



Hüma YILMAZ

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Department of Analytical Chemistry,
Faculty of Pharmacy,
Gazi University, Ankara, TURKEY
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EDUCATION

Ph.D., Gazi University, Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, TURKEY, 2014-2020, cGPA 3.97/4.00

MSc, Gazi University, Faculty of Pharmacy, Analytical Chemistry Department, Ankara, TURKEY, 2011-2014, cGPA 3.72/4.00

MSc, Hacettepe University, Health Economics, and Pharmacoeconomics, Ankara, TURKEY, 2022 – 2024.

BSc, Blacksea Technical University, Faculty of Science, Department of Chemistry, Trabzon, TURKEY, 2006-2011, cGPA 3.59/4.00

EXPERIENCES

- Research & Teaching Assistant

Department of Analytical Chemistry, Faculty of Pharmacy, Gazi University
Ankara, Turkey, 16.09.2011-present

MSc thesis: Detection of Telmisartan Using Molecularly Imprinted Solid-Phase Extraction Spectrofluorimetric Method from Human Urine. Supervisor, Prof. Dr. Hasan BASAN.

Ph.D. thesis: Development of a Phosphorescence Sensor Based on Surface Molecularly Imprinted Mn Doped ZnS Quantum Dots for Selective Recognition of Antibiotic in Human Serum. Supervisor, Prof. Dr. Hasan BASAN.

- Visiting Ph.D. Student

University of Leicester

September 2015 - November 2015 Leicester, United Kingdom

“Developing Molecularly Imprinted Polymer Nanoparticles for Diagnostic Applications”

Supervisor, Prof. Dr. Sergey Piletsky

Department of Chemistry, Biotechnology Group

-Post-Doctoral Researcher

University of Zagreb

September 2024 – Present, Zagreb, Croatia

“Characterization of optically responsive nanomaterials for detection of biomarkers with wearables”
Supervisor, Prof. Dr. Ivana Steinberg
Department of Chemical Engineering and Technology

TEACHING EXPERIENCES

Instructor at Analytical-I/II Laboratory, 2011-present
Assistant Instructor at General Chemistry, 2011-2012, 2016-2017, 2021-present
Assistant Instructor at Analytical Chemistry-I, 2011-present Assistant Instructor at Separation Methods on Chromatography, 2011-present
Bio-Art, Lecturer, 2021 – present

POSTER PRESENTATION

- 1-Yilmaz, H., Atal, S., Koç, M., Serdaroglu, V., Tatlıdil, İ., Buruk, C.K., Sökmen, M., 2011, Preparation and Antibacterial Properties of Silver and Cobalt Loaded Nano TiO₂ Particles. National VII. Nanotechnology Congress, page 84, Sabancı University, İstanbul, Turkey
- 2-Yilmaz, H., Torul, H., Ciftci, H., Boyaci, I. H., Tamer, U., 2012, Floride Ion Determination Based On Surface-Enhanced Raman Spectroscopy, page 258, 10th International Symposium on Pharmaceutical Sciences (ISOPS), Ankara, Turkey
- 3- Yagoup Gorbani, Hüma Yilmaz, Hasan Basan, 2014, Selective Extraction of Atenolol Using Molecularly Imprinted Polymers, 1st National Biosensors Symposium, 2014, Tekirdağ, TURKEY
- 4- Yagoup Gorbani, Hüma Yilmaz, Hasan Basan, 2015, Spectrofluorimetric Determination of Atenolol From Human Urine Using Molecularly Imprinted Solid-Phase Extraction, 1st Gazi Pharmacy Symposium Series, Antalya, Turkey.
- 5- H. Yilmaz, H. Basan, 2016, Preconcentration of indapamide from human urine using molecularly imprinted solid-phase extraction, The 9th International Conference on Molecular Imprinting (MIP2016), Lund, Sweden.
- 6- H. Yilmaz, N. Ertaş, H. Basan, Development of a phosphorescence sensor based on surface molecularly imprinted Mn-doped ZnS quantum dots for selective recognition of melamine, The 9th International Conference on Molecular Imprinting (MIP2016), Lund, Sweden.
- 7- H. Yilmaz, H. Basan, 2016, Determination of telmisartan using molecularly imprinted solid-phase extraction spectrofluorimetric method from human urine, The 9th International Conference on Molecular Imprinting (MIP2016), Lund, Sweden.
- 8- H. Yilmaz, N. Ertaş, H. Basan, 2017, Synthesis of a Phosphorescence Sensor Based on Surface Imprinted Mn-doped ZnS Quantum Dots for Sensing Cefdinir, 10th Deutsch/1st European Biosensor Symposium, Potsdam, Germany.
- 9- H. Yilmaz, N. Ertaş, H. Basan, 2017, Surface Molecularly Imprinted Inorganic Polymer Capped Mn-doped ZnS Quantum Dots as a Phosphorescent Sensor for Detecting Tobramycin, 2. Gazi Pharmacy Symposium Series, Ankara, Turkey.
- 10- M. Aktürk, H. Yılmaz, T. Akbaba, N. Ertaş, H. Basan, 2017, Development of hybrid organic-inorganic surface imprinted Mn-doped ZnS QDs as a Phosphorescent Sensor for the Recognition and Detection of Tobramycin, 2. Gazi Pharmacy Symposium Series, Ankara, Turkey.

