Said El Shamieh, PhD.
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PROFESSIONAL EXPERIENCE

2020-2021: Scientific Consultant, Digitsole® Company, Nancy, Lorraine, France.

2019-Present: Associate Professor of Human Genetics, Faculty of Health Sciences, Beirut Arab University, Beirut, Lebanon.

2016-2019: Assistant Professor of Human Genetics, Faculty of Health Sciences, Beirut Arab University, Beirut, Lebanon.

2015-2016: Part-time assistant professor, Faculty of Sciences, University of Balamand, Souk El Gharb, Lebanon.

2012-2014: Postdoctoral Fellow at the *Institut de La Vision*, *Sorbonnes Universités*, Paris, France.

2009-2012: Graduate teaching, Faculty of Pharmacy, *Université de Lorraine*, Nancy, France.

EDUCATION

2009-2012: PhD in Health and Life Sciences, *Université de Lorraine*, Nancy, France.

2007-2009: M.Sc. in Molecular, Structural and Cellular Biology, *Université Henri Poincaré*, Nancy, France.

2003-2007: Bachelor degree in Laboratory sciences, Lebanese University, Lebanon.

PUBLICATIONS

1. Jaffal L, Ibrahim M, **El Shamieh S**. Analysis of rod-cone dystrophy genes reveals unique mutational patterns. **BMJ Open Science.** 2022.
2. **El Shamieh S** and Maltese PE. Editorial: The genetics of inherited retinal diseases in understudied ethnic groups: novel associations, challenges, and perspectives. **Frontiers in Genetics.** 2022.
3. Maltese PE, Colombo L, Martella S, Rossetti L, **El Shamieh S**, Sinibaldi L, Passarelli C, Coppè AM, Buzzonetti L, Falsini B, Chiurazzi P, Placidi G, Tanzi B, Bertelli M, Iarossi G. Genetics of Inherited Retinal Diseases in Understudied Ethnic Groups in Italian Hospitals. **Frontiers in Genetics**. 2022.
4. Jaffal L, Akhdar H, Joumaa H, Ibrahim M, Chhouri Z, Assi A, Helou C, Lee H, Seo GH,Joumaa W**, El Shamieh S**. Novel missense and splice site mutations in USH2A, CDH23, PCDH15 and ADGRV1 are associated with USHER Syndrome in Lebanon. **Frontiers in Genetics**. 2022.
5. Jaffal L, Mrad Z, Ibrahim M, Salami A, Audo I, Zeitz C, **El Shamieh S**. The research output of rod-cone dystrophy genetics. **Orphanet Journal of Rare Diseases**. 2022.
6. Vitamin D Related Gene Polymorphisms and Cholesterol Levels in a Mediterranean Population. Fakhoury HMA, **El Shamieh S**, Rifai A, Tamim H, Fakhoury R. **Journal of Cardiovascular Development and Diseases**. 2022.

7 Chedid P, Salami A, Ibrahim M, Visvikis-Siest S, **El Shamieh S**. The association of vascular endothelial growth factor related SNPs and circulating iron levels might depend on body mass index. **Front Biosci (Landmark Ed)**, 2022.

8 Smirnov VM, Nassisi M, Solis Hernandez C, Méjécase C, **El Shamieh S**, Condroyer C, Antonio A, Meunier I, Andrieu C, Defoort-Dhellemmes S, Mohand-Said S, Sahel JA, Audo I, Zeitz C. Retinal Phenotype of Patients With Isolated Retinal Degeneration Due to CLN3 Pathogenic Variants in a French Retinitis Pigmentosa Cohort. **JAMA Ophthalmololgy**. 2021.

9 Zeitz C, Nassisi M, Laurent-Coriat C, Andrieu C, Boyard F, Condroyer C, Démontant V, Antonio A, Lancelot ME, Frederiksen H, Kloeckener-Gruissem B, **El Shamieh S**, Zanlonghi X, Meunier I, Roux AF, Mohand-Saïd S, Sahel JA, Audo I. CHM mutation spectrum and disease: an update at the time of human therapeutic trials. **Human Mutation.** 2021.

10 **El Shamieh S** and Zgheib N. Pharmacogenetics in developing countries and low resource environments. **Human Genetics**, 2021.

11 **El Shamieh S†**, Salami A, Fawaz M, Jounblat R, Waked M, Fakhoury R. rs6837671A>G in FAM13A Is a Trans-Ethnic Genetic Variant Interacting with Vitamin D Levels to Affect Chronic Obstructive Pulmonary Disease. **Journal of Personalized Medicine**, 2021.

