CURRICULUM VITAE   Betul Akcesme

PERSONEL INFORMATION

Name:	Betul (Cicek)
Surname:	Akcesme
Date of Birth and Place:	04.03.1986 Kutahya/Turkey
Address:	Sarajevo/ Bosnia and Herzegovina
e-mail:	betul.akcesme@sbu.edu.tr, bakcesme@ius.edu.ba

EDUCATION

2012-2016: PhD

International University of Sarajevo (Sarajevo-Bosnia and Herzegovina)

"Genetics and Bioengineering" Natural Sciences and Engineering Faculty

Thesis Title: A Highly Accurate Technique for the Prediction of Protein Structural Classes

2010-2011: Post Graduate Specialization Program (D.S.P.U) (with highest honors GPA)

"Horticultural Genetics and Biotechnology"

Mediterranean Agronomic Institute of Chania (International Center for Advanced Mediterranean Agronomic Studies-CIHEAM) (Crete-Greece)

2005-2010: BSc

- **2006-2010- Undergraduate**

International University of Sarajevo (Sarajevo-Bosnia and Herzegovina)

"Biological   Sciences and Bioengineering" Natural   Sciences   and   Engineering Faculty

Thesis: "Molecular and in silico analysis of novel missense mutation in wisp3 gene associated with childhood onset Progressive Pseudorheumatoid Arthropathy (c.667T>G)"

INGEB (Genetic Engineering and Biotechnology Institute, Sarajevo)-BIH

- **2005-2006- English Language School -**International University of Sarajevo (Sarajevo-Bosnia and Herzegovina

EXPERIENCES

WORKING EXPERIENCE

2022- Present: Visiting Assistant Professor

International University of Sarajevo (Sarajevo-Bosnia and Herzegovina)

"Genetics and Bioengineering" Faculty of Natural Sciences and Engineering

2017- Present: Assistant Professor

University of Health Sciences (İstanbul- Turkey)

"Biomedicine Program" Hamidiye Faculty of Medicine

2016-2017: Assistant Professor

International University of Sarajevo (Sarajevo-Bosnia and Herzegovina)

"Genetics and Bioengineering" Faculty of Natural Sciences and Engineering

2012-2016: Senior Assistant

International University of Sarajevo (Sarajevo-Bosnia and Herzegovina)

"Genetics and Bioengineering" Faculty of Natural Sciences and Engineering

TEACHING EXPERIENCES

- Lecturer **Biomedicine for Medical Faculty**, BSc
- Lecturer **Biology**, BSc
- Lecturer **General Microbiology, BSc**
- Lecturer **Structural Biology, BSc**
- Lecture **Genetics I and II, BSc**
- Lecturer **Advanced Structural Bioinformatics, PhD**
- Lecturer **Medical Biology and Genetics, BSc**
- Lecturer **Omics Technologies, MSc**
- Lecturer **Molecular Genetics, MSc**
- Lecturer **Functional Genomics and Proteomics, PhD**
- Teaching Assistant **Structural Biology**
- Teaching Assistant **Chemistry**
- Teaching Assistant **Pharmaceutical Biotechnology**
- Teaching Tutorials **Collage Mathematic**

EDUCATIONAL AND SCIENTIFIC ACTIVITIES

- ## CONFERENCE AND CONGRESS

- Semiz, S., Halilovic, L., Akcesme, B., Durakovic, C., Akcesme, F. B., Adilovic, M., ... & Serdarevic, F. (2018, October). Bioethical issues in personalized medicine and pharmacogenomics: Students' awareness and attitudes. In European Journal of Human Genetics (vol. 26, pp. 817-817). Macmillan Building, 4 Crinan St, London n1 9xw, England: Nature Publishing Group.

- Çoşkunpinar Ender Mehmet, Aynaci Engin, Aynaci Aysun, Kalkanli Taş Sevgi, Hastürk Burcu, İş Şeyma, Akçeşme Betül , Investigation and validation of miRNA and target genes that are effective in the pathogenesis of allergic asthma, Turkish Thoracic Association 21st Annual Congress, 2018 April

- B.Akcesme, Using Digital Image Features for Protein Structural Class Prediction 2nd International Congress on Applied Biological Sciences. Sarajevo BIH, May 27-31, 2016

- B. Akcesme, Potential Therapeutic Role of Mesenchymal Stem Cells in Cancers: Exploitation of Delivery System International conference on Engineering and Natural Sciences: ICENS Sarajevo BIH, May 24-28, 2016

- "Gene Expression Clustering" Second Regional Conference on Soft Computing 2013, Sarajevo-Bosnia and Herzegovina

- 17th and 19th of August 2009, Istanbul Technical University 3th National Molecular Biology and Genetics Student Congress, Istanbul-TURKEY

- 10th and 11th of May 2008, Boğaziçi University Science Club Molecular Biology and Genetics HaftaSonu3, Boğaziçi University, Istanbul-TURKEY

- ## TRAINING AND WORKSHOPS

- 2021 March, Workshop on Integrative modelling of biomolecular complexes with HADDOCK (Online)
  Professor Alexandre Bonvin & Professor Brian Jimenez, Utrecht University, NL

- 2008-2009 Fall Semesters- Pathology Laboratory- Kosevo Hospital, Sarajevo-Bosnia and Herzegovina

- 2007-2008 Spring Semester- Institute for Genetic Engineering and Biotechnology (INGEB) - Sarajevo- Bosnia and Herzegovina

