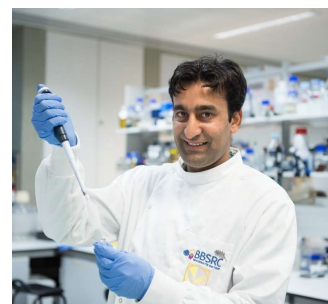


CURRICULUM VITAE

Name Abrar Hussain
ID No. 31205-4260231-9
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Innovative and Passionate Food Scientist/Teacher with Excellent Team Working Skills

PROFESSIONAL PROFILE

My passion is to engross myself in research, academia and to provide high quality educational opportunities to youth of my country at an international standard. Determined to Direct, Manage, and Coordinate the activities of the University in order to ensure that the policies, programs, goals and objectives of the University in compliance with the University governance requirements, and any regulations, rules, laws, codes, standards applicable to higher institutions of learning. Furthermore, use of my technical expertise learned from reputed international organizations to make a difference by innovative ideas and hard work in the field of food sciences.

RESEARCH SKILLS & ABILITIES

➤ **Food Analyses (Cereal Quality)**

Food Quality Analyses (SRC tests, SDS-sedimentations etc.), Protein polymers determination by SE-HPLC, ICP- Mass Spectrophotometry, Confocal and light microscopy, Dough mixograph analysis, Normal phase HPLC for tocopherols and carotenoids, sensory quality, Bread-making.

➤ **Food Biotechnology**

DNA extraction, cloning, PCR, Western Blotting, SDS Poly Acrylamide Gel Electrophoresis, Gel quantifications, Development of different extraction methods etc.

➤ **Field Expertise**

Designing field experiments, Organic farming systems research, Environmental Risk Assessment, Food industry collaborations for product development.

- Experience in starting new programs in food sciences and in organizational designing/restructuring; strong appreciation of emerging global trends in higher education.
- Innovative in research and development and allow integration of Food Chemistry/Medicinal Chemistry with other disciplines of life sciences (e.g. Molecular Biology and Biotechnology).
- Over 12 years of research and teaching experience in the university. An amicable and enthusiastic Food Chemistry Teacher with the ability to motivate students to work at optimal levels while maintaining a comfortable, creative environment, and keeping clear perspective of goals to be accomplished in research.
- The ability to represent the University effectively in its dealings with Government, International agencies and other external stakeholders, a track record of success in fund raising.

- Ability to take a long-term and strategic view and entertain a wide range of possibilities in developing and implementing strategic plans.

QUALIFICATIONS

| Degree | Institute | Session | Div. |
|---------------------------------|--|---------|-----------------|
| President International Fellow | Institute of Genetics and Developmental Biology, CAS, Beijing, China | 2017 | - |
| Rothamsted International Fellow | Rothamsted International, Hertfordshire, UK | 2016 | - |
| Post-PhD | Swedish University of Agricultural Sciences (SLU), Sweden | 2012 | - |
| PhD | Swedish University of Agricultural Sciences (SLU), Sweden | 2012 | - |
| M.Sc. (Hons.) | University of Agriculture, Faisalabad, PAK | 2007 | 1 st |
| B.Sc. (Hons.) | University of Agriculture, Faisalabad, PAK | 2005 | 1 st |
| F.Sc. | Govt.S.E college Bahawalpur PAK | 2001 | 1 st |
| Matriculation | Yazman Public School Yazman. PAK | 1998 | 1 st |

PROFESSIONAL EXPERIENCES

01/23-to-date

Head, Department of Biosciences at COMSATS University Islamabad, Sahiwal Campus Pakistan.

01/20-to-date

Associate Professor, Department of Biosciences at COMSATS University Islamabad, Sahiwal Campus Pakistan.

11/12-to-1/20

Assistant Professor, Department of Biosciences at COMSATS University Islamabad, Sahiwal Campus Pakistan.

08/17-to-08/18

President International Fellow, State Key Laboratory of Plant Cell and Chromosome Engineering, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China. Investigating the fundamental molecular mechanisms underlying the bread quality of wheat flour using series of well define deletion mutants.

07/16-to-08/17

Rothamsted International Fellow, Rothamsted International UK. Developing small scale methods to assess the bread-making quality of wheat flours. Determination of protein quality at low nitrogen fertilizer input.

08/17-to-date

TWAS-UNESCO Associateship, International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat, Morocco. Evaluating wheat lines developed at ICARDA for mixing behavior and bread-making quality.

05/15-to-10/15

Incharge, Department of Biosciences at COMSATS Institute of Information Technology, Sahiwal Pakistan.

10/07-04/12

PhD thesis: Quality of organically produced wheat from diverse origin . Research experience in cereal quality laboratory SLU, Alnarp for four years and field experiment for screening a total of 860 wheat genotypes from Nordic Gene Bank for organic farming.

04/12 – 08/12

Post-PhD Research Associate in Department of Agrosystems, SLU, Sweden worked on developing carotenoid extraction method from wheat grains.

06/10-05/11

Teaching Assistant in Master course “ Agroecology at SLU Alnarp, Sweden.”

Teaching Assistant in PhD course “ Introductory course for PhD students at SLU, Alnarp, Sweden”

01/07- 10/07

Research Assistant under ALP project at: Agronomic Research Station, Ayub Agricultural Research Institute, Faisalabad, Pakistan.

09/05 - 06/07

MSc thesis: Effect of weed competition periods on the growth and yield of black seed (*Nigella sativa* L.)

02/05 – 07/05

Internee: Agronomic Research Station Bahawalpur and Soil and Water Testing Lab, RARI Bahawalpur, Pakistan. Preparation of layouts for experiments, Farm management, Data processing & Analysis, Testing and analysis of water, soil and fertilizers.

