Bara Gali Summer Campus, University of Peshawar, Pashawar, Pakistan. Abstract Book P.182
- 4) Iqbal, S., Anwar F., **Hussain A.I.**, and Bhangar M.I. Enhancement in the Oxidative Stability of Some Vegetable Oils by Blending with *Moringa oleifera* Oil., (2006) **Abstracted as Oral** at World Conference and Exhibition on Oilseed and Vegetable Oil Utilization, August 14-16, Hilton Istanbul Convention and Exhibition Centre, Istanbul, Turkey.
- 5) **Hussain, A.I.**, Anwar, F., Bhangar M.I. and Shahid, M. Antioxidant and Antimicrobial Activities of Essential Oils and Methanolis Extract of Spearment (*Mentha spicata*) From Pakistan, (2007), **Presented as Oral** at 2nd International Seminar on Analytical Sciences, September 6-8, 2007, National Centre of Excellence in Analytical Chemistry, University of Sindh, Janshoro, Pakistan. Abstract Book P. 38.
- 6) **Hussain, A.I.**, Anwar F., Sherazi S.T.H. and Przybylski R. Chemical Composition, Antioxidant and Antimicrobial Activities of Basil (*Ocimum basilicum*) Essential Oils Depends on Seasonal Variations, (2007) **Presented as Oral** at Singapore International Chemistry Conference-5 (SICC-5)/7th Asia-Pacific International Symposium on Microscale Separation and Analysis, December 16-19, 2007, Suntec Singapore International Convention & Exhibition Centre, Singapore. Abstract Book P. 6:155-156.
- 7) Ali, M., Anwar, F. and **Hussain, A.I.** Antioxidant and Antimicrobial Activities of Essential Oil of Fennel (*Foeniculum vulgare* Mill.) from Pakistan, (2008). **Presented as Poster** at 18th National Chemistry Conference, February 25-27, Institute of Chemistry, University of Punjab, Lahore, Pakistan. Abstract Book P. 2.
- 8) **Hussain, A.I.**, Anwar, F. and Sherazi, S.T.H. Changes in Essential Oil Composition, Antioxidant and Antimicrobial Activities of Fennel (*Foeniculum vulgare* Mill.) Fruits at Different Stages of Maturity, (2008) **Presented as Poster** at 18th National Chemistry Conference, February 25-27, Institute of Chemistry, University of Punjab, Lahore, Pakistan. Abstract Book P. 87.
- 9) **Hussain, A.I.** and Anwar, F. Changes in composition, antioxidant and antimicrobial activities of essential oil of fennel (*Foeniculum vulgare* Mill.) fruits at different stages of maturity, (2008), Abstracted at 1st International Seminar on Medicinal Plants, May 21-23, Lahore College for Women University. Abstract Book P. 20.

