

## Asst. Prof. AHMET EMİN ATİK

### Personal Information

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### Biography

Dr. Ahmet Emin Atik graduated with honor degree from Chemistry Department of İzmir Institute of Technology (IZTECH) in 2005. He received M.Sc. degree from the same department in 2007. Dr. Atik earned his Ph.D. in Chemistry from IZTECH (2013) under supervision Prof. Dr. Talat Yalçın. During his M.Sc. and Ph.D. studies, he worked as a research and teaching assistant in Institute of Engineering and Science, IZTECH. In his Ph.D. studies, he was appointed as a visiting scientist at Centre Laser Infrarouge d'Orsay (CLIO), Université Paris-Sud XI (France) for three months. In CLIO, he studied gas-phase structures of acetylated peptide's *b* ions through infrared multiphoton dissociation (IRMPD) technique. His Ph.D. thesis covers gas-phase fragmentation mechanisms of peptide *b* ions by mass spectrometry. He conducted a post-doctoral research in Biological Mass Spectrometry and Proteomics Facility (IZTECH, 2013-2015).

Dr. Atik joined Turgut Pharmaceuticals in 2015 as a Protein Analysis Specialist. After spending one year, he became a Head of Protein Analytics in the same company. In 2020, Dr. Atik promoted to the Quality Control Manager position in Turgut Pharmaceuticals.

Dr. Atik studies mainly focus on physicochemical characterization of biopharmaceuticals with state-of-the-art analytical techniques. He has experience on mass spectrometric characterization and identification of peptides/proteins over 15 years.

### Education Information

Post Doctorate, Izmir Institute Of Technology, Faculty Of Science, Department Of Chemistry (English), Turkey 2014 - 2015

Doctorate, Izmir Institute Of Technology, Institute Of Engineering And Natural Sciences, Chemistry Department , Turkey 2008 - 2014

Postgraduate, Izmir Institute Of Technology, Institute Of Engineering And Natural Sciences, Chemistry Department, Turkey 2005 - 2008

Undergraduate, Izmir Institute Of Technology, Faculty Of Science, Department Of Chemistry (English), Turkey 2000 - 2005

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Studies of gas-phase fragmentation mechanisms of peptide b ions by mass spectrometry, Izmir Institute Of Technology, Institute Of Engineering And Natural Sciences, 2013

Postgraduate, A proteomic approach for identifying boron-stress tolerant proteins in barley genotypes, Izmir Institute Of Technology, Institute Of Engineering And Natural Sciences, 2007

## Research Areas

Biotechnology, Mass Spectroscopy

## Academic Titles / Tasks

Assistant Professor, Acibadem Mehmet Ali Aydinlar University, Faculty of Engineering, Basic Sciences, 2021 - Continues

Research Assistant, Izmir Institute Of Technology, Institute Of Engineering And Natural Sciences, 2005 - 2014

## Courses

Selected Topics in Biological Mass Spectrometry, Doctorate, 2020 - 2021

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Gas-phase fragmentation reactions of a(7) ions containing a glutamine residue**  
ATİK A. E. , Arslanoglu A., Yalcin T.  
JOURNAL OF MASS SPECTROMETRY, vol.56, no.8, 2021 (Journal Indexed in SCI)
- II. **Observation of the side chain O-methylation of glutamic acid or aspartic acid containing model peptides by electrospray ionization-mass spectrometry**  
Atik A. E. , Guray M. Z. , Yalcin T.  
JOURNAL OF CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES, vol.1047, pp.75-83, 2017 (Journal Indexed in SCI)
- III. **Gas-phase structures and proton affinities of N-terminal proline containing b(2)(+) ions from protonated model peptides**  
Karaca S., Atik A. E. , Elmaci N., Yalcin T.  
INTERNATIONAL JOURNAL OF MASS SPECTROMETRY, vol.393, pp.1-8, 2015 (Journal Indexed in SCI)
- IV. **Specific rearrangement reactions of acetylated lysine containing peptide b(n) (n=4-7) ion series**  
Atik A. E. , Hernandez O., Maitre P., Yalcin T.  
JOURNAL OF MASS SPECTROMETRY, vol.49, no.12, pp.1290-1297, 2014 (Journal Indexed in SCI)
- V. **Protonated Dipeptide Losses from b(5) and b(4) Ions of Side Chain Hydroxyl Group Containing Pentapeptides**  
Atik A. E. , Yalcin T.  
JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY, vol.24, no.10, pp.1543-1554, 2013 (Journal Indexed in SCI)
- VI. **The role of lysine epsilon-amine group on the macrocyclization of b ions**  
Atik A. E. , Gorgulu G., Yalcin T.  
INTERNATIONAL JOURNAL OF MASS SPECTROMETRY, vol.316, pp.84-90, 2012 (Journal Indexed in SCI)
- VII. **A Systematic Study of Acidic Peptides for b-Type Sequence Scrambling**  
Atik A. E. , Yalcin T.  
JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY, vol.22, no.1, pp.38-48, 2011 (Journal Indexed in SCI)
- VIII. **Proteomic changes during boron tolerance in barley (*Hordeum vulgare*) and the role of vacuolar**

