

CURRICULUM VITAE (CV)

Dr. Salman Freeh Alamery, Assistance Professor

PhD in Plant Molecular Biology and Genomics

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Profile

I have a great interest in genetic and genomics analysis including gene discovery and characterization, genetic mapping, NGS sequencing, comparative genomics and bioinformatics. I also have In-depth knowledge of various procedures and technologies adopted in molecular biology and biotechnology. Also I am interested to share these knowledge and skills with scientists, community and stakeholders in order to boost their role in economic based knowledge and contribute to Kingdom vision 2030

My research areas include:

- Functional genomics studies such as whole genome sequencing, gene annotations and comparative genomics.
- Identification and sequencing of candidate genes controlled plant resistance/tolerance by sequence variation analysis of unknown resistance genes among related species
- Investigation of the molecular basis of plant interactions and resistance/tolerance mechanisms by functional genomics approach and genetic transformation.
- Study the gene expression and transcriptome for plant resistance/tolerance, Including the role of mRNA transcript and small RNAs and regulation level of transcription
- Utilization of Gene cloning and expression systems for recombinant protein production and their therapeutics and economics uses
- Utilization of Bioinformatics for biological data mining and comparative studies.

EXPERTISE

Biochemistry
Molecular biology
Plant biotechnology
Plant genetics
Plant genomics
Bioinformatics

SKILLS

DNA extraction
Molecular Genetics
PCR and cloning
Genome Sequencing
Gene annotation
Genetic mapping and molecular marker
DNA sequencing
Protein Expression
Plant Cell Culture
Plant genetic transformation
RT-PCR and gene expression
Genotyping
Genetic diversity
SNP genotyping
Genetic analysis

EDUCATION (Qualifications)

2015 \ **Doctor of Philosophy Degree in Science** (4 years) , University of Queensland, Australia

Thesis topic: Genome wide identification of NBS-LRR genes in Brassica and their association with disease resistance in Brassica napus

2010 \ **Master of Science with honours** (2 years) Major: **Molecular biology and biotechnology**, Griffith University, Australia

Thesis topic: Development of SSR marker linked to PRSV-P resistance gene in papaya hybrids.

2005 \ **Bachelor of Science** (4 years) Major: **Biochemistry** \ King Saud University, Saudi Arabia

RESEARCH PROJECTS AND GRANTS

Funded Projects:

2017, Establishment of Research Group on “**Plant Genomics**” approved and supported by the Deanship of Scientific Research at King Saud University

2017, New faculty grants approved on project research “**Functional Expression of SUMO genes in Plants using Transcriptomic and Bioinformatics**” by the Deanship of Scientific Research at King Saud University

2018, Establishment of Research Group on “**Genes and Proteins**” approved and supported by the Deanship of Scientific Research at King Saud University

2018, Establishment of Research Group on “**Application of Bioinformatics in life sciences Application of Bioinformatics in life sciences**” approved and supported by the Deanship of Scientific Research at King Saud University

Submitted proposal for grants to KASCT & NPST

Cloning and Functional Expression Analysis of Multiple Abiotic Stresses Tolerant Genes in Saudi Wheat Varieties

Complete Genome Sequencing and Evolutionary Analysis of Human Respiratory Syncytial Virus strains from Riyadh, Saudi Arabia

Developing Multi-stress Tolerant Barley Varieties to Mitigate Climate Change using Genomic Approaches

Development of a protein folding biosensor to study protein misfolding diseases

EMPLOYMENT AND PROFESSIONAL EXPERIENCE

Research Assistant, 2005 to 2007 \ Biotechnology Research Centre King Abdul-Aziz City of Science and Technology

Demonstrator, 2007 to 2014 \ Teaching laboratories ,Biochemistry Department Science Collage, King Saud University

Assistant professor, 2015 to present \ Faculty member Biochemistry Department Science Collage King Saud University

Protein Research Chair member , 2015 to 2019 \Biochemistry Department Science Collage King Saud University

Director of centre of excellence of biotechnology research, 2016 to present Science Collage, King Saud University

Chairman of Biochemistry Department, March 2018 to March 2020 Science Collage, King Saud University

SUPERVISING AND MENTORING OF UNDERGRADUATE AND GRADUATE STUDENTS

- BCH 497 project, Yazeed Faisal Al-Harbi, In silico analysis of mutations associated with improving the thermostable DNA polymerase activity, 2016-17
- BCH 497 project, Ziyad Mohammad Alateaq, Sequence comparison of different thermostable DNA polymerases for bacteria and archaea, 2016-17
- BCH 497 project, Suliman Alsohail , Determination of activity of antioxidant enzymes in different turfgrasses under normal conditions, 2017-18
- Involved in monitoring a student at KSU Distinguished and Talented Students Program