INTERNATIONAL COURSES

| Course Title | Year | Country | Course Title | Year | Country |
|---|---------|---------|---|------|---------|
| Research design for PhD-students | 2007 | Sweden | Popular science writing | 2009 | Sweden |
| Rhetoric for PhD students | 2007-08 | Sweden | Philosophy of science | 2010 | Sweden |
| Information retrieval for PhD-students | 2007 | Sweden | Treatment of data course | 2009 | Sweden |
| Nordic course in crop production | 2010 | Denmark | Plant protection biology | 2008 | Sweden |
| Ethics in science | 2008 | Sweden | Methodologies for the determination of tocol | 2009 | Denmark |
| Microscopy in plant biology | 2008 | Sweden | Organic Food and Framing Systems: Possible roles in mitigating and adapting to climate change | 2011 | Denmark |
| Introductory course for PhD students | 2008 | Sweden | Genomic technologies in clinical diagnostics:NGS | 2017 | UK |
| How to write and publish scientific paper | 2009 | Sweden | Nutrition and well being | 2017 | UK |
| Research Methodologies in organic food and farming research | 2009 | Sweden | The Science of nutrition | 2017 | UK |
| Bioinformatics 101 | 2016 | UK | Innovation: The food industry | 2017 | UK |
| Geneious training course | 2017 | UK | Starting a business: Vision and opportunity | 2017 | UK |
| Introduction to Galaxy for NGS data processing | 2017 | UK | Introduction to Phylogenetics | 2017 | UK |
| Microsoft certificate courses: word,excel,power pointetc | 2017 | UK | Planning and analysing your RNA-seq | 2017 | UK |

INTERNATIONAL & NATIONAL PROJECTS

1. Use of HMW-GS deletion mutants to understand functionality of wheat flour. Abrar Hussain NRPU Project 2018. Project No. 8690.
2. Investigation of the fundamental molecular mechanisms underlying the control of dough functionality and wheat quality by high molecular weight glutenins subunits in wheat. Abrar Hussain and Daowen Wang 2017. Funded by Chinese Academy of Sciences. CAS Project No. 2017PB0044 .
3. Determination of wheat grain quality at low protein content. Abrar Hussain and Peter Shewry 2016. Funded by Rothamsted Research UK grant No.0080.
4. Protein polymerization and micro-nutrients in whole meal flour. Abrar Hussain 2014. HEC 0.5 M Funded project.
5. Sequencing and mapping of mycobacterium tuberculosis from the patients in Pakistan by using next generation sequencing. Abrar Hussain (Collaborator). HEC Awarded project worth 5.5 Million under NRPU.
6. RNA-Seq-based transcriptome analysis of antibiotic resistance and virulence mechanism of *Campylobacter jejuni* a serious foodborne illness in South Punjab, Pakistan 2017. Abrar Hussain (Co-PI). HEC Awarded project worth 4 Million under NRPU.
7. Protein composition effect on mixing behaviour of different wheat genotypes developed at ICARDA: Identification of the best gluten protein combinations for the main wheat derived products consumed in CWANA region. Abrar Hussain 2017. TWAS No. 3240295900
8. Biochemical composition and anti-enzymatic activity of essential oils from indigenous medicinal plants. 0.5 M HEC Funded .Abrar Hussain (Co-PI)
9. Appraisal of Youngsters acquaintance to some organochlorine and pyrethroid pesticide residues through milk collected from Sahiwal market. 0.5M HEC Funded, Abrar Hussain (Co-PI)
10. Studies on Prevalence and Mutational screening of Peroneal muscular atrophy (PMA) in families of Sahiwal division. 0.5M HEC Funded, Abrar Hussain (Co-PI)
11. Role of Un-Extactable Polymeric Proteins on Edn-Use Quality of Pakistan Wheat Flour. Abrar Hussain 2016. NRPU Project 5 Million (Minor revisions submitted).
12. Use of HMW-GS deletion mutants to understand functionality of Wheat flour. Abrar Hussain 2017. NRPU Project 9.5 Million (submitted). Application No. HEC/R&D/NRPU/2017/8690.
13. Improving post-harvest value of dates through implementing advance technology for small level farmers. Abrar Hussain (PI). (5 Million) Submitted to AIP program PARC.

14. Wheat Yield and Quality Improvement (WYQI) in the Punjab, Pakistan. Abrar Hussain (Co-PI). 5M Pounds. Submitted to Agri-Tech Funding UK.
15. Antioxidants in organically produced wheat in collaboration with Eva Johansson, SLU, Sweden. (2 M SEK).
16. Ozonation, a non-chemical insect pest management technology in stored wheat (5 Million). Abrar Hussain (PI). Submitted to AIP program PARC.

CO-CURRICULAR CERTIFICATES

- ✚ Basic Unit Leader Course
- ✚ Four years in Agriversity Scouts Group, UAF, Pakistan.
- ✚ Participation in many department functions.
- ✚ Management of CampFires.
- ✚ Admission Duties.
- ✚ First Aid Course.
- ✚ Civil Defence Course
- ✚ PhD council representative in Internationalization Board, SLU, Alnarp, Sweden.
- ✚ Member ASK PhD council Sweden from November 2007 to January 2012.

The membership of the above-mentioned bodies provided a way to catharsis and I was able to express my inherent talent, creativity and capabilities.

SCIENTIFIC SOCIETY MEMBERSHIP

- 2007-To date: Food Society, SLU, Alnarp, Sweden.**
- 2007-To date: Sensory Research School, SLU, Alnarp, Sweden.**
- 2009 - To date: Nordic association of agricultural scientists (NJF)**
- 2010 – To date: International Society of organic agriculture research**

AWARDS/DISTINCTIONS

- ✚ Rothamsted International Fellowship award 2016-17 to work at Rothamsted Research, United Kingdom (UK).
- ✚ President International Fellowship (PIFI) at State Key Laboratory of Plant Cell and Chromosome Engineering, Institute of Genetics and Developmental biology by Chinese Academy of Sciences.
- ✚ TWAS-UNESCO Associateship at International Center for Agricultural Research in the Dry Areas (ICARDA) funded by TWAS.
- ✚ COMSATS Research Productivity Award 2013, 2014, 2015, 2016, 2017
- ✚ PhD Overseas scholarship for PhD studies in SLU, Sweden by HEC, Pakistan
- ✚ Award of honorarium and appreciation on extra ordinary performance in research and academia by COMSATS 2013, 2014, 2015.
- ✚ MS Scholarship for studies in China under Cultural Exchange Program 2006. (Declined).