- 11- H. Yilmaz, N. Ertaş, H. Basan, 2019, A Selective Phosphorescent Sensor for Cefdinir Detection Using Surface Imprinted Polymers Coated Mn-doped ZnS Quantum Dots, 4th International Congress on Biosensors, Çanakkale, Turkey.
- 12- M. Yildiz, H. Yilmaz, H. Basan, 2021, Determination Of Rivastigmine By Using Molecularly Imprinted Solid-Phase Extraction. Gazi Pharmacy, Symposium Series, Online.
- 13- M. K. Keşir, E. Durmaz, H. Yilmaz, 2022, Novel Selective Adsorption and Photodegradation of BPA by Molecularly Imprinted Modified Titanium Dioxide Particles in Water Samples, NanoTr-16, Ankara, Turkey.
- 14- Yilmaz, H., 2022, A spectrofluorimetric sensor for Fosfosmycin Trometamol based on molecularly imprinted polymers on carbon dots for fluorescent sensing of in Urine, 29-30/11/2022, UK-Poland-Ukraine Bioinspired Materials Conference, Online.
- 15- Yilmaz, H., Şanlı, S. 2024. Development of a fluorescent sensor based on molecularly-imprinted silica nanoparticles for rapid and selective detection of trimetazidine in urine samples, 12-15/05/2024, 8th International Conference on Bio-Sensing Technology, Sevilla, Spain.
- 16- Yilmaz. H., Kucukgocen, H. E. 2024. Development of a fluorescent sensor using surface-imprinted polymers for specific recognition of 5-fluorouracil, 10-13/12/2024, Conference on Research and Innovations in Science and Technology of Materials, SNAIA – CRISTMAS, Paris, France.

ORAL PRESENTATION

- 1-Yilmaz, H., Basan, H., Molecularly imprinted solid-phase extraction of indapamide, 6th Black Sea Basin Conference on Analytical Chemistry, Blacksea Technical University (6BBCAC), 2013, Trabzon, Turkey.
- 2-Yilmaz, H., Ertaş, N., Basan, H. Quantum Dots Coated with Molecularly Imprinted Polymer as Phosphorescent Sensor for Selective Determination of Amoxicillin, 3rd International Environmental Chemistry Congress (EnviroChem), 01-04 November 2021, Mirage Park Resort Hotel – Antalya, Turkey
- 3-Yilmaz. H., Spectrofluorimetric Determination of Montelukast Sodium Based on Molecularly Imprinted Solid-Phase Extraction, 5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2022), Online.
- 5-Yilmaz, H., Sensitive Spectrofluorimetric Method For Determination Of Gentamicin, International Multidisciplinary Symposium on Drug Research and Development - DRD 2023, Izmir, Turkey
- 6- Yilmazi H., Ertaş, N., Development of Molecularly Imprinted Fluorescent Test Strips for Rapid and Visual Determination, of Memantine, 13th Workshop on Biosensors and Bioanalytical Microtechniques in Environmental, Food and Clinical Analysis (BBMEC) 2024, Izmir, Turkey.