12 Jaffal L, Joumaa H, Mrad Z, Zeitz C, Audo I, **El Shamieh, S**. Genetics of rod-cone dystrophy in the Arab World. **European Journal of Human Genetics**, 2020.

13 Chedid P, Salami A, **El Shamieh S†.** The Association of rs1898830 in Toll-Like Receptor 2 with Lipids and Blood Pressure. **J Cardiovasc Dev Dis**. 2020.

14 El Ghoch M, **El Shamieh S**. Is There a Link Between Nutrition, Genetics, and Cardiovascular Disease? **J Cardiovasc Dev Dis**. 2020.

15 **El Shamieh S†**, Salami A, Stathopoulou MG, Chedid P, Visvikis-Siest S. Increased risk of hypercholesterolemia in a French and Lebanese population due to an interaction between rs2569190 in CD14 and gender. **Clinica Chimica Acta**. 2020.

16 Naja K, Salami A, **El Shamieh S†**, Fakhoury R†. rs622342 in SLC22A1, CYP2C9*2 and CYP2C9*3 and Glycemic Response in Individuals with Type 2 Diabetes Mellitus Receiving Metformin/Sulfonylurea Combination Therapy: 6-Month Follow-Up Study. **J Pers Med.** 2020.

17 **El Shamieh S**,Stathopoulou MG, Bonnefond A, Ndiaye NC, Lecoeur C, Meyre D, Dadé S, Chedid P, Salami A, Shahabi P, Dedoussis G, Froguel P, Visvikis-Siest S. Obesity status modifies the association between rs7556897T>C in the intergenic region SLC19A3-CCL20 and blood pressure in French children. **Clinical Chemistry and Laboratory Medicine**. 2020.

18 Moussa S, Saleh F, **El Shamieh S**, Assi T, Othman A, Farhat F. Detection of PIK3R1 (L449S) Mutation in a Patient with Ovarian Cancer: A Case Report. **Case Reports in Oncology** 2020.

19 Jaffal, L.; Joumaa, W.H.; Assi, A.; Helou, C.; Cherfan, G.; Zibara, K.; Audo, I.; Zeitz, C.; **El Shamieh, S†**. Next Generation Sequencing Identifies Five Novel Mutations in Lebanese Patients with Bardet–Biedl and Usher Syndromes. **Genes** 2019.

20 Salami A, Costanian C, **El Shamieh S†**. rs2569190A>G in CD14 is Independently Associated with Hypercholesterolemia: A Brief Report. **Journal of Cardiovascular Development and Diseases**. 2019.

21 Naja K, **El Shamieh S**[†], Fakhoury R. rs622342A>C in SLC22A1 is associated with metformin pharmacokinetics and glycemic response. **Drug Metabolism and Pharmacokinetics**, 2019.

22 Masri I, Salami I, **El Shamieh S**[†]**,** Bissar Tadmouri[†] N. rs3851179G>A in PICALM is protective against Alzheimer's disease in five different countries surrounding the Mediterranean. **Current Aging Science**, 2019.

23 Boulanger-Scemama E, Mohand-Saïd S, **El Shamieh S**, Démontant V, Condroyer C, Antonio A, Michiels C, Boyard F, Saraiva JP, Letexier M, Sahel JA, Zeitz C, Audo I. Phenotype Analysis of Retinal Dystrophies in Light of the Underlying Genetic Defects: Application to Cone and Cone-Rod Dystrophies. **International Journal of Molecular Sciences**. 2019.

24 Salami A, **El Shamieh S**[†]. Association between SNPs of Circulating Vascular Endothelial Growth Factor Levels, Hypercholesterolemia and Metabolic Syndrome. **Medicina**. 2019.

25 Gorenjak V, Vance D.R, Petrelis A, Stathopoulou MG, Dadé S, **El Shamieh S**, Murray H, Masson C, Lamont J, Fitzgerald P, Visvikis-Siest S. Peripheral blood mononuclear cells extracts VEGF protein levels and VEGF mRNA: Associations with inflammatory molecules in a healthy population. **PLoS ONE**. 2019.

26 **El Shamieh S**[*], Saleh F*, Assaad S, Farhat F. Next generation sequencing reveals a nonsense mutation in RB1 that may promote chemo-resistance to palbociclib in ovarian cancer. **Drug Metabolism & Personalized Therapy.** 2019.