- ✚ PhD Scholarship for studies in China under Cultural Exchange Program 2007. (Declined).
- ✚ Travel grant from SLU, Sweden to attend conferences.
- ✚ Receive appreciation letter from UAF administration for performing admission duties.
- ✚ HEC approved supervisor by Higher Education Commission Pakistan.
- ✚ Appreciation letter and shield from Shaukat Khanum Memorial Hospital administration for holding cancer awareness seminars.
- ✚ Appreciation letter and shield from Ali Zeb Foundation administration for holding Thalesemia Awareness and blood camps.
- ✚ Study travel grant from SLU Sweden for visiting food science laboratory at BOKU, Austria.
- ✚ Appreciation letter from SUNDAS Foundation administration for holding Hemophiliac diseased.

SCIENTIFIC PUBLICATIONS

1. Shewry, P.R., Wood, A.J., Hassall, K.L., Pellny, T.K., Riche, A., **Hussain, A.**, Shi, Z., Mosleth, E.F., Charlton, M., Poole, M., Jones, S., Newton, K., Penson, S., Tucker, G., Griffiths, S. and Hawkesford, M.J. (2023), Identification of traits underpinning good breadmaking performance of wheat grown with reduced nitrogen fertilisation. *J Sci Food Agric*, 103: 7664-7672.
2. Mehmood, Asim, Peter M. Dracatos, Linta Maqsood, Qudsia Yousafi, **Abrar Hussain**, Muhammad J. Jaskani, Muhammad W. Sajid, Muhammad S. Haider, and Muhammad M. Hussain. 2023. "Genetic Variability and Population Structure of Pakistani Potato Genotypes Using Retrotransposon-Based Markers" *Agriculture* 13, no. 1: 185.
3. Sarwar, N., Mubeen, K., Farooq, O., Wasaya, A., Yasir, T.A., Shahzad, M., Javed, M., **Hussain, A.**, Awan, M.I., Dawood, M. and Ahmad, S., 2023. Impact of Heat Stress on Cereal Crops and Its Mitigation Strategies. In *Disaster Risk Reduction in Agriculture* (pp. 191-210). Singapore: Springer Nature Singapore.
4. Shafaq, S., **Hussain, A.** (2022). Rice Nutritional Aspects. In: Sarwar, N., Atique-ur- Rehman, Ahmad, S., Hasanuzzaman, M. (eds) *Modern Techniques of Rice Crop Production* . Springer, Singapore. https://doi.org/10.1007/978-981-16-4955-4_35.
5. Yousafi, Q., Bibi, S., Saleem, S., **Hussain, A.**, Hasan, M.M., Tufail, M., Qandeel, A., Khan, M.S., Mazhar, S., Yousaf, M., Moustafa, M., Al-Shehri, M., Khalid, M., Kabra, A., 2022. Identification of Novel and Safe Fungicidal Molecules against *Fusarium oxysporum* from Plant Essential Oils: In Vitro and Computational Approaches. *BioMed Research International* 2022, 5347224.
6. Qudsia Yousafi, Muhammad Sohail Shahzad, Shahzad Saleem, Muhammad Wasim Sajid, **Abrar Hussain**, Asim Mehmood, Allah Ditta Abid, Amina Qandeel, Anum Shahid,

Muhammad Saad Khan, Sania Mazhar, Ahmed Ezzat Ahmed, Khalid M. Al Syaad, Terpinen-4-ol from *Trachyspermum ammi* is a potential and safer candidate molecule for fungicide development against *Alternaria solani*, *Journal of King Saud University - Science*, Volume 34, Issue 1, 2022, 101747, ISSN 1018-3647.

7. Ellen F. Mosleth, Marie Lillehammer, Till K Pellny, Abigail J. Wood, Andrew B. Riche, **Abrar Hussain**, Simon Griffiths, Malcolm J. Hawkesford, Peter R. Shewry. 2020. Genetic variation and heritability of grain protein deviation in European wheat genotypes. *Field Crops Research* (255) 107896.
8. **Hussain A**, Larsson H, Johansson E 2021. Carotenoid extraction from locally and organically produced cereals using saponification method. *Processes* 9, no. 5: 783. <https://doi.org/10.3390/pr9050783>
9. Qudsia Yousaf, Jannat Batool, Muhammad Saad Khan, Tamsila Perveen, Wasim Sajid, **Abrar Hussain**, Asim Mehmood, Shahzad Saleem. 2020. In Silico Evaluation of Food Derived Bioactive Peptides as Inhibitors of Angiotensin Converting Enzyme (ACE). *Int J Pept Res Ther* (2020). <https://doi.org/10.1007/s10989-020-10090-y>.
10. Qudsia Yousafi, Maria Azhar, Muhammad Saad Khan, Asim Mehmood, Shahzad Saleem, Muhammad Wasim Sajid, **Abrar Hussain**, Mohammad Amjad. 2020. Kamal. Interaction of human dynein light chain 1 (DYNLL1) with enterochelin esterase (*Salmonella typhimurium*) and protective antigen (*Bacillus anthracis*) might be the potential cause of human infection. *Saudi Journal of Biological Sciences* 27 (2020) 1396–1402.
11. Asim Mehmood, Umal Baneen, Ahmad Zaheer, Muhammad Wasim Sajid, **Abrar Hussain** et al. 2019. Physical and chemical mutagens improved *Sporotrichum thermophile*, strain ST20 for enhanced Phytase activity. *Saudi Journal of Biological Sciences* 26 (2019) 1485–1491.
12. Sajjad Karim, Imran Riaz Malik, Quratulain Nazeer, Ahmad Zaheer, Muhammad Farooq, Nasir Mahmood, Arif Malik, Muhammad Asif, Asim Mehmood, Abdul Rehman Khan, Abdul Jabbar, Muhammad Arshad, Qudsia yousafi, **Abrar Hussain**, Zeenat Mirza, Muhammad Atif Iqbal, Mahmood Rasool, 2019. Molecular analysis of V617F mutation in Janus kinase 2 gene of breast cancer patients. *Saudi Journal of Biological Sciences* 26(2019) 1123–1128.
13. Yar AM, Zaman G, Hussain A, Changhui Y, Rasul A, **Hussain A**, Bo Z, Bokhari H, Ibrahim M. 2018. Comparative Genome Analysis of 2 Mycobacterium Tuberculosis Strains from Pakistan: Insights Globally Into Drug Resistance, Virulence, and Niche Adaptation. *Evolutionary Bioinformatics*. 14-1-9.
14. Muhammad Rizwan Bashir, Muhammad Atiq, Muhammad Sajid, **Abrar Hussain**, Hafiz Saeed ur Rehman and Azhar Mehmood, 2018. . Impact of organic matter and soil types on the development of fusarium wilt of chilli. *Pak. J. Agri. Sci.*, Vol. 55(4), 749-753
15. Daowen Wang, Kunpu Zhang, Lingli Dong, Zhenying Dong, Yiwen Li, **Abrar Hussain**, Huijie Zhai. 2022. Molecular genetic and genomic analysis of wheat milling and end-use traits in China: Progress and perspectives. *The Crop Journal* 6 (2018) 68 – 8 1.
16. Zobia Akram, Athar Mehmood, Sumaira Kanwal, Sahrish Zulfiqar, Naeem Sarwar,

