CURRICULUM VITAE
Dr. Amal Majed H. Alenad

Current Position: Associate Professor
Present Address: Department of Biochemistry, College of Science, King Saud University.
e-Mail Address: aalenad@ksu.edu.sa

Academic Qualifications and Research:

1- Postdoctoral research fellow, September 2015 - September 2016, in project entitled Molecular & Cellular Proteomics Analysis Using Quantitative Mass Spectrometry. Proteomics Unit for Cancer Sciences, Centre for Proteomics Research, Institute for Life Science, Southampton, UK.

2- Postdoctoral research fellow, October 2012 - September 2013, in project entitled Epigenetic Therapeutics of Prostate Cancer. Cancer Research Centre, Cancer Sciences Unit, Faculty of Medicine, Southampton General Hospital, Southampton, UK.

3- PhD awarded in May 2012 in Epigenetic entitled 'The Role of DNA methyltransferases in Fetal Programming', University of Southampton, UK.

4- BSc in Biochemistry, 2005, King Saud University, Saudi Arabia.

5- Diploma in Science and Mathematics Junior Education, 1993, Aljouf Collage of Junior Education, Saudi Arabia.

Membership of Scientific Associations:

1- British Biochemical Society
2- DoHAD Society

Research Interests:

A- Epigenetic mechanisms in health and disease.
B- Epigenetics and the developmental origins of chronic diseases.
C- Nutritional Epigenetic and chronic diseases prediction.
D- Epigenetic markers and disease prevention.
E- Gene-environment interaction.
F- Epigenetics and drug development.
G- Epigenetic and Bioinformatics.

Techniques Proficiency

1- Cell Cultures
2- Embryonic Stem Cell Cultures
3- PCR and RT-PCR
4- Methylation – Sensitive PCR
5- Methylation Analysis by Pyrosequencing
6- cDNA Microarray
7- Immunoprecipitation –ChIP assay
8- Cloning and Transfection
9- Luciferase Assay

10- Site Directed Mutagenesis
11- DNA and RNA Isolation
12- cDNA synthesis
13- Bisulfite Conversion of DNA
14- Major Biochemical and Molecular Biology Techniques

Chapter Books publication

1- Alokail MS and AM Alenad; DNA Methylation; A Concise Review of Molecular Pathology of Breast Cancer. Edited by M, Gunduz, Publisher by InTech, ISBN 978-953-51-2030-8, PP 27-56, 2015. (More than 1000 International downloaded)

Scientific Papers Contribution:

1- **Alenad AM**, Alkaltham LF, Sabico S, Khattak MNK, Wani K, Al-Daghri NM, Alokail MS. Associations of zinc-α-2-glycoprotein with metabolic syndrome and its components among adult Arabs. Sci Rep. 2022 Mar 22;12(1):4908.
doi: 10.1038/s41598-022-09022-1.

2- Almutairi GO, Malik A, Alonazi M, Khan JM, Alhomida AS, Khan MS, **Alenad AM**, Altwaijry N, Alafaleq NO. Expression, purification, and biophysical characterization of recombinant MERS-CoV main (Mpro) protease. Int J Biol Macromol. 2022 Jun 1;209(Pt A):984-990.
doi: 10.1016/j.ijbiomac.2022.04.077.

3- Khan MS, Althobaiti MS, Almutairi GS, Alokail MS, Altwaijry N, **Alenad AM**, Al-Bagmi MS, Alafaleq NO. Elucidating the binding and inhibitory potential of p-coumaric acid against amyloid fibrillation and their cytotoxicity: Biophysical and docking analysis. Biophys Chem. 2022 May 11:106823.
doi: 10.1016/j.bpc.2022.106823.

4- Khan MS, Alokail MS, **Alenad AMH**, Altwaijry N, Alafaleq NO, Alamri AM, Zawba MA. Binding Studies of Caffeic and p-Coumaric Acid with α-Amylase: Multispectroscopic and Computational Approaches Deciphering the Effect on Advanced Glycation End Products (AGEs). Molecules. 2022 Jun 21;27(13):3992.
doi: 10.3390/molecules27133992.

5- **Amal Majed Alenad**. DNA Methylation Analysis of the Hippo signalling Pathway Core Component Genes in Breast Cancer Cells. Medical Science and Discovery. 2022; 9(2):126-131.
http://dx.doi.org/10.36472/msd.v9i2.688

6- Ghadeer M. Aldawsar, Shaun Sabico, Abir A. Alamro, Amal Alenad, Kaiser Wani, Abdullah M. Alnaami, Malak N. K. Khattak, Mohammad S. Masoud, Nasser M. Al-Daghri and Majed S. Alokail. Angiogenin Levels and Their Association with Cardiometabolic Indices Following Vitamin D Status Correction inSaudi Adults. Biology 2022; 11(2): 286. https://doi.org/10.3390/biology11020286