POST GRADUATE STUDENT SUPERVISION

Student	Thesis title	
Esraa Shabab Almalki	Assessing the Anti-Carcinogenic Effect of Curcumin Analog (PAC) by Modulating DNA Damage Signaling Pathway Gene Expression in Human Breast Cancer	Completed
Reem Ibrahim Al-Rashed	Effect of Anethole on the Physiological Responses by Modulating Specific EGFR Pathways in Human Breast and Colon Cancer Cells	Completed
Safiah Almushawwah	Association between XPA and XPC Genes Polymorphism and Smoking in Saudi Population	Ongoing
Nasser Abobakr Lakhrm	Genotyping And Genome Sequencing Of Human Respiratory Syncytial Virus Strains From Riyadh, Saudi Arabia	Ongoing
Mohammed Abdulkarim Alshehri	Assessment of the effect of metal nanoparticles on the structure-function of the proteins	Ongoing
Anwar Jamal Abdul Nasir	proinflammatory cytokines gene expression in liver and kidneys of rats exposed to Bitis arietans snake venom	Ongoing

Anfal Hussain Fahad Alajmi	Molecular basis of regulation of cancer progression by Pozitotinib and its combination with Olmutinib	Ongoing
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SCIENTIFIC ACHIEVEMENT

<i>h</i> index:8	Total Citations: 1489	Total publications: 36
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PUBLICATIONS

- [1] Alamery, S., “Development of a Co-dominant Microsatellite Marker for a PRSV-P Resistance Gene in Intergeneric Hybrids Between Carica Papaya and Vasconcellea Quercifolia,” Griffith University, 2010.
- [2] Alamery, S., and Drew, R., 2014. Studies on the genetics of PRSV-P resistance genes in intergeneric hybrids between Carica papaya and Vasconcellea quercifolia, Acta Hort. (ISHS). 1022, no. 1, pp. 55-61,
- [3] Chalhoub, B., Denoeud, F., Liu, S., Parkin, I. A., Tang, H., Wang, X., Chiquet, J., Belcram, H., Tong, C., and Samans, B., 2014. Early allopolyploid evolution in the post-Neolithic Brassica napus oilseed genome, Science. 345, no. 6199, pp. 950-953,
- [4] Dalton-Morgan, J., Hayward, A., Alamery, S., Tollenaere, R., Mason, A. S., Campbell, E., Patel, D., Lorenc, M. T., Yi, B., and Long, Y., 2014. A high-throughput SNP array in the amphidiploid species Brassica napus shows diversity in resistance genes, Functional & Integrative Genomics. 14, no. 4, pp. 643-655,
- [5] Raman, H., Dalton-Morgan, J., Diffey, S., Raman, R., Alamery, S., Edwards, D., and Batley, J., 2014. SNP markers-based map construction and genome-wide linkage analysis in Brassica napus, Plant Biotechnology Journal. 12, no. 7, pp. 851-860,
- [6] Ahmed, A., Parveen, S., Al-Hassinah, S. M., and Al-Amery, S. F., 2018. An overview of respiratory syncytial virus infections in Saudi Arabia, The Journal of Infection in Developing Countries. 12, no. 11, pp. 929-936,
- [7] Alamery, S., Tirnaz, S., Bayer, P., Tollenaere, R., Chaloub, B., Edwards, D., and Batley, J., 2018. Genome-wide identification and