27 Jaffal L, Joumaa W, Assi A, Helou C, Condroyer C, El Dor M, Cherfan G, Zeitz C, Audo I, Zibara K, **El Shamieh S**[†]. Novel missense mutations in BEST1 are associated with bestrophinopathies in Lebanese patients. **Genes**, 2019.

28 Assaad S, Costanian C, Jaffal L, Tannous F, Stathopoulou M, **El Shamieh S**[†]. Association of TLR4 Polymorphisms, Expression, and Vitamin D with Helicobacter pylori Infection. **Journal of Personalized Medicine**, 2019.

29 **El Shamieh S**[†], Saleh F, Masri N, Fakhoury H, Fakhoury R. The association between *ACE* I/D polymorphism and the risk of Alzheimer's disease in Lebanon. **Meta Gene**. 2018.

30 Nasser M, Chedid P, Salami A, Khalifeh M, **El Shamieh S**, Joumaa WH. Dataset on significant role of Candesartan on cognitive functions in rats having memory impairment induced by electromagnetic waves. **Data Brief**. 2018.

31 **El Shamieh S**[†], Costanian C, Kassir R, Visvkis-Siest S, Bissar-Tadmouri N. *APOE* genotypes in Lebanon: distribution and association with hypercholesterolemia and Alzheimer's disease. **Personalized Medicine**. 2018.

32 Méjécase C, Hummel A, Mohand-Saïd S, Andrieu C, **El Shamieh S**, Antonio A, Condroyer C, Boyard F, Foussard M, Blanchard S, Letexier M, Saraiva JP, Sahel JA, Zeitz C, Audo I. Whole exome sequencing resolves complex phenotype and identifies *CC2D2A* mutations underlying non-syndromic rod-cone dystrophy. **Clinical Genetics**. 2018.

33 **El Shamieh S**, Saleh F, Moussa S, Kattan J, Farhat F. *RICTOR* gene amplification is correlated with metastasis and therapeutic resistance in triple negative breast cancer. **Pharmacogenomics**. 2018.

34 Audo I, Mohand-Said S, Boulanger-Scemama E, Zanlonghi E, Condroyer C, Démontant V, Boyard F, Antonio A, Méjécase C, **El Shamieh S**, Sahel JA, Zeitz C. MERTK mutations account for 1.7% of cases with inherited retinal dystrophies. **Human Mutation**. 2018 Apr 16.

35 **El Shamieh S[†*]**, Alghalyini B, Salami A, Visvikis Siest S, Fakhoury HM, Fakhoury R. Effect of *SLCO1B1* gene polymorphisms and vitamin D on statin-induced myopathy. **Drug Metabolism & Personalized Therapy.** 2018.

36 Méjécase C, Mohand-Saïd S, **El Shamieh S**, Antonio A, Condroyer C, Blanchard S, Letexier M, Saraiva JP, Sahel JA, Audo I, Zeitz C. A novel nonsense variant in *REEP6* is involved in a sporadic rod-cone dystrophy case. **Clinical Genetics**. 2017.

37 **El Shamieh S**, Méjécase C, Bertelli M, Terray A, Michiels C, Condroyer C, Fouquet S, Sadoun M, Clérin E, Liu B, Léveillard T, Goureau O, Sahel JS, Audo I and Zeitz C. Further Insights into the Ciliary Gene and Protein KIZ and Its Murine Ortholog PLK1S1 Mutated in Rod-Cone Dystrophy. **Genes**. 2017.

38 **El Shamieh S[†]**, Saleh F, Fawaz M, Farhat F, Siest G, Visvikis-Siest S. Next Generation Sequencing and Immuno-histochemistry profiling identify numerous biomarkers for personalized therapy of endometrioid endometrial carcinoma. **Clinical Chemistry and Laboratory Medicine**. 2017.

39 Akhdar H, **El Shamieh S**, Musso O, Désert R, Joumaa W, Guyader D, Aninat C, Corlu A, Morel F. The rs3957357C>T SNP in GSTA1 Is Associated with a Higher Risk of Occurrence of Hepatocellular Carcinoma in European Individuals. **PLoS One**. 2016.

40 Audo I, **El Shamieh S**, Méjécase C, Michiels C, Demontant V, Antonio A, Condroyer C, Boyard F, Letexier M, Saraiva JP, Blanchard S, Mohand-Saïd S, Sahel JS, Zeitz C. ARL2BP mutations account for 0.1% of autosomal recessive rod-cone dystrophies with the report of a novel splice variant. **Clinical Genetics**. 2016.