### **proton-translocating ATPase subunit E**

Atik A. E. , Bozdogan G. O. , Akinci E., Kaya A., KOÇ A., Yalcin T., Karakaya H. C.

TURKISH JOURNAL OF BOTANY, vol.35, no.4, pp.379-388, 2011 (Journal Indexed in SCI)

## **Articles Published in Other Journals**

### **I. Physicochemical and Functional Characterization of a Candidate Adalimumab Biosimilar TUR01**

Atik A. E. , Demirhan D., Alban R. S.

25th European Society for Animal Cell Technology Meeting, BMC Proceedings , vol.12, pp.13, 2018 (International Conference Book)

## **Books & Book Chapters**

### **I. Nanoanalytic: Quantitative Analytical Tools That Give an Idea of How Does the Cell Act at the Molecular Level**

Atik A. E.

in: Nanobiyoteknoloji, Prof. Dr. Ata Akin, Editor, Türkiye Klinikleri Yayınevi, Ankara, pp.1-5, 2021

## **Refereed Congress / Symposium Publications in Proceedings**

### **I. Analytical Characterization for the Comparability Evaluation of TUR03 Drug Substance and Innovator Lots by Mass Spectrometry**

Atik A. E.

3rd International Congress on Analytical and Bioanalytical Chemistry, İstanbul, Turkey, 22 - 26 March 2021, pp.77-78

### **II. Terapötik Monoklonal Antikorun Stres Koşulları Altında Bağlanma Özelliklerinin İncelenmesi**

Atik A. E. , Demirhan D., Can Ö., Alban R. S.

3. Ulusal Proteomik Konferansı (TUPA), İstanbul, Turkey, 27 - 29 February 2020, pp.42

### **III. Monoklonal Antikor Yapısındaki Biyobenzer ve Referans İlaçların Stres Koşullarındaki Davranışlarının Kütle Spektrometresi ile İncelenmesi**

Atik A. E.

3. Ulusal Proteomik Kongresi (TUPA), İstanbul, Turkey, 27 - 29 February 2020, pp.21

### **IV. Comparison of Methionine Oxidation Profiles of Biosimilar TUR01 Monoclonal Antibody to Its Reference Under Oxidative Stress**

Atik A. E.

22nd International Mass Spectrometry Conference (IMSC), Florence, Italy, 26 - 31 August 2018, pp.511-512

### **V. Gas-Phase Fragmentation Mechanisms Studies of Doubly-Protonated Peptide Ions Containing Basic Amino Acid Residues by Mass Spectrometry**

Atik A. E. , Yalcin T.

22nd International Mass Spectrometry Conference (IMSC), Florence, Italy, 26 - 31 August 2018, pp.952-953

### **VI. Biyobenzer Bir Monoklonal Antikorun Fonksiyonel ve Sitotoksik Özelliklerinin Belirlenmesi ve Referans Ürün ile Karşılaştırılması**

Atik A. E. , Demirhan D., Can Ö.

