

## Prof. NURİYE AKBAY

### Personal Information

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### Education Information

Post Doctorate, University of Maryland, School Of Medicine, Biochemistry And Molecular Biology Department, United States Of America 2011 - 2012

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Analitik Kimya, Turkey 2003 - 2009

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Analitik Kimya, Turkey 2000 - 2003

Undergraduate, Hacettepe University, Fen Fakültesi, Kimya, Turkey 1995 - 2000

### Research Areas

Life Sciences, Molecular Biology and Genetics, Chemistry, Analytical Chemistry, Spectroscopical Methods, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Istanbul Medeniyet University, Faculty Of Engineering And Natural Sciences , Chemistry , 2016 - 2019

Associate Professor, Tekirdağ Namik Kemal University, Faculty Of Arts And Sciences, 2014 - 2016

Assistant Professor, Tekirdağ Namik Kemal University, Faculty Of Arts And Sciences, 2010 - 2014

Other, University of Maryland, School Of Medicine, Biochemistry And Molecular Biology Department, 2011 - 2012

Research Assistant, Hacettepe University, Fen Fakültesi, Kimya, 2001 - 2010

Research Assistant, --Seçiniz--, National Academy Of Sciences Of Ukraine, Molecular Biology And Genetic Institute, 2006 - 2007

### Advising Theses

Akbay N., Psiko-uyarıcı modafinil ile nükleik asitlerin etkileşim mekanizmasının floresans spektroskopisi ile incelenmesi , Postgraduate, E.Öğuzcan(Student), 2020

Akbay N., JWH-122 ve JWH-122 N-(4-HİDROKSİPENTİL) METABOLİTİNİN LC-MS/MS İLE KANDA TAYİNİ, Postgraduate, M.Yılmaz(Student), 2017

Akbay N., Quantitative analysis of MDMA by GC/FID and method validation, Postgraduate, M.Şahin(Student), 2016

Akbay N., Çeşitli hidrazon türevleri ile nükleik asitlerin bağlanma mekanizmalarının florimetrik yöntemle incelenmesi, Postgraduate, Ş.Özkan(Student), 2016

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

- I. **Spectroscopic and molecular modeling methods to investigate the interaction between psychostimulant modafinil and calf thymus DNA using ethidium bromide as a fluorescence probe**  
Oğuzcan E., Köksal Z., Taşkın Tok T., Uzgören Baran A., Akbay N.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.1, no.1, pp.1-2, 2021 (Peer-Reviewed Journal)
- II. **Palladium(II) and ruthenium(II) complexes of benzotriazole functionalized N-heterocyclic carbenes: Cytotoxicity, antimicrobial, and DNA interaction studies**  
Onar G., GÜRSES C., KARATAŞ M. O. , Balcıoğlu S., Akbay N., Özdemir N., ATEŞ B., ALICI B.  
Journal of Organometallic Chemistry, pp.48-56, 2019 (Peer-Reviewed Journal)
- III. **Multispectroscopic and Computational Investigation of ct-DNA Binding Properties with Hydroxybenzylidene Containing Tetrahydrocarbazole Derivative**  
Ozkan S., Taskin-Tok T., Uzgoren-Baran A., AKBAY N.  
JOURNAL OF FLUORESCENCE, vol.29, no.1, pp.101-110, 2019 (Peer-Reviewed Journal)
- IV. **Metal-enhanced fluorescence of the trimethine cyanine dyes complexed with amyloid fibrils**  
LOSITSKY M. Y. , AKBAY N., CHERNII S. V. , KRYVOROTENKO D. V. , YARMOLUK S. M. , Kovalska V. B.  
JOURNAL OF LUMINESCENCE, vol.204, pp.209-215, 2018 (Peer-Reviewed Journal)
- V. **Investigation of binding properties of two ethidium derivatives with serum albumins: spectral and computational approach**  
AKBAY N., Tok T. T. , Seferoglu Z., GÖKOĞLU E.  
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, vol.36, no.12, pp.3114-3121, 2018 (Peer-Reviewed Journal)
- VI. **Characterization of the Interaction between Phthalocyanine and Amyloid Fibrils by Surface-Enhanced Raman Scattering (SERS)**  
Losytskyy M., AKBAY N., Chernii S., Avci E., Chernii V., Yarmoluk S., Culha M., Kovalska V.  
ANALYTICAL LETTERS, vol.51, pp.221-228, 2018 (Peer-Reviewed Journal)
- VII. **Metal-enhanced intrinsic fluorescence of nucleic acids using platinum nanostructured substrates**  
Akbay N., Mahdavi F., Lakowicz J. R. , Ray K.  
CHEMICAL PHYSICS LETTERS, vol.548, pp.45-50, 2012 (Peer-Reviewed Journal)
- VIII. **Distance-Dependent Metal-Enhanced Intrinsic Fluorescence of Proteins Using Polyelectrolyte Layer-by-Layer Assembly and Aluminum Nanoparticles**  
Akbay N., Lakowicz J. R. , Ray K.  
JOURNAL OF PHYSICAL CHEMISTRY C, vol.116, no.19, pp.10766-10773, 2012 (Peer-Reviewed Journal)
- IX. **Interactions of Two Ethidium Derivatives with Calf Thymus DNA and Serum Albumins Using Fluorescence Quenching Method**  
Akbay N., Seferoglu Z., Goekoglu E.  
CURRENT ANALYTICAL CHEMISTRY, vol.6, no.4, pp.334-340, 2010 (Peer-Reviewed Journal)
- X. **Fluorescence study on the interaction of bovine serum albumin with two coumarin derivatives**  
Akbay N., Topkaya D., Ergun Y., Alp S., GÖK E.  
JOURNAL OF ANALYTICAL CHEMISTRY, vol.65, no.4, pp.382-387, 2010 (Peer-Reviewed Journal)
- XI. **Fluorescence Interaction and Determination of Calf Thymus DNA with Two Ethidium Derivatives**  
Akbay N., Seferoglu Z., Gok E.  
JOURNAL OF FLUORESCENCE, vol.19, no.6, pp.1045-1051, 2009 (Peer-Reviewed Journal)
- XII. **Determination of Vitamin B(12) Using a Chemiluminescence Flow System**  
Akbay N., GÖK E.  
JOURNAL OF ANALYTICAL CHEMISTRY, vol.63, no.11, pp.1073-1077, 2008 (Peer-Reviewed Journal)
- XIII. **Interaction of thyroxine with 7 hydroxycoumarin: A fluorescence quenching study**  
Goek E., Oeztuerk C., Akbay N.  
JOURNAL OF FLUORESCENCE, vol.18, no.5, pp.781-785, 2008 (Peer-Reviewed Journal)
- XIV. **The mechanism of benzothiazole styrylcyanine dyes binding with dsDNA: Studies by spectral-**