41 Rancier M, Zaaber I, Stathopoulou MG, Chatelin J, Saleh A, Marmouch H, **El Shamieh S**, Masson C, Murray H, Lamont J, Fitzgerald P, Mahjoub S, Said K, Bel Hadj Jrad Tensaout B, Mestiri S, Visvikis-Siest S. Pro- and anti-angiogenic VEGF mRNAs in autoimmune thyroid diseases. **Autoimmunity**. 2016.

42 Boulanger-Scemama E, **El Shamieh S,** Démontant V, Condroyer C, Antonio A, Michiels E, Boyard F, Saraiva JP, Letexier M, Souied E, Mohand-Saïd S, Sahel JA, Zeitz C and Audo I. Next-Generation Sequencing applied to a large French cone and cone-rod dystrophy cohort: mutation spectrum and new genotype-phenotype correlation. **Orphanet Journal of Rare Diseases**. 2015 .

43 Kikuchi S, Kameya S, Gocho K, **El Shamieh S**, Akeo K, Sugawara Y, Yamaki K, Zeitz C, Audo I, Takahashi H. Cone dystrophy in patient with homozygous RP1L1 mutation. **BioMed Research International**. 2015.

44 **El Shamieh S**, Boulanger-Scemama E, Lancelot ME, Antonio A, Démontant V, Condroyer C, Letexier M, Saraiva JP, Sahel JA, Audo I, Zeitz C. Targeted next generation sequencing identifies novel mutations in *RP1* as a relatively common cause of autosomal recessive rod-cone dystrophy. **BioMed Research International**. 2015.

45 **El Shamieh S**, Neuillé M, Terray A, Orhan E, Condroyer C, Démontant V, Michiels C, Antonio A, Boyard F, Lancelot ME, Letexier M, Saraiva JP, Léveillard T, Mohand-Saïd S, Goureau O, Sahel JA, Zeitz C, Audo I. Whole exome sequencing identifies *KIZ* as a ciliary gene underlying autosomal recessive rodcone dystrophy. **The American Journal of Human Genetics**. 2014.

46 Neuillé M, **El Shamieh S**, Orhan E, Michiels C, Antonio A, Lancelot ME, Condroyer C, Bujakowska K, Poch O, Sahel JA, Audo I, Zeitz C. Lrit3nob6 a novel mouse model of complete congenital stationary night blindness. **PLoS ONE**. 2014.

47 Siest G, Ndiaye NC, El Shamieh S, Shahabi P, Stathopoulou M, Saleh AS, Godjo T, Albertini L, Visvikis-Siest S. Conference Scene: Systems biology and personalized health science and translation. **Pharmacogenomics.** 2013 Dec;14(16):1953-64.

48 Orhan E, Prézeau L, **El Shamieh S**, Bujakowska KM, Michiels C, Zagar Y, Vol C, Bhattacharya SS, Sahel JA, Sennlaub F, Audo I, Zeitz C. Further insights in GPR179: expression, localization and associated pathogenic mechanisms leading to congenital stationary night blindness. **Investigative Ophthalmology Vision Sciences**. 2013.

49 Audo I, Bujakowska K, Orhan E, **El Shamieh S**, Sennlaub F, Guillonneau X, Antonio A, Michiels C, Lancelot ME, Letexier M, Saraiva JP, Nguyen H, Luu TD, Léveillard T, Poch O, Dollfus H, Paques M, Goureau O, Mohand-Saïd S, Bhattacharya SS, Sahel JA, Zeitz C. The familial dementia gene revisited: a missense mutation revealed by whole exome sequencing identifies *ITM2B* as a candidate gene underlying a novel autosomal dominant retinal dystrophy in a large family. **Human Molecular Genetics**, 2013.

50 Stathopoulou MG, Monteiro P, Shahabi P, Peñas-Lledó E, **El Shamieh S**, Silva Santos L, Thilly N, Siest G, Llerena A, Visvikis-Siest S. Newly identified synergy between clopidogrel and calcium-channel blockers for blood pressure regulation possibly involves CYP2C19 rs4244285. **International Journal of Cardiology**, 2013.

51 Nivet-Antoine V, Labat C, **El Shamieh S**, Dulcire X, Cottart CH, Beaudeux JL, Zannad F, Visvikis- Siest S, Benetos A. Relationship between catalase haplotype and arterial aging. **Atherosclerosis**, 2013.