- Muhammad Ibrahim, **Abrar Hussain***. 2022. An Insight into the Protein Polymerization of Commercial Wheat Varieties from Pakistan. *Cereal Chemistry* (Accepted).
17. **Abrar Hussain**, Till K Pellny, Abigail J Wood, Zhiqiang Shi, Yongfang Wan, Andrew Riche, Clothilde Baker, Simon Griffiths, Simon Penson, Malcolm J Hawkesford and Peter R Shewry. 2022. Using Solvent Retention Capacity for the Prediction of Protein Polymers in Wheat Flour. (Accepted in *Cereal Science*).
 18. **Abrar Hussain**, Kunpu Zhang, Daowen Wang, 2022. Use of novel mutants lacking in Glu-1 and Glu-3 for prediction of end use quality of wheat. (Submitted to *Theoretical and Applied Genetics*).
 19. Zhu Boa, Wang Saia, Li Oua, Annam Hussain, **Abrar Hussain**, Shen Jiand, Muhammad Ibrahim. 2017. High-quality genome sequence of human pathogen *Enterobacter asburiae* type strain 1497-78^T. *Journal of Global Antimicrobial Resistance* 8 (2017) 104–105.
 20. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite, Marie E. Olsson and Eva Johansson. 2015. Carotenoid Content in Organically Produced Wheat: Relevance for Human Nutritional Health on Consumption. *Int. J. Environ. Res. Public Health*, 12, 14068-14083.
 21. Sumaira Kanwal, Shazia Mannan, Abrar Hussain, Shazia Perveen (2016). Regression in polio eradication in Pakistan: A national Tragedy. *Journal of the Pakistan Medical Association*. 66(3):328-33.
 22. Hakoomat Ali, Naeem Sarwar, Zuhair Hasnain, Shakeel Ahmad and Abrar Hussain. 2016. Zinc Fertilization Under Optimum Soil Moisture Condition Improved the Aromatic Rice Productivity. *Philippine Journal of Crop Science (PJCS)* August 2016, 41 (2):1-11.
 23. Liaqat Ali, Muhammad Waqar Hassan, Moazzam Jamil, Javaid Iqbal, Muhammad Sarwar Yaqub, Muhammad Akram, Imtiaz Ahmed and **Abrar Hussain** 2016. Effect of nursery bulb size and planting density on thrips population, plant height and yield of onion (Phulkara variety) in Bahawalpur, Pak. *J. Life Soc. Sci.* (2016), 14(2): 96-103.
 24. Athar Mahmood, **Abrar Hussain**, Ahmed Naeem Shahzad and Bernd Honermeier, 2015. Biomass and biogas yielding potential of sorghum as affected by planting density, sowing time and cultivar. *Pakistan Journal of Botany*, 47(6): 2401-2408
 25. Shazia Perveen, Shazia Mannan, **Abrar Hussain**, Sumaira Kanwal. 2015. Charcot-Marie-Tooth type 1A disease from patient to laboratory. *Journal of the Pakistan Medical Association*. 65(2):206-212.
 26. Eva Johansson, **Abrar Hussain**, Ramune Kuktaite, Staffan C. Andersson and Marie E. Olsson. 2014. Contribution of Organically Grown Crops to Human Health. *Int. J. Environ. Res. Public Health*. 11, 3870-3893
 27. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite, Maria Luisa Prieto-Linde, Eva Johansson (2013). Amount and size distribution of monomeric and polymeric proteins in the grain of organically produced wheat: Influence of genotype and location. *Cereal Chemistry* 90 (1), 80-86.
 28. E. Johansson, A.H. Malik, **A. Hussain**, F. Rasheed, W.R. Newson, T. Plivelic, M. Hedenqvist,