- comparative analysis of NBS-LRR resistance genes in *Brassica napus*, *Crop and Pasture Science*. 69, no. 1, pp. 72-93,
- [8] Khan, M. S., Bhat, S. A., Rehman, M. T., Hassan, I., Tabrez, S., AlAjmi, M. F., Hussain, A., Husain, F. M., and Alamery, S. F., 2018. Rutin attenuates negatively charged surfactant (SDS)-induced lysozyme aggregation/amyloid formation and its cytotoxicity, *International journal of biological macromolecules*. 120, pp. 45-58,
 - [9] Khan, S., Al-Senaigy, A., Bacha, B., and Alamery, S., 2018. An efficient methodology for the purification of date palm peroxidase: Stability comparison with horseradish peroxidase (HRP), *Saudi Journal of Biological Sciences*. 26, no. 2, pp. 301-307,
 - [10] Malik, A., Khan, J. M., Alamery, S. F., Fouad, D., Labrou, N. E., Daoud, M. S., Abdelkader, M. O., and Ataya, F. S., 2018. Monomeric *Camelus dromedarius* GSTM1 at low pH is structurally more thermostable than its native dimeric form, *PLoS ONE*. 13, no. 10, pp. e0205274,
 - [11] Al-Bagmi, M. S., Khan, M. S., Ismael, M. A., Al-Senaigy, A. M., Bacha, A. B., Husain, F. M., and Alamery, S. F., 2019. An efficient methodology for the purification of date palm peroxidase: Stability comparison with horseradish peroxidase (HRP), *Saudi Journal of Biological Sciences*. 26, no. 2, pp. 301-307,
 - [12] Al-Shabib, N. A., Khan, J. M., Malik, A., Sen, P., Ramireddy, S., Chinnappan, S., Alamery, S. F., Husain, F. M., Ahmad, A., and Choudhry, H., 2019. Allura red rapidly induces amyloid-like fibril formation in hen egg white lysozyme at physiological pH, *International journal of biological macromolecules*. 127, pp. 297-305,
 - [13] Azum, N., Ahmed, A., Rub, M. A., Asiri, A. M., and Alamery, S. F., 2019. Investigation of aggregation behavior of ibuprofen sodium drug under the influence of gelatin protein and salt, *Journal of Molecular Liquids*. 290, pp. 111187,
 - [14] Hussain, T., Al-Attas, O. S., Alamery, S., Ahmed, M., Odeibat, H. A., and Alrokayan, S., 2019. The plant flavonoid, fisetin alleviates cigarette smoke-induced oxidative stress, and inflammation in Wistar rat lungs, *Journal of food biochemistry*. 43, no. 8, pp. e12962,
 - [15] Hussain, T., Naushad, S. M., Ahmed, A., Alamery, S., Mohammed, A. A., Abdelkader, M. O., and Alkharm, N. A. N., 2019. Association of vitamin D receptor TaqI and ApaI genetic polymorphisms with nephrolithiasis and end stage renal disease: a meta-analysis, *BMC Medical Genetics*. 20, no. 1, pp. 193,

- [16] Khan, H. A., Alamery, S., Ibrahim, K. E., El-Nagar, D. M., Al-Harbi, N., Rusop, M., and Alrokayan, S. H., 2019. Size and time-dependent induction of proinflammatory cytokines expression in brains of mice treated with gold nanoparticles, *Saudi journal of biological sciences*. 26, no. 3, pp. 625-631,
- [17] Khan, J. M., Ahmed, A., Alamery, S. F., Farah, M. A., Hussain, T., Khan, M. I., Khan, R. H., Malik, A., Fatima, S., and Sen, P., 2019. Millimolar concentration of sodium dodecyl sulfate inhibit thermal aggregation in hen egg white lysozyme via increased α -helicity, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 572, pp. 167-173,
- [18] Khan, J. M., Malik, A., Ahmed, A., Rehman, M. T., AlAjmi, M. F., Khan, R. H., Fatima, S., Alamery, S. F., and Abdullah, E. M., 2019. Effect of cetyltrimethylammonium bromide (CTAB) on the conformation of a hen egg white lysozyme: A spectroscopic and molecular docking study, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*. 219, pp. 313-318,
- [19] Khan, J. M., Malik, A., Sen, P., Ahmed, A., Ahmed, M., Alamery, S. F., Almaharfi, H. A., Choudhry, H., and Khan, M. I., 2019. Different conformational states of hen egg white lysozyme formed by exposure to the surfactant of sodium dodecyl benzenesulfonate, *International journal of biological macromolecules*. 128, pp. 54-60,
- [20] Khan, M. S., Rehman, M. T., Bhat, S. A., Tabrez, S., Hussain, A., Husain, F. M., AlAjmi, M. F., Alamery, S. F., and Sumbul, S., 2019. Food additive dye (quinoline yellow) promotes unfolding and aggregation of myoglobin: A spectroscopic and molecular docking analysis, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*. 214, pp. 216-226,
- [21] Kotb, A., Ismail, S., Kimito, I., Mohamed, W., Salman, A., and Mohammed, A. A., 2019. Increased CD5+ B-cells are associated with autoimmune phenomena in lepromatous leprosy patients, *Journal of infection and public health*. 12, no. 5, pp. 656-659,
- [22] Abdelaal, K. A., Attia, K. A., Alamery, S. F., El-Afry, M. M., Ghazy, A. I., Tantawy, D. S., Al-Doss, A. A., El-Shawy, E.-S. E., M Abu-Elsaoud, A., and Hafez, Y. M., 2020. Exogenous application of proline and salicylic acid can mitigate the injurious impacts of drought stress on barley plants associated with physiological and histological characters, *Sustainability*. 12, no. 5, pp. 1736,