INTERNATIONAL TRAINING/WORKSHOP

1- MSC Euromaster Summer School: Measurement Science in Chemistry, International Summer School on Quality Assurance in a Testing Laboratory (ISO/IEC 17025), 7-20 July 2013, Director of Summer School: Prof. Dr. Philip Taylor (Sponsored by: European Union, European Commission) Lyon, FRANCE.

Content: Covers broad range of topics related to quality assurance, ISO/IEC-17025, metrology and accreditation

- Traceability, Uncertainty, Compliance Assessment,
- Validation, Use of CRMs, Internal and External Quality Assurance, Interlaboratory Comparisons,
- Auditing, Essential in today's testing laboratories

- 2- Validation of Analytical Methods for Pharmaceutical Analysis, 4-5 December 2013, Director of Training: Oona McPolin (Mourne Training Service) Berlin, GERMANY.
- 3- Micro and Nanosensor Ph.D. Summer School, 15-26 August 2016, Director of Training: Anja Boisen, Copenhagen, DENMARK.
- 4-Winter School for Theoretical Chemistry and Spectroscopy, Graduate Course, 10-14 December 2018, Director of Training: Bernd Ensing, Han-Sur-Lesse, BELGIUM.

MEETINGS

- 1- Chromatography Conference, Blacksea Technical University, 2009, Trabzon, Turkey.
- 2- 5th Analytical Chemistry Conference, Atatürk University 2010, Erzurum, Turkey.
- 3- National VII. Nanotechnology Congress, Sabancı University, 2011, Istanbul, Turkey
- 4- Applied Chromatographic Analysis Workshop, Blacksea Technical Analysis 2011, Trabzon, Turkey.
- 5- 10th International Symposium On Pharmaceutical Sciences (Isops), 2012, Ankara, Turkey.
- 6- 6th Black Sea Basin Conference on Analytical Chemistry Karadeniz Technical University (6BBCAC), 2013, Trabzon, TURKEY
- 7- 1st National Biosensors Symposium, 2014, Tekirdağ, TURKEY.
- 8- 1st Gazi Pharmacy Symposium Series, 2015, Antalya, TURKEY.
- 9- 9th Molecularly Imprinted Polymer Conference, 2016, Lund, SWEDEN.
- 10- 10th Deutch Biosensor Symposium/1st European Biosensor Symposium, 2017, Potsdam, Germany.
- 11- 2. Gazi Pharmacy Symposium Series, 2017, Ankara, TURKEY.
- 12- 4th International Congress on Biosensors, Çanakkale, TURKEY.
- 13- 3rd International Gazi Pharma Symposium Series (GPSS-2021), 08-10 September 2021, Online.
- 14- 3rd International Environmental Chemistry Congress (EnviroChem), 01-04 November 2021, Mirage Park Resort Hotel - Antalya TURKEY.
- 15- Nanoscience & Nanotechnology Conference (NanoTr-16), 05-08 September 2022, METU, Ankara, Turkey.
16. 5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2022), Online.
17. UK-Poland-Ukraine Bioinspired Materials Conference, 29-30/11/2022, Online.
- 18- International Multidisciplinary Symposium on Drug Research and Development - DRD 2023, Izmir-Turkey.
- 19- 8th International Conference on Bio-Sensing Technology, Sevilla, Spain.
- 20- 13th Workshop on Biosensors and Bioanalytical Microtechniques in Environmental, Food and Clinical Analysis (BBMEC) 2024, Izmir, Turkey.
- 21- Conference on Research and Innovations in Science and Technology of Materials, SNAIA – CRISTMAS, 10-13 December 2024, Paris, France.

PROJECTS

- 1-Yüzeyi Moleküler Baskılanmış Mn-doplanmış ZnS Kuantum Noktaları Temelli Fosforesans Sensörünün Geliştirilmesi. (**Eng:** Development of a Surface Molecularly Imprinted Mn-Doped ZnS Quantum Dot-Based Phosphorescence Sensor) Basan, H., Ertaş N., Yılmaz, H. TUBITAK Project, 1001, (Project Fellow, 2016 – 2018)
- 2- 5-Florourasil İçin Yüzeyi Baskılanmış Polimerler Kullanılarak Spektroflorimetrik Yöntem Geliştirilmesi. (**Eng:** Development of a Spectrofluorimetric Method Using Surface-Imprinted