- M. Gällstedt, R. Kuktaite (2013). Gluten protein structures: Relationships with functionality in various applications. *Cereal Chemistry* 90 (4), 367-376.
29. **Abrar Hussain**, Hans Larsson, Marie E. Olsson, Ramune Kuktaite , Heinrich Grausgruber, Eva Johansson (2012). Is organically produced wheat a source of tocopherols and tocotrienols for health food? *Food Chemistry* 132, 1789–1795.
 30. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite , Maria Luisa Prieto-Linde, Eva Johansson (2012). Towards the understanding of bread-making quality in organically grown wheat: Mixing behavior, protein polymerization and structural properties. *Cereal Science* 56: 659-666
 31. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite , Eva Johansson (2010). Mineral Composition of Organically Grown Wheat Genotypes: Contribution to Daily Minerals Intake. *International Journal of Environmental Research and Public Health* 7:3442-3456.
 32. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite , Eva Johansson (2012). Concentration of some heavy metals in organically grown primitive, old and modern wheat genotypes: Implications for human health. *Journal of Environmental Science and Health, part B*, 47 (7), 751-758.
 33. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite , Eva Johansson (2012). Healthy food from organic wheat: Choice of genotypes for production and breeding. *Journal of Science of Food and Agriculture*. 92: 2826–2832
 34. Awan I.M., R. Ahmad, E. A. Waraich, A. Mahmood and **A. Hussain**. 2014. Sunflower Response to Foliar Application of Urea and Integrated Foliar Fertilizers under Water Stress Conditions. *Agric. Res. Commun.* 2014. 1(2): 39-43.
 35. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite , Maria Luisa Prieto-Linde, Eva Johansson (2009). Protein content and composition in organically grown wheat: Influence of genotype. *Journal of Agronomy Research*, 7 (2) ; 599-605.
 36. **Abrar Hussain**. 2009. Nutritional and mixing characteristics of organically grown wheat genotypes Introductory Paper at the Faculty of Landscape Planning, Horticulture and Agricultural Science vol. 2009:2 ISSN 1654-3580.
 37. **Abrar Hussain**. (2012). *Quality of organically produced wheat from diverse origin*. Diss. (sammanfattning/summary) Alnarp, Sweden : Sveriges lantbruksuniv., Acta Universitatis agriculturae Sueciae, 1652-6880 ; 2012:18, ISBN 978-91-576-7654-2.
 38. **Abrar Hussain**., Nadeem A., Ashraf I., Awan M. 2009. Effect of weed competition periods on the growth and yield of black seed (*Nigella sativa* L.) *Pakistan Journal of Weed Science Research* 15(1); 71-81.
 39. Yar AM, Zaman G, Hussain A, Hussain A, Bo Z, Bokhari H, Ibrahim M. 2018. Comparative Genome wide analysis of sigma factor in *Mycobacterium tuberculosis* Strains mnpk and swlpk from Pakistan: Insights Globally Into Drug Resistance, Virulence, and Niche Adaptation (Accepted in *Evolutionary Bioinformatics*).
 40. Zubaria Ishaq, Nazish Ishaq, Imran Ishaq, **Dr. Abrar Hussain** and Dr. Muhammad Wasim Sajid. 2017. Screening of Organochlorine Pesticide Residues in Milk Collected from Sahiwal region. *International Journal of Scientific & Engineering Research* 8 (2) 955-968.
 41. Zubaria Ishaq, Muhammad Wasim Sajid, Shahzad Saleem, Asim Mehmood, Liaqat Ali and

Abrar Hussain.2018. A Perspective on Organochlorine Pesticide Residues in Milk Produced in Pakistan. *EC Nutrition* 13 (6). 402-410.

42. **Abrar Hussain**, Ramune Kuktaite, Eva Johansson (2018). Carotenoids in organically produced wheat genotypes. (*manuscript*)
43. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite, Maria Luisa Prieto-Linde, Eva Johansson (2018). High molecular weight glutenins composition of organically grown wheat genotypes from diverse origin. (*manuscript*)

CONFERENCE PROCEEDINGS

44. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite, Maria Luisa Prieto-Linde, Eva Johansson 2009. Influences of organically grown wheat genotypes on protein quality and quantity. Gluten Workshop 2009, Clermont-Ferrand, France 7-9 September.
45. **Abrar Hussain**, Larsson H., Kuktaite R., Prieto-Linde M.L., Johansson E. 2009. Protein contents and composition in organically grown wheat: Influences of genotype. Fostering healthy food systems through organic agriculture-Focus on Nordic-Baltic region. International scientific conference, Tartu, Estonia. 25-27 August.
46. **Abrar Hussain**, Prieto-Linde M.L., Kuktaite R., Larsson H., Johansson E. 2009. Variation in mineral and protein contents among genotypes of organically grown wheat. Organic agriculture, Denmark, April 2009.
47. **Abrar Hussain**, Johansson E. 2008. Antioxidants and proteins in organically grown wheat. Research methodologies in organic foods and farming research. Lyngby, Danmark, 2-7 November.
48. **Abrar Hussain**, 2009. Genotype screening for nutritional quality in organic wheat. TP Organics towards a strategic research agenda, NJF workshop Tartu, Estonia. 28 August.
49. Hans Larsson and **Abrar Hussain** 2009. Kvalitetsaspekter på det Svenska sortmaterialet av vete. SLF project report.
50. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite, Maria Luisa Prieto-Linde, Eva Johansson 2009. Influences of organically grown wheat genotypes on protein quality and quantity. Gluten Proteins, pp 72-76.
51. **Abrar Hussain**, Hans Larsson, Ramune Kuktaite, Maria Luisa Prieto-Linde, Eva Johansson 2011. Health related aspects of organically grown wheat. First international conference on organic food quality and health, Prague, Czech Republic. 18-20 May.
52. **Abrar Hussain**, Ali Hafeez Malik and Eva Johansson, 2011. Food quality of organically produced primitive wheat. 24th NJF congress on Food, Feed, Fuel and Fun-Nordic light on future land use and rural development. NJF report vol 7, No. 3 pp, 88.
53. Ali Hafeez Malik, **Abrar Hussain** and Eva Johansson, 2011. Influence of combinations of genetic and environmental factors on bread-making quality of four Nordic wheat cultivars. 24th NJF congress on Food, Feed, Fuel and Fun-Nordic light on future land use and rural development. NJF report vol 7, No. 3 pp, 204.