7- Saba Abdi, Abeer Abdulaziz Almiman, Mohammed Ghouse Ahmed Ansari, Abdullah M. Alnaami, Abdul Khader Mohammed, Naji J. Aljohani, **Amal Alenad**, Amani Alghamdi, Majed S. Alokail, and Nasser M. Al-Daghri. PTHR1 Genetic Polymorphisms Are Associated with Osteoporosis among Postmenopausal Arab Women. BioMed Research International. 2021;8

8- **Alenad, A. M**. Epigenetic Regulation of the Tumour Suppressor RASSF1A in Bone Cancer Cells: DNA Methylation Study. *Medical Science and Discovery*. 2021; *8*(8), 453-459. https://doi.org/10.36472/msd.v8i8.569

9- M Al-Daghri N, Abd-Alrahman S, Wani K, Krishnaswamy S, **Alenad A**, Hassan MA, S Al-Attas O, Alokail MS. Strong parent-child correlation in circulating vitamin B12 levels and its association with inflammatory markers in Saudi families. Int J Vitam Nutr Res. 2020 Oct; 90(5-6):430-438. doi: 10.1024/0300-9831/a000585.

10- **Alenad A**, Alenezi MM, Alokail MS, Wani K, Mohammed AK, Alnaami AM, Sulimani M, Zargar S, Clerici M, Al-Daghri NM. Association of ANGPTL8 (Betatrophin) Gene Variants with Components of Metabolic Syndrome in Arab Adults.. Sci Rep. 2020 Apr 21; 10(1):6764. doi: 10.1038/s41598-020-63850-7.

11- Al-Daghri NM, Wani K, Yakout SM, Al-Hazmi H, Amer OE, Hussain SD, Sabico S, Ansari MGA, Al-Musharaf S, **Alenad AM**, Alokail MS, Clerici M. Favorable Changes in Fasting Glucose in a 6-month Self-Monitored Lifestyle Modification Programme Inversely Affects Spexin Levels in Females with Prediabetes. Sci Rep. 2019 Jul 1;9(1):9454.

12- Manousopoulou A, Al-Daghri NM, Sabico S, Garay-Baquero DJ, Teng J**, Alenad A**, Alokail MS, Athanasopoulos N, Deligeoroglou E, Chrousos GP, Bacopoulou F, Garbis SD. Polycystic Ovary Syndrome and Insulin Physiology: An Observational Quantitative Serum Proteomics Study in adolescent, Normal-Weight Females. Proteomics Clin Appl. 2019 Apr 9:e1800184.

13- Al-Daghri NM, Abd-Alrahman S, Wani K, Krishnaswamy S, **Alenad A**, Hassan MA, S Al-Attas O, Alokail MS. Strong Parent-Child Correlation in Circulating Vitamin B12 levels and Its Association with Inflammatory Markers in Saudi Families. Int J Vitam Nutr Res. 2019 Apr 1:1-9.

14- Al-Daghri NM, Mohammed AK, Bukhari I, Rikli M, Abdi S, Ansari MGA, Sabico S, Hussain SD, Al-Saleh Y, **Alenad A**, Alokail MS. Efficacy of

vitamin D supplementation according to vitamin D binding protein polymorphisms. Nutrition. 2019 Feb;63-64:148-154.

15- Al-Daghri NM, Sabico S, Al-Hazmi H, **Alenad AM**, Al-Amro A, Al-Ghamdi A, Hussain SD, Chrousos G, Alokail MS. Circulating spexin levels are influenced by the presence or absence of gestational diabetes. Cytokine. 2019 Jan;113:291-295.

16- Al-Daghri NM, Manousopoulou A, Alokail MS, Yakout S, **Alenad A**, Garay-Baquero DJ, Fotopoulos M, Teng J, Al-Attas O, Al-Saleh Y, Sabico S, Chrousos GP, Garbis SD. Sex-specific correlation of IGFBP-2 and IGFBP-3 with vitamin D status in adults with obesity: a cross-sectional serum proteomics study. Nutr Diabetes. 2018 Oct 4;8(1):54.

17- Al-Daghri NM, **Alenad A**, Al-Hazmi H, Amer OE, Hussain SD, Alokail MS. Spexin Levels Are Associated with Metabolic Syndrome Components. Dis Markers. 2018 Sep 4;2018:1679690.

18- Al-Daghri NM, Mohammed AK, Al-Attas OS, Amer OE, Clerici M, **Alenad A**, Alokail MS. SNPs in FNDC5 (irisin) are associated with obesity and modulation of glucose and lipid metabolism in Saudi subjects. Lipids Health Dis. 2016 Mar 11;15:54.

19- Al-Daghri NM, Costa AS, Alokail MS, Zanzottera M, **Alenad** AM, Mohammed AK, Clerici M, Guerini FR. Synaptosomal Protein of 25 kDa (Snap25) Polymorphisms Associated with Glycemic Parameters in Type 2 Diabetes Patients. J Diabetes Res. 2016;2016:8943092.