Polymers for 5-Fluorouracil). Küçükgöçen, H.E., Yılmaz, H. TUBITAK Project, 2209, (PI, 10/2023-12/2024)

3- Trimetazidinin Seçimli Ekstraksiyonu İçin Moleküler Baskılanmış Polimerlerin Geliştirilmesi. (Eng: Development of Molecularly Imprinted Polymers for the Selective Extraction of Trimetazidine). Şahin, A.F., Yılmaz, H. TUBITAK Project, 2209, (PI, 10/2023-12/2024)

4- Bisfenol A'nın çeşitli ortamlardan seçici ekstraksiyonu için moleküler baskılanmış katı faz ekstraksiyon sorbentinin geliştirilmesi ve Orbitrap LC-MS ile Tayini. (Eng: Development of a Molecularly Imprinted Solid-Phase Extraction Sorbent for the Selective Extraction of Bisphenol A from Various Matrices and Its Determination by Orbitrap LC-MS.) Akgün, B., Basan, H., Yılmaz, H. (Researcher, 01/2023-07/2024), Çavuş, F., Güzelsoy, N. A., Çavuş, S. The Ministry of Agriculture and Forestry of Turkey, (2023-2025)

5- Perflorooktanoik Asit için Sularda ve Biyolojik Sıvılarda Moleküler Baskılanmış Polimer Temelli Analiz Yöntemi Geliştirilmesi. (Eng: Development of a Molecularly Imprinted Polymer-Based Analytical Method for the Determination of Perfluorooctanoic Acid in Water and Biological Fluids.) Durmaz, E., Yılmaz, H. (Researcher), Koç, S. Project Supported by Higher Education Institutions. (01/2024-01/2025).

6- Wearable Optical Chemical Sensors for Multimodal Determination of Biomarkers. Steinberg Murkovic, I., Meštrović, E., Meštrović, Z.L., Meštrović, D., Roglić, M., Fruk, L., Lihter, M., Mohr, G.J., Steinberg, M.D., Zuvic, I., Yılmaz, H., (Post-Doctoral Researcher, 09/2024-). Croatian Science Foundation, (12/2023 – 12/2027).

SCIENTIFIC ARTICLES

1-Yılmaz, H., Basan, H. 2015. Development Of A Molecularly Imprinted Solid-Phase Extraction Sorbent For The Selective Extraction Of Telmisartan From Human Urine, J. Sep. Sci. DOI: 10.1002/jssc.201401349.

2-Yılmaz, H., Basan, H. 2015. Preconcentration Of İndapamide From Human Urine Using Molecularly Imprinted Solid-Phase Extraction, J. Sep. Sci. DOI: 10.1002/jssc.201500427.

3-Gorbani, Y., Yılmaz, H., Basan, H. 2017. Spectrofluorimetric Determination Of Atenolol From Human Urine Using High Affinity Molecularly Imprinted Solid-Phase Extraction Sorbent, Luminescence, 32, 8, 1391-1397.

4-Yılmaz, H., Ertaş, N., Basan, H. 2024. Development Of A New Phosphorescence Sensor Based On Surface

Molecularly Imprinted Mn-doped Zns Quantum Dots For Detection Of Melamine in Milk Products. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 309, 123818.

BOOK CHAPTERS

1-Basan, H. ve Yılmaz, H. 2020. Molecularly Imprinted Polymers as Recognition and Signaling Elements in Sensors. Switchable Bioelectronics. New York: Jenny Stanford Publishing, 161-175.

CERTIFICATES

1-TS EN ISO/EC 17025 Basic Education and Document Preparation Accreditation of Testing Laboratories.

2-ISO 22000:2005 Food Safety Management System Certificate in Education.

3-OHSAS 18001:2007 Occupational Health and Safety Management System Certificate in Education.

4-GMP (Good Manufacturing Practices) Certificate of Education.

LANGUAGES

Fluent in English (spoken and written)

French limited (spoken and written)

German limited (spoken and written)

OCCUPATIONAL SKILLS

Molecularly imprinted polymers, photocatalysis, novel methods, nanoparticles, spectroscopy, fluorescent and phosphorescent sensors, biosensors, solid phase extraction, quantum dots, drug-effective materials, and spectroscopic techniques.