54. **Abrar Hussain**, 2011. Health and organic wheat: what is your choice? Seminar organized by Department of Agriculture-Farming Systems Technology and Product Quality, SLU, Alnarp, Sweden. 1st April.
55. **Abrar Hussain**, 2011. Influence of organic farming system on the nutritional value of wheat grain. Organic food and farming systems: Possible roles in mitigating and adapting to climate change, Denmark, 5-10 June.
56. **Abrar Hussain**, 2011. Health and organic wheat: what is your choice. Seminars in Agrosystems, SLU, Sweden. 1 April.
57. **Abrar Hussain**, 2011. Challenges for sustainable legume cropping systems. Workshop organized by Department of Agrosystems, SLU, Alnarp, Sweden, 14 September.
58. E. Johansson, A.H. Malik, **A. Hussain**, F. Rasheed, W. R. Newson, T. Plivelic, M. Hedenqvist, M. Gällstedt, R. Kuktaite, 2012. Gluten protein structures: variation in wheat grain and at various applications. 11th International Gluten Workshop .August 12-15, Beijing, China.
59. Hans Larsson and **Abrar Hussain** 2012. Nutritional and baking aspects of organic wheat genotypes. Nordic wheat workshop, Denmark, June 18-20.
60. **Abrar Hussain**, 2012. Use of Information Technology in Irrigation Management for Small Scale Farming Communities in Rural Areas 25-27 December 2012, Islamabad, Pakistan.
61. R. Kuktaite, **A. Hussain**, F. Yousefi, H. Larsson, M. L. P. Linde and E. Johansson, 2013. Wheat from sustainable perspective: Locally adapted genotypes with health benefits and good bread-making quality. International Wheat Genetics symposium, 8-14 September, Yokohama, Japan.
62. E. Johansson, A. Malik, **A. Hussain**, B. Husenov, M. Makhkamov, R. Kuktaite, 2013. Genotype and environment interactions determine protein composition and bread-making quality in wheat. International Wheat Genetics symposium, 8-14 September, Yokohama, Japan.
63. **Abrar Hussain** 2012. Use of Information Technology in Irrigation Management for Small Scale Farming Communities in Rural Areas. 23-25 December, Islamabad, Pakistan.
64. Shah, G.M., Shah, G.A, Groot, J.C.J, Raza, A.S., **Hussain A.**, Nadeem M. Nasir M., Shahid M. and Lantinga E.A, 2013. Losses and crop utilisation of nitrogen from solid cattle manure when subjected to various storage conditions. HEC-DAAD Summer school, CIIT, Islamabad.
65. **Abrar Hussain 2014**. Towards understanding the role of protein content and composition in bread quality. International conference on Nutritional therapies against lifestyle Related disorders. 29-30 May, UAF. Pakistan.
66. **Abrar Hussain 2016**. Wheat protein quality. International meeting of Wheat Genetic Program at Rothamsted UK on 30th November 2016.
67. **Abrar Hussain 2016**. "Impact of evolutionary changes on nutritional value of wheat grain". LERN Conference 9th November 2016 Queen Mary University, London.

68. Muhammad Wasim Sajid, Muhammad Atif Randhawa, Asim Mehmood, **Abrar Hussain**, Awais Ihsan and Muhammad Shamoon 2016. The Present Status of Organochlorine Residues in Milk Collected from Market of Faisalabad-Pakistan. International Conference on Agricultural, Biological and Environmental Sciences (ICABES-2016). Pattaya (Thailand) Dec. 14-16, 2016. ISBN 978-93-84468-80-4 page; 57-62.
69. **Abrar Hussain 2017**. "Wheat grain quality under different environments". Rothamsted Open Innovation Forum (ROIF).18-20 January 2017, Rothamsted UK.
70. **Abrar Hussain 2017**. Quality of wheat flour under low nitrogen input. SCI conference Young Researchers in Crop Sciences. Rothamsted International UK 2017.
71. **Abrar Hussain 2017**. Bioinformatics User Forum. Rothamsted UK 2017.
72. Till K Pellny, Abigail J Wood, Zhiqiang Shi, **Abrar Hussain**, Yongfang Wan, Andrew Riche, Clothilde Baker, Simon Griffiths, Simon Penson, Malcolm J Hawkesford and PeterR Shewry. 2018. Developing new types of wheat with good processing quality at low grain protein content. Accepted for oral International Wheat Conference, Maxico (April 2018).
73. **Abrar Hussain 2018**. Protein Polymerization and Solvent Retention Capacity of Wheat Flour as Affected by Nitrogen Fertilization at Natural Sciences at the Interface of Climate Change, Food & Security and sustainability (NSICFSS)" University of Kotli Azad Jammu and Kashmir. 24-26 October 2018.
74. Afifa Manzoor. **Abrar Hussain** Suitability of sres to asses protein and bread quality parameters of Pakistani wheat varieties. 30th All Pakistan Food Science conference & Food and Nutrition Expo-2019 Theme: Value added Food Products for Export Led Growth. 10-11 December, 2019 at The University of Lahore, Pakistan.
75. **Abrar Hussain 2022** International Conference on "New Trends in Biological Sciences" March 21-22. University of Okara, Pakistan.
76. **Abrar Hussain 2022**. Recent Trends in Environmental Sustainability" COMSATS Vehari Campus February 21-23, 2022.
77. **Abrar Hussain 2022** "Assessment for Online Learning" March 15, 2022. FDA, CUI, Islamabad.
78. **Abrar Hussain**. 1st International Virtual workshop: COVID-19 Pandemic and Impact on Education, Society and Sustainable development Goals (SDG). December 9-10. 2020. CUI, Sahiwal.
79. **Abrar Hussain 2023**. Millets for Global Food Security 13-16 February 2023 India.
80. **Abrar Hussain 2022**; Seminar on Water Borne Diseases. University College of Montgomery.
81. **Abrar Hussain 2022**. International Symposium of Agriculture and Plant Biology. August 8. Hybrid mode.
82. Till K Pellny, Abigail J Wood, Zhiqiang Shi, **Abrar Hussain**, Yongfang Wan, Andrew

Riche, Clothilde Baker, Simon Griffiths, Simon Penson, Malcolm J Hawkesford and Peter R Shewry. 2019. Developing new types of wheat with good processing quality at low grain protein content. Accepted for oral International Wheat Conference, Mexico.

83. Abrar Hussain 2024. Determination of Antioxidant and Antimicrobial Activity of Cannabis sativa and Molecular Docking Studies of Potential Cannabinoids International Symposium on Medicinal Plants and Natural Product “March 7-8 University of Agriculture Faisalabad, Pakistan.

POPULAR SCIENCE WRITINGS

- Ekologiskt vete med högt näringsvärde och goda bakegenskaper. Centre for Organic Food and Farming (EPOK) Dated 24-04-2012.
- Opportunities to produce organic wheat with high nutritional and baking quality available at: <http://www.slu.se/en/about-slu/fristaende-sidor-eng/whats-on/news/2012/5/opportunities-to-produce-organic-wheat-with-high-nutritional-and-baking-quality/>
- Gamla vetesorter för nyttigare och bättre ekologiskt mjöl. SLU news Dated 09-05-12.

CONFERENCES AND SEMINAR ORGANIZED

- Nutritional Awareness Seminar at CUI Sahiwal 2023.
- World Food Day Seminar 2023.
- Food Product Gala and awareness seminar 2022.
- National workshop on “**Food Safety & Hygiene**” at CIIT, Sahiwal 18 May 2016 .
- Thallesemia status in pakistan and awareness at COMSATS, Sahiwal 04 July 2016.
- Seminar on World Food Day COMSATS, Sahiwal 10 October 2015.
- Nutrition and Stress Management COMSATS, Sahiwal 21 March 2015.
- One day seminar on Current Cancer Scenarios in Pakistan with SKMH. October 2014.