2. Ulusal Proteomik Konferansı (TUPA), İstanbul, Turkey, 24 - 25 November 2017, pp.40

### **VII. Oksidatif Stres Altındaki Referans & Biyobenzer Monoklonal Antikorun Karşılaştırmalı Fizikokimyasal Analizleri**

Atik A. E. , Demirhan D., Can Ö., Serdar M. A.

2. Ulusal Proteomik Konferansı (TUPA), İstanbul, Turkey, 24 - 25 November 2017, pp.32

- VIII. **Fragmentation Reactions of a7 Ions from Singly Protonated Model Heptapeptides Containing Glutamine Residue**  
Atik A. E. , Yalçın T.  
65th ASMS Conference on Mass Spectrometry and Allied Topics, Indiana, United States Of America, 4 - 08 June 2017, pp.105
- IX. **Improvement of Glycosylation Profile to Increase Similarity of Adalimumab Biosimilar to the Innovator with High-Resolution Mass Spectrometry**  
Atik A. E. , Demirhan D., Can Ö.  
65th ASMS Conference on Mass Spectrometry and Allied Topics, Indiana, United States Of America, 4 - 08 June 2017, pp.186
- X. **Investigation of Gas Phase Fragmentation Reaction Mechanism of Doubly-Protonated bn (n=7-9) Ions by Mass Spectrometry**  
Atik A. E. , Yalçın T.  
64th ASMS Conference on Mass Spectrometry and Allied Topics, Texas, United States Of America, 5 - 09 June 2016, pp.182
- XI. **Investigation the Extent of in vitro Methylation of Glutamic Acid or Aspartic Acid Containing Model Peptides by Electrospray Ionization-Mass Spectrometry (ESI-MS)**  
Atik A. E. , Yalçın T.  
3rd Mediterranean Sea Region Countries Mass Spectrometry Workshop (MEDMS III), Athens, Greece, 28 June - 02 July 2015, pp.64
- XII. **Effect of Tyrosine Position on the Fragmentation Reactions of b3 Ions from Model Tripeptides**  
Atik A. E. , Yalçın T.  
20th International Mass Spectrometry Conference (IMSC), Geneva, Switzerland, 24 - 29 August 2014, pp.297
- XIII. **Infrared Multiple Photon Dissociation (IRMPD) Spectroscopy of b7 Ions from Model Acetylated Peptides**  
Atik A. E. , Yalçın T.  
3rd TAC Light Sources (SR & FEL) International Users' Meeting, Ankara, Turkey, 5 - 07 October 2013, pp.11-12
- XIV. **A New Rearrangement Reaction of Peptide b Ions Containing Acetylated Lysine Residue**  
Atik A. E. , Yalçın T.  
61st ASMS Conference on Mass Spectrometry and Allied Topics, Minnesota, United States Of America, 9 - 13 June 2013, pp.90
- XV. **Effects of C-terminal Amide vs Carboxylic Acid Groups on the Dissociation of Deprotonated Model Peptides Containing Acidic Residue**  
Atik A. E. , Yalçın T.  
61st ASMS Conference on Mass Spectrometry and Allied Topics, Minnesota, United States Of America, 9 - 13 June 2013, pp.90
- XVI. **The Role of Lysine ε-Amine Group on the Macrocyclization of b Ions**  
Atik A. E. , Yalçın T.  
60th ASMS Conference on Mass Spectrometry and Allied Topics, Vancouver, Canada, 19 - 24 May 2012, pp.119
- XVII. **Characteristic Fragmentation Patterns of b5+ and b4+ Ions from Side Chain Hydroxyl Group Containing Pentapeptides**  
Atik A. E. , Görgülü G., Yalçın T.  
IX. Kimyasal Fizik Kongresi, İzmir, Turkey, 14 - 16 October 2010, pp.162
- XVIII. **Protonlanmış Peptit Türevlerinin Reaksiyon Mekanizmalarının Kütle Spektrometresi ile İncelenmesi**  
Görgülü G., Atik A. E. , Yalçın T.  
XXIV. Ulusal Kimya Kongresi, Zonguldak, Turkey, 29 June - 02 July 2010, pp.375
- XIX. **Effect of Acidic Amino Acid on b-Type Sequence Scrambling**  
Atik A. E. , Yalçın T.  
58th ASMS Conference on Mass Spectrometry and Allied Topics, Utah, United States Of America, 23 - 27 May 2010, pp.144
- XX. **Kütle Spektrometresinin Proteomik Çalışmalardaki Rolü**

Atik A. E. , Karakaya H. Ç. , Koç A, Yalçın T.

