

## Said El Shamieh, PhD.

Lebanese, 34 years.

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## EDUCATION

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**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.

## PROFESSIONAL EXPERIENCE

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**August 2019-Present:** Associate Professor of Genetics and Genomics, Faculty of Health Sciences, Beirut Arab University, Beirut, Lebanon.

**2016-June 2019:** Assistant Professor of Genetics and Genomics, Faculty of Health Sciences, Beirut Arab University, Beirut, Lebanon.

**2015-2016:** Lecturer, Faculty of Sciences, University of Balamand, Souk El Gharb, Lebanon.

**2014-2016:** Lecturer, Faculty of Sciences, Beirut Arab University, Beirut, Lebanon.

**2014-2016:** Part-time Assistant Professor, Faculty of Sciences, Lebanese University, Lebanon.

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

- Project: Identification of novel genes associated with Rod Cone Dystrophy using Targeted and Whole Exome Next Generation Sequencing.

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

## PUBLICATIONS

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1. Jaffal, L.; Joumaa, W.H.; Assi, A.; Helou, C.; Cherfan, G.; Zibara, K.; Audo, I.; Zeitz, C.; **El Shamieh, St.** Next Generation Sequencing Identifies Five Novel Mutations in Lebanese Patients with Bardet–Biedl and Usher Syndromes. **Genes** 2019, 10, 1047.

2. Salami A, Costanian C, **El Shamieh St.** rs2569190A>G in CD14 is Independently Associated with Hypercholesterolemia: A Brief Report. **Journal of Cardiovascular Development and Diseases**. 2019, 6, 37.

3. Naja K, **El Shamieh St**, Fakhoury R. rs622342A>C in SLC22A1 is associated with metformin pharmacokinetics and glycemic response. **Drug Metabolism and Pharmacokinetics**, In Press.

4. Masri I, Salami I, **El Shamieh St**, Bissar Tadmouri† N. rs3851179G>A in PICALM is protective against Alzheimer’s disease in five different countries surrounding the Mediterranean. **Current Aging Science**, In Press.

5. 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 Sep 30;20(19).

6. Salami A, **El Shamieh S<sup>†</sup>**. Association between SNPs of Circulating Vascular Endothelial Growth Factor Levels, Hypercholesterolemia and Metabolic Syndrome. **Medicina**. 2019 Aug 11;55(8).
7. 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 Aug 16;14(8).
8. **El Shamieh S<sup>\*</sup>**, 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, May 30;34(2).
9. Jaffal L, Joumaa W, Assi A, Helou C, Condroyer C, El Dor M, Cherfan G, Zeitz C, Audo I, Zibara K, **El Shamieh S<sup>†</sup>**. Novel missense mutations in BEST1 are associated with bestrophinopathies in Lebanese patients. **Genes**, 2019, 10(2), 151.
10. Assaad S, Costanian C, Jaffal L, Tannous F, Stathopoulou M, **El Shamieh S<sup>†</sup>**. Association of TLR4 Polymorphisms, Expression, and Vitamin D with Helicobacter pylori Infection. **Journal of Personalized Medicine**, 2019. Jan 11.
11. **El Shamieh S<sup>†</sup>**, 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, 18:191-194
12. 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 Nov 26.
13. **El Shamieh S<sup>†</sup>**, Costanian C, Kassir R, Visvikis-Siest S, Bissar-Tadmouri N. APOE genotypes in Lebanon: distribution and association with hypercholesterolemia and Alzheimer's disease. **Personalized Medicine**. 2018.
14. Méjécasse 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 Sep 29.
15. **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 Jun 1;19(9):757-760.
16. Audo I, Mohand-Saïd S, Boulanger-Scemama E, Zanlonghi E, Condroyer C, Démontant V, Boyard F, Antonio A, Méjécasse 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.
17. **El Shamieh S<sup>\*</sup>**, 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 Feb 8.
18. Méjécasse 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 Nov 9.
19. **El Shamieh S**, Méjécasse 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, 8(10), 277.

20. **El Shamieh St**, 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 Jul 29.
21. 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 Dec 9;11(12).
22. Audo I, **El Shamieh S**, Méjécasse 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 Oct 28.
23. 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 Aug 5:1-7.
24. 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 Jun 24;10:85.
25. 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.
26. **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.
27. **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. Apr 3;94(4):625-33.
28. 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 Mar 5;9(3).
29. 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.
30. 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 Dec 9;54(13):8041-50.
31. 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 Jan 15;23(2):491-501.

32. 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 Oct 3;168(3):3057-8.