- **PROJECTS**

Researcher- COVID-19 in Turkey: SARS-CoV-2 Genome Analysis and Mutation Screening, Identification of Genetic Variations in COVID-19 Patients, Correlation Analysis with Results and Effect on Disease Prognosis (2020-2022)

Research Manager- Investigation and validation of miRNA and target genes that are effective in the pathogenesis of allergic asthma- Scientific Research Project Grand of University of Health Sciences, (2017- 2019)

Research Assistant - Development of Different Disease Modeling by Using Cell Culture Techniques - Scientific Research Project Grand of University of Health Sciences (2017- 2019)

Research Assistant- "Setting up Cystic Fibrosis diagnosis with multiplex PCR in Bosnia" Clinical Center, University of Sarajevo (2013)

PUBLICATIONS

- E Coskunpinar, B Akcesme, SK Tas, A Aynaci. (2023) Investigation of miRNAs that are effective in the pathogenesis of asthma. Journal of Asthma, 1-14

- Akcesme, B., Erkal, B., & Donmez, Z. Y. (2023). Structural and functional characterization of SARS-CoV-2 nucleocapsid protein mutations identified in Turkey by using in silico approaches. Acta Virologica, 67(1), 59-68.

- Erkal, B., Akçeşme, B., Çoban, A., & Korkut, Ş. V. (2022). A comprehensive in silico analysis of multiple sclerosis related non-synonymous SNPs and their potential effects on protein structure and function. Multiple Sclerosis and Related Disorders, 68, 104253.

- Akçeşme, F. B., Kul Köprülü, T., Erkal, B., İş, Ş., Cevher Keskin, B., Akçeşme, B., ... & Tekin, Ş. (2022). tracking the circulating SARS-CoV-2 variants in Turkey: complete genome sequencing and molecular characterization of 1000 SARS-CoV-2 samples. bioRxiv, 2022-04.

- Mahmutovic L, Akcesme B, Durakovic C, Akcesme FB, Maric A, Adilovic M, Hamad N, Wjst M, Feeney O, Semiz S. (2018) Perceptions of students in health and molecular life sciences regarding pharmacogenomics and personalized medicine. Hum Genomics. Nov 14;12(1):50.

- Akçeşme B, Akçeşme F. B., Muhamed Adilovic, Can Mehmet (2018). Recurrent Neural Networks for Linear B-Epitope Prediction in Antigens. Southeast Europe Journal of Soft Computing,

- Akcesme, B., & Can, M. (2016). Support Vector Machines for Predicting Protein Structural Classes via Pseudo Images Derived From Amino Acid Sequences. Southeast Europe Journal of Soft Computing, 5(1).

- Akcesme, B., & Can, M. (2016). Secondary Structure and Neighbor Preferences of Amino Acids. Southeast Europe Journal of Soft Computing,4(2).

- Akcesme, B. (2015). Prediction of Protein Structural Classes for Low-Similarity Sequences Based On Predicted Secondary Structure. Southeast Europe Journal of Soft Computing, 4(1).

- Akcesme, B., & Akcesme, F. B. (2014). Predicting the Secondary Structure of Proteins Using Artificial Neural Networks. SouthEast Europe Journal of Soft Computing, 3(2).

- Akcesme, B., & Akcesme, F. B. (2014). Regression Analysis to Predict the Secondary Structure of Proteins. SouthEast Europe Journal of Soft Computing, 3(2).
- Can, M., Akcesme, B., & Akcesme, F. B. (2014). Predicting the Secondary Structure of Proteins by the Use of Hamming Distances and Alignment Scores. SouthEast Europe Journal of Soft Computing, 3(2).
- Haque, A., Akcesme, B., Mujić, J., Glamočlija, U., & Akcesme, F. B. (2013). Helminth-Derived Product (s): Source for Potential Therapeutic. Periodicals of Engineering and Natural Sciences (PEN), 1(1).
- Akcesme, B. (2013). The Effect of Tamoxifen Treatment During 24 Months On Alkaline Phosphatase Concentration In Breast Cancer Patients.
- Akcesme, B. (2013). Gene Expression Data Clustering. Southeast Europe Journal of Soft Computing, 2(2).
- Gawwad, M. R. A., Sutkovic, J., Zahirovic, E., Akcesme, F. B., Akcesme, B., & Zhang, L. (2013). 3D structure prediction of replication factor C subunits (RFC) and their interactome in Arabidopsis thaliana. Network Biology, 3(2), 74.
- Can, M., Gursoy, O., Akcesme, B., & Akcesme, F. B. (2012). Leaf Area Assessment By Image Analysis. SouthEast Europe Journal of Soft Computing, 1(2).

BOOKS

- Akcesme, B. (2022) Çevre kirliliği için doğaya dayalı çözümler: Türkiye'nin sanayi bölgelerinde yeşil peyzaj tasarımı olarak fitoremediasyon. In Betas, N. (Ed.), ÇEVRE, İKLİM VE AFET: Dirençli Şehirler İçin Yol Haritası. (pp 41-57) Nobel Akademik Yayıncılık

MENTORSHIP

- **Master Thesis:** Zehra Yaren Dönmez, 2021

  Investigation of the Effects of SARS-CoV-2 Mutations on Protein Structures by In-Silico Methods

SCHOLARSHIPS AND HONORS

- 2010-2011

  International Center for Advanced Mediterranean Agronomic Studies- CIHEAM Post Graduate full Fellowship

- 2005-2010

  Bachelor Fellowship by Education Development Sarajevo (SEDEF)

- 2006-2009

   High Honor in Faculty of Engineering and Natural Sciences in IUS (in all semesters)