ADMINISTRATIVE DUTIES PERFORMED

| Sr. No. | Description of Duty Performed | Semester |
|---------|--|-----------------|
| 1 | Head, Department of Biosciences CUI, Sahiwal | SP23-To-Date |
| 2 | Looking after Biotechnology at CUI Sahiwal Campus | SP23-To-Date |
| 3 | Main Architect of the proposal launching Department of Environmental Sciences and BS Agriculture at CUI Sahiwal Campus | SP23-To-Date |
| 4 | Main Architect of the proposal launching MS in Human Nutrition & Dietetics at CUI Sahiwal Campus | SP23-To-Date |
| 5 | Incharge, Food Science and Nutrition Program at CUI, Sahiwal. | Fall 18-to-FA19 |

| | | |
|----|---|--------------------|
| 6 | Main architect of FSN program at CUI Sahiwal. Prepared SoS and Proposal for launching BS in Food Science and Nutrition at CUI, Sahiwal. Got Approval from academic council and notified. Now program is running with a strength of 500 students | Fall- 2015-to-date |
| 7 | Member Departmental Academic Review Committee | Fall-14- to-date |
| 8 | Developed 20 deletion mutants of Glu genes in wheat in collaboration with IGDB, CAS Beijing china will be patent soon | 2018-to-date |
| 9 | Member CARC CUI, Sahiwal Campus | SP23-To-Date |
| 10 | Member convocation Steering Committee | SP23-To-Date |
| 11 | Member accreditation committee, Food Science and Nutrition Program at CUI, Sahiwal. | SP22-To-Date |
| 12 | Member UPSIGN: Consortium of UK-PAK scientists | SP22-To-Date |
| 13 | Convener of Cafeteria Committee and perform activities assigned by competent authority | SP22-To-SP22 |
| 14 | Convener DAC of the Department | SP23-To-Date |
| 15 | Nutrition counseling sessions at DHQ Hospital Sahiwal | SP23-To-Date |
| 16 | Member Departmental Academic Review Committee | Fall-14- To-Fall16 |
| 17 | Acting Incharge of Department of Biosciences | Fall-15-To-SP-16 |
| 18 | Arranged seminars with cooperation of Shaukat Khanum Memorial Hospital, Ali Zeb Foundation and SUNDUS foundation. | SP-14-16 |
| 19 | Coordinator Directorate of Student Affairs | SP-13 -Fall 15 |
| 20 | Convener of Health awareness and blood donor society at CIIT, Sahiwal | SP-13-SP-16 |
| 21 | Secretary of MS Advisory Committee | Fall-14- To-SP16 |
| 22 | Academic Coordinator of MSB | Fall-14- To-16 |
| 23 | Convocation Committee | Fall-15 |
| 24 | Departmental administrative responsibilities (batch advisor, arranging seminars etc...) | Fall-14-To-SP-16 |
| 25 | Departmental Operating Officer (DOO) | Fall-14 |
| 26 | Administrative responsibilities to organize Orientation Day | Fall-15, SP-15 |
| 27 | Member ORIC CIIT Sahiwal | SP-15-SP16 |
| 28 | Prepared SoS and Proposal for Doctor of Nutrition and Dietetics program at CIIT, Sahiwal (description attached). Got Approval from academic | SP-16-To-Fall |

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|----|---------------------------------------|---------|
| | council and notified. | 16 |
| 29 | Member MS thesis evaluation committee | SP14-16 |

LANGUAGE SKILLS

English: Fluent **Swedish:** Good
Urdu: Excellent
Punjabi: Excellent

INTERNATIONAL COLLABORATIONS

- Wheat Quality Lab. Department of Plant Breeding and Biotechnology. SLU, Alnarp, Sweden.
- Department of Crop Sciences, Rothamsted International Research UK.
- State Key Laboratory of Plant Cell and Chromosome Engineering, Institute of Genetics and Developmental Biology, CAS, Beijing. China.
- Bread quality lab, International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat, Morocco.

THESIS TITLE OF MS STUDENTS

| # | Student Name | Thesis Title | MS/PhD | Supervisor / Co-Supervisor | Status: Registered / Completed |
|---|--------------|---|--------|----------------------------|--------------------------------|
| 1 | Hijab Waseem | Sensory evaluation of fortified breads | MS | Supervisor | Completed |
| 2 | Irum Hanif | Determination of Biochemical and Therapeutic Properties of Green Leafy Vegetables | MS | Supervisor | Completed |
| 3 | Rohma Naeem | Proximate Composition and Therapeutic Activities of Citrus Fruit Peels | MS | Supervisor | Completed |

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|----|-----------------|--|----|---------------|-------------------------------|
| 4 | Rida Bakhtawar | Determination of antioxidant and antimicrobial activity of Cannabis sativa and molecular docking studies of potential cannabinoids | MS | Supervisor | Completed |
| 5 | Aqsa Sajjad | Analysis of Biochemical and Physical Parameters of Commercially Grown Maize Hybrids. | MS | Supervisor | Completed |
| 6 | Shahneel Shafaq | Investigation of molecular mechanisms underlying wheat flour functionality | MS | Supervisor | Completed |
| 7 | Sadia Masood | Varietal Differences in Dietary Fibre Content of Wheat and its Relationship with Bread Quality Parameters | MS | Supervisor | Completed |
| 8 | Afifa Manzoor | Suitability of SRCs to Assess Protein and Bread Quality Parameters of Pakistani Wheat Varieties | MS | Supervisor | Completed |
| 9 | Rabia Ghaffar | Analysis of Proteins in Basmati Rice Seedlings Grown at Low Temperature | MS | Supervisor | Completed |
| 10 | Sadia Masood | Varietal differences in dietary fibre contents of wheat and its relationship to bread quality parameters | MS | Supervisor | Registered / thesis completed |
| 11 | Meerab Fatima | Isolation, Identification and analysis of xanthomonas oryzae specificity causing bacterial blight in rice | MS | Co-Supervisor | Completed |