52 Ndiaye NC, **El Shamieh S**, Stathopoulou MG, Siest G, Tsai MY, Visvikis-Siest S. Two epistatic interactions may be involved in blood pressure genetic regulation. **BMC Medical Genetics**, 2013.

53 Stathopoulou MG*****, Bonnefond A*****, Ndiaye NC*****, Azimi Nezhad M, **El Shamieh S**, Saleh A, Rancier M, Siest G, Lamont J, Fitzgerald P, Visvikis-Siest S. A common variant highly associated with plasma VEGFA levels also contributes to the variation of both LDL-C and HDL-C. **Journal of Lipid Research**, 2013.

54 **El Shamieh S**, Ndiaye NC, Stathopoulou MG, Murray HA, Masson C, Lamont JV, Fitzgerald P, Benetos A, Visvikis-Siest S. Functional epistatic interaction between rs6046G>A in *F7* and rs5355C>T in *SELE* modifies systolic blood pressure levels in 8,220 European individuals. **PLoS ONE**, 2012.

55 **El Shamieh S** and Visvikis-Siest S. Hypertension genetic biomarkers and future challenges with the emerging of epigenomics**. Clinica Chimica Acta**, 2012.

56 Mangino M, Hwang SJ, Spector TD, Hunt SC, Kimura M, Fitzpatrick AL, Christiansen L, Petersen I, Elbers CC, Harris T, Chen W, Srinivasan SR, Kark JD, Benetos A, **El Shamieh S**, Visvikis-Siest S, Christensen K, Berenson GS, Valdes AM, Viñuela A, Garcia M, Arnett DK, Broeckel U, Province MA, Pankow JS, Kammerer C, Liu Y, Nalls M, Tishkoff S, Thomas F, Ziv E, Psaty BM, Bis JC, Rotter JI, Taylor KD, Smith E, Schork NJ, Levy D, Aviv A. Genome Wide Association points toward CTC1 and ZNF676 as telomere regulating genes. **Human Molecular Genetics**, 2012.

57 Froguel P, Ndiaye NC, Bonnefond A, Bouatia-Naji N, Dechaume A, Siest G, Herbeth B, Falchi M, Bottolo L, Guéant-Rodriguez RM, Lecoeur C, Langlois MR, Labrune Y, Ruokonen A, **El Shamieh S**, Stathopoulou MG, Morandi A, Maffeis C, Meyre D, Delanghe JR, Jacobson P, Sjöström L, Carlsson LM, Walley A, Elliott P, Jarvelin MR, Dedoussis GV, Visvikis-Siest S. A genome-wide association study identifies rs2000999 as a strong genetic determinant of circulating Haptoglobin levels. **PLoS ONE**, 2012.

58 Ndiaye NC*, Azimi-Nezhad M*, **El Shamieh S***, Stathopoulou MG*, Visvikis-Siest S. Cardiovascular diseases and Genome-Wide Association Studies. **Clinica Chimica Acta**, 2011.

59 Siest G, Nezhad MA, Bagrel D, **El Shamieh S**, Lambert D, Ndiaye NC, Shahabi P, Visvikis-Siest S. Functional genomics towards personalized healthcare and systems medicine. **Personalized Medicine**, 2011.

60 **El Shamieh S,** Nzietchueng R, Benachour H, Labat C, Herbeth B, Ndiaye NC, Masson C, Visvikis-Siest S, Benetos A. Klotho KL-VS genotype is involved in blood pressure regulation. **Clinica Chimica Acta,** 2011.

61 **El Shamieh S,** Herbeth B, Azimi-Nezhad M, Benachour H, Masson C, Visvikis-Siest S. Human formyl peptide receptor 1 C32T SNP is associated with increased blood pressure levels **Clinica Chimica Acta**, 2010 8.

PATENT

Visvikis-Siest S, **El Shamieh S,** Murray H, Lamont J, Fitzgerald. 2013. Genetic factors in blood pressure. **Patent US 20140336283 A1**, 13 November 2014.

EDITORSHIP

2022- Present: Associate Editor, BMC Medical Genomics (IF=3.6, Q2 Scimago), Springer Nature, UK

2021-Present: Associate Editor, Section: genetics of rare diseases, Frontiers in Bioscience Landmark (IF=4.1, Q1 Scimago).

2021-2022: Guest Editor of the special issue: The genetics of inherited retinal diseases in understudied ethnic groups: novel associations, challenges, and perspectives, Frontiers in Genetics (IF=4.56).