- 10) **Hussain, A.I.**, Anwar, F., Nigam, P.S. and Sarker, S.D. Antimicrobial and Antioxidant Activities of The Essential Oils of Selected Species of Lamiaceae, (2009), **Presented as Oral** at 19th International Congress of Nutrition (ICN 2009), October 4-9, 2009, BITEC, Bangkok, Thailand.
- 11) **Hussain, A.I.**, Anwar, F. and Nigam, P.S. Variation in the Biological Active Compounds of Volatile Oils of Three *Ocimum* Species Grown at Hilly and Plane Regions, (2009), **Presented as Distinguished Poster** at 19th International Congress of Nutrition (ICN 2009), October 4-9, 2009, BITEC, Bangkok, Thailand.
- 12) **Hussain, A.I.**, Anwar, F., Jabbar, A., Mahboob, S. and Nigam, P.S. (2009). Seasonal variation in the Composition and Biological Activities of Essential Oil of *Rosmarinus officinalis* from Pakistan. Abstracted at 6th International Interdisciplinary Meeting on Bioanalysis. November 5-8, 2009, Organized by University of Pecs, Hungary. Abstract Book P.54
- 13) **Hussain, A.I.**, Chatha, S.A.S, Worthington, J., and Jabbar, A. (2010). Chemical composition and biological activities of the essential oils of three *Ocimum* species Collected from different geographical regions of Pakistan. Presented as **Oral** at 3rd International Conference for Young Chemists (ICYC) 2010. June 23-25, 2010, Organized by School of Chemical Sciences, Universiti Sains Malaysia, Pinang, Malaysia. Abstract Book P. 69.
- 14) **Hussain, A.I.**, Chatha, S.A.S., Iqbal, M.S. and Jabbar, A. (2010). Inter-varietal variation in nutritional and antioxidant potential of mungbean (*Vigna radiate* L.) Presented as **Oral** at 3rd International Conference for Young Chemists (ICYC) 2010. June 23-25, 2010, Organized by School of Chemical Sciences, Universiti Sains Malaysia, Pinang, Malaysia. Abstract Book P. 64.
- 15) **Hussain, A.I.**, and Anwar, F. (2010). Appraisal of chemical composition and antioxidant and antimicrobial characteristics of essential oils from aerial parts of selected mentha species. Presented as **Oral** at 3rd International Conference for Young Chemists (ICYC) 2010. June 23-25, 2010, Organized by School of Chemical Sciences, Universiti Sains Malaysia, Penang, Malaysia. Abstract Book P. 72.
- 16) **Hussain, A.I.**, et al., (2012). Bioactive compounds and antioxidant activity of different extracts from bitter apple (*Citrullus colocynthis*). Presented as **Oral** at 26th Scientific Meeting of Malaysian Society of Pharmacology & Physiology (MSPP 2012). May 18-20, 2012, Organized by School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia. Abstract Book P. 68.
- 17) **Hussain, A.I.**, Chatha, S.A.S., Arshad, M.U., Nigam, P.S., (2014). Chemical composition and antioxidant, antimicrobial, antimalarial and antiproliferative activities of *Ocimum sanctum* essential oils, depends on geographical variation. Presented as Oral at 5th International Congress on Aromatic & Medicinal Plants (CIPAM2014), Zarzia, Tunisia. March 17-20, 2014.
- 18) **Hussain A.I.** (2017). Bitter apple fruit: Phytochemistry, pharmacology, traditional uses and nutritional potential. Presented as Keynote Lecture at 2nd Global Summit on Pharmaceutics and Drug Delivery Systems, Singapore, June 29-30, 2017.

Technical Skills

I have extensively used following state of the art techniques of analytical chemistry and bio-analytical chemistry in my research and able to perform these skills independently.

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- Capillary Gas Liquid Chromatography (CGLC)
- Triple Quad Gas Chromatograph Mass Spectrometry (GC-MSMS)
- High Performance Liquid Chromatography (HPLC)
- Fast Protein Liquid Chromatography (FPLC)
- High Performance Thin Layer Chromatography (HP-TLC)
- Column Chromatography
- Electrophoresis
- UV-Visible Spectrophotometer
- Microtitre Plate Reader
- Atomic Absorption Spectrophotometer
- Bioassays
- In vivo work by using Power Lab (AD Instruments) for blood pressure, ECG, RCBP etc. and NIBP (CODA)

Brief Statement of Research Interest

- **Evaluation of pharmaceutical potential of various medicinal plants using different diseased models** (Rats models, anti hypertensive, anti diabetic, antioxidant, etc. activities)
- **Evaluation of antioxidants, antimicrobial and anticancer potential of indigenous plant extracts, essential oils and agricultural wastes**
(Extraction, purification/ isolation, biological activities, characterization and structural elucidation, applications)
- **Antimalarial 'lead' identification from the Lamiaceae using the haem polymerization assay**
- **Characterization and quality assessment of vegetable oils/fats and related products**
(Physico-chemical studies, fatty acids and tocopherols profiles, oxidative stability, minor and major components, adulterants, prooxidant metals, shelf life studies, blending etc.,)
- **Characterization and biological activities of essential oils**
(Extraction; hydro distillation/steam distillation, antioxidant and antimicrobial activity, bioactive constituent's studies)

- **Proximate analysis and mineral composition of medicinal plants, fruits, vegetables, spices/herbs**
- **Studies of the effects of abiotic stresses (drought, salinity, heat etc.) on the physico-chemical characteristics of vegetable and essential oils**
- **In vivo antioxidant, antihypertensive and anti-diabetic activities of plants bioactives using different rat models**