20- Al-Daghri NM, Al-Attas OS, Krishnaswamy S, Yakout SM, Mohammed AK, **Alenad** AM, Chrousos GP, Alokail MS. Association between promoter region genetic variants of PTH SNPs and serum 25(OH)-vitamin D level. Int J Clin Exp Pathol. 2015 Jul 1;8(7):8463-71.

21- Al-Daghri NM, Al-Attas OS, Krishnaswamy S, Mohammed AK, **Alenad** AM, Chrousos GP, Alokail MS. Association of Type 2 Diabetes Mellitus related SNP genotypes with altered serum adipokine levels and metabolic syndrome phenotypes. Int J Clin Exp Med. 2015 Mar 15;8(3):4464-71.

22- Alokail MS, Al-Daghri NM, Mohammed AK, Vanhoutte P, **Alenad** A. Increased TNF α, IL-6 and ErbB2 mRNA expression in peripheral blood leukocytes from breast cancer patients. Med Oncol. 2014 Aug;31(8):38.

23- Al-Daghri NM, Al-Attas OS, Alkharfy KM, Khan N, Mohammed AK, Vinodson B, Ansari MG, **Alenad** A, Alokail MS. Association of VDR-gene variants with factors related to the metabolic syndrome, type 2 diabetes and vitamin D deficiency. Gene. 2014 Jun 1;542(2):129-33.

24- Al-Daghri NM, Alkharfy KM, Al-Attas OS, Krishnaswamy S, Mohammed AK, Albagha OM, **Alenad** AM, Chrousos GP, Alokail MS. Association between

type 2 diabetes mellitus-related SNP variants and obesity traits in a Saudi population. Mol Biol Rep. 2014 Mar;41(3):1731-40.

25- Al-Daghri NM, Alkharfy KM, Alokail MS, **Alenad** AM, Al-Attas OS, Mohammed AK, Sabico S, Albagha OM. Assessing the contribution of 38 genetic loci to the risk of type 2 diabetes in the Saudi Arabian Population. Clin Endocrinol (Oxf). 2014 Apr;80(4):532-7.

26- Alokail M and Alenad A. Methylation of hippo pathway genes in bone, kidney, breast and prostate cancer cells. FASEB Journal. April 1,2014, 991.1.

27- Alokail MS, Al-Daghri N, Abdulkareem A, Draz HM, Yakout SM, Alnaami AM, Sabico S, **Alenad** AM, Chrousos GP. Metabolic syndrome biomarkers and early breast cancer in Saudi women: evidence for the presence of a systemic stress response and/or a pre-existing metabolic syndrome-related neoplasia risk? BMC Cancer. 2013 Feb 4;13:54.

28- **Alenad AM** and Alokail MS. Nanoparticles: Promising Tools for Genomic Application. Arabian Journal of Chemistry. 2008; 1(1): 83-91.

Poster or Oral Presentation in Conferences

1- **Alenad AM**, Homocysteine induces Dnmt1 transcription through the cAMP response element in the Dnmt1 promoter. Poster presentation in the Experimental Biology Annual Meeting, 28March-1 April 2015. Boston, USA,
2- **Alenad AM** and Alokail MS, Tumor suppressor hippo pathway methylation in bone, breast, kidney and prostate. Poster presentation in the keystone Symposia meeting on Epigenetics and Cancer. Keystone, Colorado, USA, 25-30 January 2015.
3- **Alenad AM** and Alokail MS, Epigenetic Investigation of Hippo Pathway in Bone, Breast and Prostate cancer cell lines. Poster presentation in the Annual Symposium: Epigenetic mechanisms in development and disease. Leeds, UK, 2012.
4- K. Lillycro*p*, **Alenad AM**., *et al*., Maternal Protein Restriction Decreases Global Histone H3 K27 Methylation in the Liver of Adult Offspring through the Altered Expression of Specific microRNAs. 7th World Congress on Developmental Origins of Health and Disease 18-21 September 2011, Portland, Oregon, USA
5- **Alenad AM**, Dose DNA methyltransferase 1 (Dnmt1) play a role in fetal programming. Oral presentation in the postgraduate annual conference of the Medicine, Health and life Sciences, University of Southampton,UK, 2009.
6- K. Lillycrop, **Alenad AM**., *et al.,* Epigenetics and developmental origion of health and disease. From genome to epigenome, Annual Meeting of Experimental Biology. S407, pp.10, 18-22, April, 2009. New Orleans, USA.

7- **Alenad AM,** The Effect of Maternal diet on Gene Expression within the Offspring. Poster presentation in the postgraduate annual conference of the Medicine, Health and life Sciences, University of Southampton,UK, 2008.

Conferences attendance

1- The postgraduate annual conference of the Medicine, Health and life Sciences, University of Southampton, 2007.
2- Nutrition society Annual meeting, University of Nottingham, 30 June – 3 July, 2008.
3- The epigenetic mechanisms in health and disease-from biology to medicine, Oxford, 13-14, November, 2009.