PROJECTS/GRANTS

2021-Present: Team Leader and member of the steering committee of the EU funded Erasmus+ OPPM (100K$, 3 years).

- Project: Online pharmacogenomics and personalized medicine postgraduate program.

2021: 3Billion company, Seoul, South Korea (35K$, 8 months).

- Project: Whole exome sequencing of thirty-three Lebanese patients with inherited retinal diseases

2018-2020: Beirut Arab University, Principal Investigator (18.5K$ over 2 years).

- Project: Genetics of chronic obstructive pulmonary disease in Lebanese affected individuals.

2018-2020: King Faisal University, Co-investigator (13K$, over 18 months).

- Project: Study of the association of Vascular Endothelial Growth Factor gene polymorphisms with Blood pressure and Hypertension.

2018-2020: Lebanese University President's Research Grant. Co-Principal Investigator (16K$ over 2 years).

- Project: Targeted Next Generation Sequencing for Lebanese Individuals with Usher Syndrome.

2016-2018: Lebanese University President's Research Grant. Principal Investigator (15K$ over 2 years).

- Project: Targeted and Whole Exome Next Generation Sequencing for Lebanese Individuals with Rod Cone Dystrophy.

2016-2018: Lebanese University President's Research Grant. Co-Investigator (12K$ over 2 years).

- Project: The Association between *Helicobacter pylori* Infection in Patients with Diabetes and Gastric Cancer in Lebanon: The Immunology, Genetics and Epidemiology.

2009-2012: *Région Lorraine* Research Grant (29K€ over 3 years).

CONFERENCES & WORKSHOPS

A- Oral presentations:

2022: Pharmacogenetics in Developing Countries: gaps, challenges, genetic diversity, and perspectives. the Industry Pharmacogenomics Working Group (I-PWG). Webex meeting.

2022: Presentation of three courses; Human genetics, Human genomics and genomics of infectious diseases at the OPPM (Online pharmacogenomics and personalized medicine postgraduate program) All partners'' meeting Oviedo, Spain.

2018: Genetic and protein profiling of cancer tumors, a first step towards personalized therapy, 9th International Santorini Conference" Systems medicine and Personalized Health and Therapy", Santorini, Greece.

2016: Cancer: A Role of Single Nucleotide Polymorphisms and mutations, Workshop 'New trends in Cancer Research', Beirut Arab University, Faculty of Sciences, Lebanon.

2014: eMethSNPs; a hypothesis to be tested in the post GWAS era, UniGR-Workshop Systems Biology, Epigenetics & Systems Analysis, Saarbrücken, Germany.

2014: Whole-Exome Sequencing Identifies *KIZ* as a Ciliary Gene Associated with Autosomal-Recessive Rod-Cone Dystrophy, Fifth annual Young researchers in Life Sciences conference, Paris, France.

2013: Next generation sequencing to determine the prevalence of gene mutations underlying rod-cone dystrophies, International Society for Genetic Eye Diseases & Retinoblastoma, Ghent, Belgium.

2012: eMethSNPs; a hypothesis to be tested in the post GWAS era, 6th Santorini International Conference, Santorini, Greece.

2010: Human *FPR1* C32T SNP interacts with age and is associated with blood pressure levels, 4th International Meeting of the French Society of Hypertension, Paris, France.

B- Poster presentations:

2018: Mutated *RB1* may promote chemo-resistance to palbociclib in ovarian cancer, 9th Santorini International Conference, Santorini, Greece.

2018: *APOE* genotypes in Lebanon: Distribution and association with hypercholesterolemia and Alzheimer's disease, 9th Santorini International Conference, Santorini, Greece.

2017: Mutation Analysis of *BEST1* gene in a Lebanese family with Vitelliform Macular Dystrophy reveals a novel mutation with incomplete penetrance, American Academy of Ophthalmology, New Orleans, Louisiana, USA.

2014: Targeted next generation sequencing identifies mutations in RP1 as a relatively common cause of autosomal recessive rod-cone dystrophy, ARVO conference, Orlando, Florida, USA.

2011: Klotho Kl-Vs Genotype Is Involved in Blood Pressure Regulation, The International Meeting of the French Society of Hypertension, Paris, France.

2010: Human *FPR1* C32T SNP interacts with age and is associated with blood pressure levels, 4th International Meeting of the French Society of Hypertension, The Santorini International Conference, Santorini, Greece.