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|----|----------------|--|----|---------------|------------|
| 12 | Zabia Akram | Protein Contents and Polymerization of Whole Meal Flour from Pakistani Wheat Varieties | MS | Supervisor | Completed |
| 13 | Zubaria Ishaq | Screening of Organochlorine Pesticide Residues in Milk Collected from Sahiwal Region | MS | Supervisor | Completed |
| 14 | Lubna Kanwal | Effect of Alpha-tocopherol succinate on kinematics, Mitochondrial Transmembrane Potential and DNA Integrity of Frozen thawed Buffalo Bull Spermatozoa. | MS | Supervisor | Completed |
| 15 | Naila Iqbal | Hypoglycemic and Anti Hypercholesteromic Effect of Aloe vera Leaf Extract in Alloxan Induced Diabetic Albino Rats | MS | Supervisor | Completed |
| 16 | Misbah Saeed | Comparison of Antibacterial Activities of Selected Lamiaceae Plant Essential oils with Antibiotics Used in Upper Respiratory Tract Infections | MS | Supervisor | Completed |
| 17 | Junaid Khalid | Comparative antifungal activity of the leaves and roots extracts of Solanum Xanthocarpum and Solanum nigrum | MS | Supervisor | Registered |
| 18 | Muhammad Nawaz | Incidence of foliar diseases of potato in Sahiwal division and its microscoping profiling | MS | Co-Supervisor | Completed |
| 19 | Umbreen Sardar | Computational Analysis of NIMIN proteins Interaction Network during SA Induced Response in <i>Arabidopsis thaliana</i> | MS | Co-Supervisor | Completed |

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|----|----------------|---|----|---------------|-----------|
| 20 | Yaqoot Sumbra | Toxic Effects of Chromium Metal on Plants, Animals, Soil and Human in Vicinity of Tannery Industries Located n Sahiwal Yaqoot Sumbra | MS | Co-Supervisor | Completed |
| 21 | Muhammad Nawaz | Incidence of foliar diseases of potato in Sahiwal division and its microscoping profiling | MS | Co-Supervisor | Completed |
| 22 | Linta Arshad | Molecular Profiling and Population Structure of Mulberry (Morus spp.) Genotypes | MS | Co-Supervisor | Completed |
| 23 | Nida Jabeen | Morphological, Biochemical and Molecular Analysis of Potato (Solanum tuberosum) Genotypes | MS | Co-Supervisor | Completed |

INTERNATIONAL STUDY VISITS

- Department of Food Science and Technology, University of Applied Sciences and Plant Biotechnology (BOKU), Vienna, Austria.
- Microscopy lab, University of Life Sciences, Copenhagen, Denmark.
- Department of Plant Breeding and Biotechnology, University of Applied Sciences and Plant Biotechnology (BOKU), Vienna, Austria.

REVIEWER/EDITORIAL MEMBERSHIP

- Member editorial Board of EC nutrition (International)
- Separations (International)
- Processes (International)
- Molecules (International)
- Food chemistry (International)
- Cereal Science (International)

- IJAB (International)
- Cereal Chemistry (International)
- Food Science (International)
- Pakistan journal of Botany (National)

COURSES TAUGHT

| Course Title | Credit Hours | PhD/Master/Undergrad | Students Feedback in %age |
|---|--------------|----------------------|---------------------------|
| Principles of Human Nutrition SP23 | 3(3, 0) | Undergrad | 94.5 |
| Nutrition in Emergency SP23 | 3(3, 0) | Undergrad | - |
| Food Fermentation and Biotechnology SP23 | 4(3, 1) | Undergrad | - |
| Nutritional requirement at different ages SP23 | 4(3, 1) | Undergrad | - |
| Nutrition in Emergency FA23 | 3(3, 0) | Undergrad | - |
| Introduction to Food Science and Nutrition FA23 | 3(3, 0) | Undergrad | - |
| Principles of Human Nutrition FA22 A | 3(3, 0) | Undergrad | - |
| Nutritional Counselling FA22 A | 3(3, 0) | Undergrad | - |
| Principles of Human Nutrition FA22 B | 3(3, 0) | Undergrad | - |
| Contemporary Nutrition FA22 B | 3(3, 0) | Undergrad | - |
| Principles of Human Nutrition SP22 A | 3(3, 0) | Undergrad | - |
| Nutrition in Emergency SP22 A | 3(3, 0) | Undergrad | - |
| Nutritional throughout life cycle SP22 B | 3(3, 0) | Undergrad | - |
| Cereal Sciences SP21 B5 A | 3(2, 1) | Undergrad | - |
| Cereal Sciences SP21 B5 B | 3(2, 1) | Undergrad | - |
| Nutritional Assesment SP21 B4 A | 3(2, 1) | Undergrad | - |
| Principles of Human Nutrition SP21 A | 3(3, 0) | Undergrad | - |
| Nutrition in Emergency FA21 B2 A | 3(3, 0) | Undergrad | - |
| Nutrition in Emergency FA21 B2 B | 3(3, 0) | Undergrad | - |
| Inherited Nutritional Disorders FA21 B7 | 3(3, 0) | Undergrad | - |
| Cereal Sciences FSN B2 A SP20 | 3(2, 1) | Undergrad | - |
| Food Chemistry Fall 19 | 3(3, 0) | Undergrad | - |
| Cereal Sciences FSN B2 B SP20 | 4(3, 1) | Undergrad | - |
| Principles of Human Nutrition B2 A Fall 19 | 3(3, 0) | Undergrad | - |
| Principles of Human Nutrition B2 B Fall 19 | 3(3, 0) | Undergrad | - |

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|-----------------------------|---------|-----------|---|
| Cereal Sciences FA20 | 3(2, 1) | Undergrad | - |
| Food Chemistry Fall 20 | 3(3, 0) | Undergrad | - |
| Environmental Biotechnology | 3(3, 0) | Masters | - |
| Report Writing and Seminar | 3(3, 0) | Masters | - |
| Environmental Microbiology | 3(3, 0) | Masters | - |
| Environmental Biotechnology | 3(3, 0) | Masters | - |

REFERENCES

1. Prof. Dr. Eva Johansson

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2. Prof. Dr. Peter Shewry

Department of Plant Sciences, Rothamsted International Research, Harpenden. UK

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