33. Nivet-Antoine V, Labat C, **El Shamieh S**, Dulcire X, Cottart CH, Beaudeau JL, Zannad F, Visvikis-Siest S, Benetos A. Relationship between catalase haplotype and arterial aging. **Atherosclerosis**, 2013 Mar;227(1):100-5.

34. 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 Jan 8;14:2.

35. 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 Feb;54(2):535-41.

36. **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;7(7).

37. **El Shamieh S** and Visvikis-Siest S. Hypertension genetic biomarkers and future challenges with the emerging of epigenomics. **Clinica Chimica Acta**, 2012 Dec 24;414:259-65.

38. 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 Dec 15;21(24):5385-94.

39. Froguel P, Ndiaye NC, Bonnefond A, Bouatia-Naji N, Dechaume A, Siest G, Herbeth B, Falchi M, Bottolo L, Guéant-Rodriguez RM, Lecoœur C, Langlois MR, Labrune Y, Ruokonen A, **El Shamieh S**, Stathopoulou MG, Morandi A, Maffei 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 ;7(3):e32327.

40. Ndiaye NC\*, Azimi-Nezhad M\*, **El Shamieh S\***, Stathopoulou MG\*, Visvikis-Siest S. Cardiovascular diseases and Genome-Wide Association Studies. **Clinica Chimica Acta**, 2011 Sep 18;412(1920):1697-701. \*

41. 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.

42. Nzietchueng R\*, **El Shamieh S\*** 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 Sep 18;412 (19-20):1773-7.

43. **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

Jan 18;413(1-2):34-8.

†: **Corresponding author.**

\*: **Equal First authors.**

## **PATENT**

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

## **RESEARCH GRANTS**

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**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).

➤ Project: Genetic regulation of blood pressure-an approach of molecular genomics revealing the implication of low-grade inflammation.

## **CONFERENCES & WORKSHOPS**

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### **A- Oral presentations:**

**2018:** Genetic and protein profiling of cancer tumors, a first step towards personalized therapy, 9<sup>th</sup> 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, 6<sup>th</sup> Santorini International Conference, Santorini, Greece.

**2010:** Human *FPR1* C32T SNP interacts with age and is associated with blood pressure levels, 4<sup>th</sup> 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, 9<sup>th</sup> Santorini International Conference, Santorini, Greece.

**2018:** *APOE* genotypes in Lebanon: Distribution and association with hypercholesterolemia and Alzheimer's disease, 9<sup>th</sup> 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* KI-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, 4<sup>th</sup> International Meeting of the French Society of Hypertension, The Santorini International Conference, Santorini, Greece.

#### **PEER REVIEW ACTIVITIES**

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**2020:** Clinica Chimica Acta, Elsevier.

**2019:** International journal of molecular sciences, MDPI.

**2019:** Nutrients, MDPI.

**2019:** BMC Medical Genetics, Nature springer.

**2019:** International Journal of Environmental Research and Public Health, MDPI.

**2019:** Arquivos Brasileiros de Oftalmologia.

**2018:** Application of Clinical Genetics, Dove Medical Press.

**2018:** Neuropsychiatric Disease and Treatment, Dove Medical Press.

**2018:** Translational Vision Science and Technology, ARVO.

**2017:** Genes, MDPI.

**2016:** British Journal of Ophthalmology, BMJ journals.

**2017:** Pharmacogenomics and Personalized Medicine, Dove Medical Press.

#### **GRADUATE STUDENTS: MASTER/PHD THESIS ADVISOR**

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**2019:** Investigating the Genetics of Usher Syndrome in Two Lebanese Families Using Whole Exome Sequencing. Zahraa Chhour, 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. 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. Malak Banjak, Master 2 Physiology Epigenetics Development Cell Differentiation, *Université Grenoble Alpes* and Lebanese University.

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

**2016:** PhD Biology, Beirut Arab University, underway. Next Generation Sequencing for Lebanese Individuals with Inherited Retinal Diseases. Mrs. Lama Jaffal.

#### **ACADEMIC JURY MEMBER**

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**2019:** PhD thesis: Effect of Epigenetic therapy on colon cancer and acute myeloid leukemia, Sonia Abou Najem, Faculty of Sciences, Beirut Arab 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

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**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

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### **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

Cell culture and differentiation

### **Genotyping:**

Multiplex assays

Hybridization probes

PCR-RFLP

## TEACHING ACTIVITIES

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### ***Undergraduate & Graduates courses:***

Human Genetics

Bioinformatics

Molecular Biology

Molecular Biotechnology

Biochemistry

## MEMBERSHIP

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**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

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English: Full professional proficiency

Arabic: Native

French: Full professional proficiency

Portuguese: Elementary proficiency