## **luminescent methods**

Akbay N., LOSYTSKY M. Y., KOVALSKA V. B., BALANDA A. O., YARMOLUK S. M.

JOURNAL OF FLUORESCENCE, vol.18, no.1, pp.139-147, 2008 (Peer-Reviewed Journal)

## **Articles Published in Other Journals**

### **I. Naproxen Derivative Interaction Properties with ct-DNA**

Akbay N., Köksal Z., Taşkın Tok T., Uzgören Baran A.

Hacettepe Journal of Biology and Chemistry, vol.47, no.2, pp.177-184, 2019 (Peer-Reviewed Journal)

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

### **I. Study of Thioflavin T (ThT) as a Fluorescence Probe and Amyloid Fibril Formation from Lysozyme**

Kaya D., Güzel P., Akbay N.

4th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2021), Ankara, Turkey, 24 - 26 November 2021, pp.1

### **II. Plasmon-controlled fluorescence and single DNA strand sequencing**

Akbay N., Ray K., Chowdhury M. H., Lakowicz J. R.

Conference on Plasmonics in Biology and Medicine IX, San-Francisco, Costa Rica, 22 - 24 January 2012, vol.8234

### **III. Distance-dependent intrinsic fluorescence of proteins on aluminum nanostructures**

Akbay N., Lakowicz J. R., Ray K.

Conference on Plasmonics in Biology and Medicine IX, San-Francisco, Costa Rica, 22 - 24 January 2012, vol.8234

## **Supported Projects**

AKBAY N., UZGÖREN BARAN A., KÖKSAL Z., OĞUZCAN E., Project Supported by Higher Education Institutions, Narkoleptik Uyarıcı Modafinilin ctDNA ile Bağlanma Mekanizmasının Çoklu Spektroskopik Tekniklerle İncelenmesi, 2019 - 2020

Akbay N., TUBİTAK Project, Amiloid Fibrillerin Etkili Tayini için Siyanin Boyalarının Metal Genişletilmiş Floresans Problarının Geliştirilmesi, 2014 - 2017

Akbay N., Project Supported by Higher Education Institutions, Çeşitli Hidrozon Türevleri ile Nükleik Asitlerin Bağlanma Mekanizmalarının Florimetrik Yöntemle İncelenmesi, 2015 - 2016

Akbay N., Project Supported by Higher Education Institutions, GC/FID Cihazı ile Kantitatif MDMA Analizi Metot Validasyon, 2015 - 2016

Akbay N., TÜBİTAK International Bilateral Joint Cooperation Program Project, Study Of Axially Coordinated Phthalocyanines As AntiFibrilogenic Agents And Sers-Probes For Amyloid Aggregates Detection, 2014 - 2016

Akbay N., Project Supported by Higher Education Institutions, Nükleik Asitlerin Tayininde Kullanılabilecek Etidiyum Bromür Türevlerinin Nükleotidler ile Etkileşimlerinin Spektroflorimetrik Yöntemle İncelenmesi, 2013 - 2014

AKBAY N., TUBİTAK Project, Nükleik Asitlerin Tayininde Kullanılabilecek Yeni Floresant Uçların Sentezlenmesi ve Etkileşimlerinin Spektroflorimetrik Yöntemle İncelenmesi, 2007 - 2009

## **Metrics**

Publication: 18

Citation (WoS): 210

Citation (Scopus): 218

H-Index (WoS): 8

H-Index (Scopus): 7