PEER REVIEW ACTIVITIES

2020: Journal of Clinical Medicine, MDPI.

2020: Ophthalmic Genetics, Taylor & Francis Online.

2020: Molecular Vision, Emory University (United States).

2020: Clinica Chimica Acta, Elsevier.

2020: Biology, MDPI.

2019: International journal of molecular sciences, MDPI.

2109: BMC Medical Genetics, Nature springer.

2018: Translational Vision Science and Technology, ARVO.

2017: Genes, MDPI.

2016: British Journal of Ophthalmology, BMJ journals.

ADVISORSHIP OF GRADUATE STUDENTS

PhD Thesis:

2020: Main supervisor of the PhD in Biology: Next Generation Sequencing for Lebanese Individuals with Inherited Retinal Diseases. Mrs. Lama Jaffal, Beirut Arab University, Faculty of Sciences.

2020: Co-supervisor of the PhD student in Biology: Analysis of CYP2C9 and (OCT1) polymorphisms in Lebanese patients with type 2 diabetes mellitus: influence on metformin/ glibenclamide therapy. Mr Khaled Naja, Beirut Arab University, Faculty of Sciences.

Master's Thesis:

2020: Investigating the Genetics of Rod-Cone Dystrophy in One Lebanese Family using Whole Exome Sequencing. Mrs Zamzam Mrad, Investigating the Genetics of Rod-Cone Dystrophy in One Lebanese Family using Whole Exome Sequencing.

2020 : Le séquençage de l'exome entier pour identifier la cause du syndrome d'USHER et de Rétinite pigmentaire dans deux familles Libanaises. Ms Hawraa Joumaa, Master 2 in Genomics and Health, Faculty of Sciences**,** Lebanese University.

2019: Investigating the Genetics of Usher Syndrome in Two Lebanese Families Using Whole Exome Sequencing. Ms. Zahraa Chhouri, Master 2 in Genomics and Health, Faculty of Sciences**,** Lebanese University.

2019: Investigating the Genetics of Rod Cone Dystrophy in Two Lebanese Families Using Whole Exome Sequencing. Ms. Mariam Ibrahim, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université Grenoble Alpes* and Lebanese University.

2018: Mutation Analysis of Bestrophin1 (*BEST1*) gene in a Lebanese Family with Best Vitelliform Macular Dystrophy. Ms. Malak Banjak, Investigating the Genetics of Rod-Cone Dystrophy in One Lebanese Family using Whole Exome Sequencing.

2017: Epidemiological study of acute gastroenteritis among hospitalized children. Ms. Lamis Salloum, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université Grenoble Alpes* and Lebanese University.

2017: Targeted Next Generation Sequencing for Two Lebanese Individuals with Rod Cone Dystrophy. Ms. Shirin Komeiha, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université Grenoble Alpes* and Lebanese University.

ACADEMIC JURY MEMBER

PhD Thesis:

2022: Internal examiner, PhD thesis: Evaluation of the Association between Diet, Polymorphisms in Inflammation-related Genes, and the Risk of Osteoarthritis in the Lebanese population. Mrs Zeina Al Ali, Faculty of Sciences, Beirut Arab University.

2020: Internal examiner, PhD thesis: Biochemical Studies on Multiple Sclerosis in Bekaa Region-Lebanon, Ms. Alaa Matar, Faculty of Sciences, Beirut Arab University.

2020: Internal examiner, PhD thesis: Discrimination between Lebanese Identical Twins using Epigenetics, Ms. Paula Romanos, Faculty of Sciences, Beirut Arab University.

2020: Internal examiner, PhD thesis: Biochemical Effects of Ocimum Basilicum on Acute Kidney Injury, Ms. Hajar Karaali, Faculty of Sciences, Beirut Arab University.

2019: Internal examiner, PhD thesis: Effect of Epigenetic therapy on colon cancer and acute myeloid leukemia, Ms. Sonia Abou Najem, Faculty of Sciences, Beirut Arab University.

Masters Thesis:

2022: Examiner, The association between HLA DQ-2 and DQ-8 genotype frequencies with Celiac Disease and the concurrent nutritional risks in Lebanese patients. Mrs Margaritta Safar, Beirut Arab University.

2020: Examiner, Investigating the Selective Inhibition of Regulatory T cells by Targeting PI3K Isoforms on Tumor Growth and Mice Survival. Mr. Farouk Al Kaakour Master 2 in Biology, Georgetown University and Beirut Arab University.