XXII. Ulusal Kimya Kongresi, Gazimagusa, Cyprus (Kktc), 6 - 10 October 2008, pp.60

**XXI. The Role of V-ATPase Subunit E on Boron Tolerance in Barley**

Atik A. E. , Karakaya H. Ç. , Koç A, Yalçın T.

European Molecular Biology Organization (EMBO) Young Scientist Forum, İstanbul, Turkey, 20 - 22 February 2008, pp.10

**XXII. Strese Maruz Bırakılmış Bitkilerde Oluşan Yeni Proteinlerin 2D-Jel ve Kütle Spektrometresi ile Analizleri**

Atik A. E. , Karakaya H. Ç. , Salih B., Yalçın T.

XX. Ulusal Kimya Kongresi, Kayseri, Turkey, 4 - 08 September 2006, pp.13

## Supported Projects

Atik A. E. , Kocagöz Z. T. , Özal İldeniz T. A. , Süyen G., Arbak S., Ünübol N., Can Ö., Demirhan D., TUBİTAK Project, Doğadan Esinlenerek Antimikrobiyal Peptit ve Benzerlerinin Geliştirilmesi, 2018 - 2021

Can Ö., ATİK A. E. , TUBİTAK Project, Igg Yapısındaki Terapötik Monoklonal Antikorun Antijen Bağlanma Özelliklerinin Belirlenmesi için Yüzey Plazmon Rezonans Sistemiyle Validasyonlarının Yapılarak Metot Geliştirilmesi, 2019 - 2020

Atik A. E. , Yalçın T., TÜBİTAK - AB COST Project, Protonlanmış Peptitlerden Elde Edilen a-İyonlarının Gaz-Fazı Parçalanma Mekanizmalarının İncelenmesi, 2013 - 2015

Atik A. E. , Yalçın T., TUBİTAK Project, Peptit Türevlerinin Gaz Fazı Reaksiyon Mekanizmalarının Kütle Spektrometre ile İncelenmesi, 2010 - 2012

## Memberships / Tasks in Scientific Organizations

American Society for Mass Spectrometry, Member, 2010 - Continues, United States Of America

Biyoteknoloji Derneği, Member, 2010 - Continues, Turkey

## Edit Congress and Symposium Activities

3. International Congress on Analytical and Bioanalytical Chemistry, Invited Speaker, İstanbul, Turkey, 2021

3. National Proteomic Conference, Invited Speaker, İstanbul, Turkey, 2020

ISPE Biotechnology Workshop, Invited Speaker, İstanbul, Turkey, 2019

22. International Mass Spectrometry Conference , Attendee, Florence, Italy, 2018

TITCK- Regulatory and Supervisory Authority: 2nd Pharmaceutical and Medical Device Information Meeting, Invited Speaker, Ankara, Turkey, 2018

2. National Proteomic Conference, Attendee, İstanbul, Turkey, 2017

Waters European Biopharma Analytical Forum (WEBAF), Invited Speaker, Paris, France, 2017

65. ASMS Conference on Mass Spectrometry and Allied Topics, Attendee, Indiana, United States Of America, 2017

3rd Annual Biosimilars Day Meeting, Invited Speaker, İstanbul, Turkey, 2017

X. Annual Congress of the European Proteomics Association, Attendee, İstanbul, Turkey, 2016

## Citations

Total Citations (WOS):44

h-index (WOS):4

## **Non Academic Experience**

Company, Turgut Pharmaceuticals, Biotechnology Department  
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Company, Turgut Pharmaceuticals , Biotechnology Department