

## Asst. Prof. MÜSLÜM İLGÜ

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAZ-8031-2020

ScopusID: 55644398900

Yoksis Researcher ID: 275341

### Education Information

Doctorate, Iowa State University of Science and Technology, Fen Edebiyat, Biochemistry, United States Of America 2005 - 2012

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, Turkey 1999 - 2005

### Foreign Languages

English, C2 Mastery

### Dissertations

Doctorate, Deciphering the Details of RNA Aminoglycoside Interactions: From Atomistic Models to Biotechnological Applications, Middle East Technical University, Life Sciences, Biochemistry, Biophysics and Molecular Biology, 2012

### Research Areas

Health Sciences, Medicine, Fundamental Medical Sciences, Biophysics, Biochemistry, Basic Sciences, Life Sciences, Biochemistry, Molecular Biochemistry

### Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty Of Arts And Sciences, Biological Sciences, 2017 - Continues

### Academic and Administrative Experience

Deputy Head of Department, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 2019 - Continues

## Courses

Biochemistry, Undergraduate, 2018 - 2019, 2017 - 2018

## Advising Theses

İLGÜ M., The Impact of ions on RNA aptamer-aminoglycoside interactions, Postgraduate, R.Fazlıoğlu(Student), 2019

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Aptamers Targeting Membrane Proteins for Sensor and Diagnostic Applications**  
Kara N., Ayoub N., Ilgu H., Fotiadis D., İLGÜ M.  
Molecules, vol.28, no.9, 2023 (SCI-Expanded)
- II. **Aptamer Applications in Neuroscience**  
Ozturk M., Nilsen-Hamilton M., Ilgu M.  
PHARMACEUTICALS, vol.14, no.12, 2021 (SCI-Expanded)
- III. **Sampling Performance of Multiple Independent Molecular Dynamics Simulations of an RNA Aptamer**  
Yan S., Peck J. M., Ilgu M., Nilsen-Hamilton M., Lamm M. H.  
ACS OMEGA, vol.5, no.32, pp.20187-20201, 2020 (SCI-Expanded)
- IV. **Common Secondary and Tertiary Structural Features of Aptamer-Ligand Interaction Shared by RNA Aptamers with Different Primary Sequences**  
Ilgu M., Yan S., Khounlo R. M., Lamm M. H., Nilsen-Hamilton M.  
MOLECULES, vol.24, no.24, 2019 (SCI-Expanded)
- V. **Aptamer-enabled uptake of small molecule ligands**  
Auwardt S. L., Seo Y., Ilgu M., Ray J., Feldges R. R., Shubham S., Bendickson L., Levine H. A., Nilsen-Hamilton M.  
SCIENTIFIC REPORTS, vol.8, 2018 (SCI-Expanded)
- VI. **Specificity and Ligand Affinities of the Cocaine Aptamer: Impact of Structural Features and Physiological NaCl**  
Sachan A., Ilgu M., Kempema A., Kraus G. A., Nilsen-Hamilton M.  
ANALYTICAL CHEMISTRY, vol.88, no.15, pp.7715-7723, 2016 (SCI-Expanded)
- VII. **Light-up and FRET aptamer reporters; evaluating their applications for imaging transcription in eukaryotic cells**  
Ilgu M., RAY J., BENDICKSON L., WANG T., Geraskin I. M., Kraus G. A., Nilsen-Hamilton M.  
METHODS, vol.98, pp.26-33, 2016 (SCI-Expanded)
- VIII. **Aptamers in analytics**  
Ilgu M., Nilsen-Hamilton M.  
ANALYST, vol.141, no.5, pp.1551-1568, 2016 (SCI-Expanded)
- IX. **IMAGETags: Quantifying mRNA Transcription in Real Time with Multiaptamer Reporters**  
Ray J., SHIN I., Ilgu M., BENDICKSON L., GUPTA V., KRAUS G. A., NILSEN-HAMILTON M.  
VISUALIZING RNA DYNAMICS IN THE CELL, vol.572, pp.193-213, 2016 (SCI-Expanded)
- X. **An adaptable pentaloop defines a robust neomycin-B RNA aptamer with conditional ligand-bound structures**  
Ilgu M., Fulton D. B., Yennamalli R. M., Lamm M. H., Sen T. Z., Nilsen-Hamilton M.  
RNA, vol.20, no.6, pp.815-824, 2014 (SCI-Expanded)
- XI. **Live-cell imaging of Pol II promoter activity to monitor gene expression with RNA IMAGETag reporters**  
SHIN I., RAY J., Gupta V., Ilgu M., Beasley J., BENDICKSON L., MEHANOVIC S., Kraus G. A., Nilsen-Hamilton M.  
NUCLEIC ACIDS RESEARCH, vol.42, no.11, 2014 (SCI-Expanded)
- XII. **Investigating the malleability of RNA aptamers**

İlgu M., WANG T., Lamm M. H., Nilsen-Hamilton M.  
METHODS, vol.63, no.2, pp.178-187, 2013 (SCI-Expanded)

## **Books & Book Chapters**

### **I. Recent Advances in Analytical Chemistry**

İlgü M., Nilsen-Hamilton M.  
IntechOpen, London, 2019

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

### **I. Clinical validation of SERS metasurface SARS-CoV-2 biosensor**

Bilgin B., Torun H., İLGÜ M., Yanik C., Batur S. N., Çelik S., Öztürk M., Dogan Ö., Ergönül Ö., Solaroglu I., et al.  
Biomedical Vibrational Spectroscopy 2022: Advances in Research and Industry, Virtual, Online, 20 - 24 February  
2022, vol.11957

## **Metrics**

Publication: 14

Citation (WoS): 268

Citation (Scopus): 178

H-Index (WoS): 6

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