2020: Genetic Polymorphisms in Lebanese patients with non-alcoholic fatty liver. Ms. Faten Jabboury, Master 2 in Genomics and Health, Faculty of Sciences, Lebanese University.

2019: Assessing the role of concussive injury on brain: a proteomics and molecular approach. Nour Chaito, Master 2 in Genomics and Health, Faculty of Sciences, Lebanese University.

2019: Prevalence, Risk Factors and Vesikari Score of Different Enteropathogens in Lebanese Hospitalized Children With Acute Gastroenteritis. Silvana Akkouch, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université* Grenoble Alpes and Lebanese University.

2019: Prevalence of different thrombosis mutations in Females with recurrent pregnancy loss. Mariam Kassem, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université* Grenoble Alpes and Lebanese University.

2019: The relationship between Empowerment and Job satisfaction and intent to leave among critical care nurses in Lebanon. Mohammad Itani, Beirut Arab University.

2018: Association of *Transcription Factor 7 Like* 2 (*TCF7L2*) Gene polymorphism with Type 2 Diabetes in Lebanese Population. Souheila Hadadadeh, Beirut Arab University.

2018: Effect of electromagnetic waves (GSM) on the liver oxidative stress in fetal and newborn rats. Wafaa Al Hassan, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université* Grenoble Alpes and Lebanese University.

2017: Investigating the genetics of USHER Syndrome in two Lebanese families. Jinane Nouredine, Faculty of Sciences, Lebanese University.

2017: *Sites Fragiles et Cancer: Investigation Moléculaire de la Variabilité Inter-Individuelle dans la Fréquence d'Expression du Site Fragile Commun FRA16D*. Carole Saliba, Faculty of Sciences, *Université Saint Joseph*.

2017: The prevalence of *APOE* gene polymorphisms in a Lebanese Case control study. Rayan Kassir. Faculty of Sciences, Beirut Arab University.

2016: Identification of Mutations in Patients with Inherited Retinal Diseases in Lebanon. Maya El Dor, Faculty of Sciences, Lebanese University.

2015: Inter-individual Genetic Variability in The Expression Frequency of The Common Fragile site FRAXB among Healthy Persons. Baraah Al Nachar, Faculty of Sciences, University Of Balamand.

2014: *Hypovitaminose D chez les patients Libanais atteints de Fièvre Méditerranéenne Familiale (FMF) : contribution du polymorphisme FOKI à la susceptibilité et/ou sévérité de la maladie*. Eliane Youssef, Anthony Khoueiry & Rawad Korkomaz**,** Faculty of Health Sciences, Lebanese German University.

CERTIFICATIONS

2014: R programming, with distinction, Johns Hopkins University, USA.

2014: The Data's Scientist Toolbox, Johns Hopkins University, USA.

2013: Initiation to Perl programming language, INSERM, France.

2011: Bioinformatics analysis of molecular sequences, INSERM, France.

SKILLS & EXPERTISE

Bioinformatics:

R programming language

Next-generation sequencing analyses

Experience with Linux operating system

Molecular sequence analyses

Primer design

Statistics:

Genetic Allele Frequencies

Deviation from Hardy–Weinberg Proportions

Linkage Disequilibrium Coefficients

Multiple markers association

Gene-gene and gene-environment interactions

Molecular and Cellular Biology:

Nucleic acids extraction and quantification

ELISA and immuno-histochemistry

RNA in situ hybridization

Genotyping:

Multiplex assays

Hybridization probes

PCR-RFLP

Cell culture and differentiation

TEACHING ACTIVITIES

Undergraduate & Graduates courses:

Human Genetics
Molecular Biology
Biochemistry
Bioinformatics
Molecular Biotechnology
Genomics

MEMBERSHIP

2021: Chair of the organization committee of BAU Webinar: The Covid 19 Pandemic on the Lebanese Setting: The Implication on Health & Wellbeing, January 27, 2021.

2017-Present: Member of the Lebanese committee of Colloquium for medical laboratory technology exams.

2016-Present: Chair of the research committee, Faculty of Health Sciences, Beirut Arab University.

2018-2019: Member of the University research committee, Beirut Arab University.

2013-2014: Member of the Association for Research in Vision and Ophthalmology.

2011-2016: Member of the European Society of Pharmacogenomics and Theranostics.

LANGUAGE

English: Full professional proficiency
Arabic: Native
French: Full professional proficiency
Portuguese: Elementary proficiency