- [23] Abdullah, E. M., Haq, S. H., Ahmed, M. A., Khan, J. M., Alamery, S. F., and Malik, A., 2020. Structural stability and solubility of glycated camel lens ζ -crystallin, *International Journal of Biological Macromolecules*,
- [24] Alanazi, I., Alamery, S., Ebrahimie, E., and Mohammadi-Dehcheshmeh, M. M., 2020. Splice-disrupt genomic variants in prostate cancer: Association of some splice-disrupt variants with advanced prostate cancer, *Authorea Preprints*,
- [25] Al-Hassinah, S., Parveen, S., Somily, A. M., AlSaadi, M. M., Alamery, S. F., Haq, S. H., Alsenaidy, H. A., and Ahmed, A., 2020. Evolutionary analysis of the ON1 genotype of subtype a respiratory syncytial virus in Riyadh during 2008–16, *Infection, Genetics and Evolution*. 79, pp. 104153,
- [26] Al-Shabib, N. A., Khan, J. M., Malik, A., Rehman, M. T., AlAjmi, M. F., Husain, F. M., Ahmed, M. Z., and Alamery, S. F., 2020. Molecular interactions of food additive dye quinoline yellow (Qy) with alpha-lactalbumin: Spectroscopic and computational studies, *Journal of Molecular Liquids*, pp. 113215,
- [27] Hafez, Y., Attia, K., Alamery, S., Ghazy, A., Al-Doss, A., Ibrahim, E., Rashwan, E., El-Maghraby, L., Awad, A., and Abdelaal, K., 2020. Beneficial Effects of Biochar and Chitosan on Antioxidative Capacity, Osmolytes Accumulation, and Anatomical Characters of Water-Stressed Barley Plants, *Agronomy*. 10, no. 5, pp. 630,
- [28] Hafez, Y. M., Attia, K. A., Kamel, S., Alamery, S. F., El-Gendy, S., Al-Doss, A. A., Mehia, F., Ghazy, A. I., Mohammed, A., and Abdelaal, K. A., 2020. *Bacillus subtilis* as a bio-agent combined with nano molecules can control powdery mildew disease through histochemical and physiobiochemical changes in cucumber plants, *Physiological and Molecular Plant Pathology*, pp. 101489,
- [29] Hashim, U. R., Jumahat, A., Jawaid, M., Dungani, R., and Alamery, S., 2020. Effects of Accelerated Weathering on Degradation Behavior of Basalt Fiber Reinforced Polymer Nanocomposites, *Polymers*. 12, no. 11, pp. 2621,
- [30] Khan, H. A., Ibrahim, K. E., Alrashood, S. T., Alamery, S., Alrokayan, S. H., Al-Harbi, N., Al-Mutary, M. G., Sobki, S. H., and Khan, I., 2020. Immunohistochemistry of IL-1 β , IL-6 and TNF- α in spleens of mice treated with gold nanoparticles, *Saudi Journal of Biological Sciences*,
- [31] Khan, J. M., Ahmed, A., Alamery, S. F., Alghamdi, O. H. A., Azmi, S., and Malik, A., 2020. Perturbation of anionic surfactant induced

- amyloid fibrillation by chemical chaperone:
A biophysical study, *Journal of Molecular Liquids*. 315, pp. 113717,
- [32] Nasreen, K., Parray, Z. A., Ahamad, S., Ahmad, F., Ahmed, A., Freeh Alamery, S., Hussain, T., Hassan, M., and Islam, A., 2020. Interactions Under Crowding Milieu: Chemical-Induced Denaturation of Myoglobin is Determined by the Extent of Heme Dissociation on Interaction with Crowders, *Biomolecules*. 10, no. 3, pp. 490,
- [33] Salman, A., Kotb, A., Ghazy, A. I., Ibrahim, E. I., and Al-Ateeq, T. K., 2020. Structural and functional characterization of Tomato SUMO1 gene, *Saudi Journal of Biological Sciences*. 27, no. 1, pp. 352-357,
- [34] Zargar, S., Alamery, S., Bakheit, A. H., and Wani, T. A., 2020. Poziotinib and bovine serum albumin binding characterization and influence of quercetin, rutin, naringenin and sinapic acid on their binding interaction, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, pp. 118335,