

## BURÇİN BOZAL PALABIYIK

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### Eğitim

**Lisans:** Eczacılık Fakültesi, Ankara Üniversitesi, 2003 – 2007

**Yüksek Lisans:** Ankara Üniversitesi Eczacılık Fakültesi Analitik Kimya Anabilim Dalı, 2007 – 2009

“Lornoksikam’ın Elektroanalitik İncelenmesi ve Tayini” (Danışman: Prof. Dr. Bengi USLU)

**Doktora:** Ankara Üniversitesi Eczacılık Fakültesi Analitik Kimya Anabilim Dalı, 2009 – 2015

“Yeni Nesil Nanosensör Tasarımı ve Antiparkinson İlaç Analizlerinde Kullanımı” (Danışman: Prof. Dr. Bengi USLU)

### İş Deneyimi

Araştırma Görevlisi, Ankara Üniversitesi Eczacılık Fakültesi Analitik Kimya Anabilim Dalı, 2010 – devam

### Bilimsel İlgi Alanları

Elektrokimya, İlaç analizleri, Biyosensörler, Modifiye elektrotlar

### Yayımlar

#### SCI ve SCI - Expanded indekslerde yer alan dergilerde yapılan yayımlar

- 1) **Burçin Bozal**, Burcu Doğan-Topal, Bengi Uslu, Sibel A. Özkan, Hassan Y. Aboul-Enein, Quantitative analysis of irbesartan in pharmaceuticals and human biological fluids by voltammetry, *Analytical Letters*, 42 (14), 2009, 2322-2338.
- 2) Burcu Dogan-Topal, **Burcin Bozal**, B. Tolga Demircigil, Bengi Uslu, Sibel A. Ozkan, Electroanalytical studies and simultaneous determination of amlodipine besylate and atorvastatine calcium in binary mixtures using first derivative of the ratio-voltammetric methods, *Electroanalysis*, 21 (22), 2009, 2427-2439.
- 3) **Burcin Bozal**, Bengi Uslu, Applications of carbon based electrodes for voltammetric determination of lornoxicam in pharmaceutical dosage form and human serum, *Combinatorial Chemistry and High Throughput Screening*, 13 (7), 2010, 599-609.

- 4) **Burçin Bozal**, Burcu Dogan-Topal, Bengi Uslu, Sibel A. Ozkan, Hassan Y. Aboul-Enein, Electrochemical study of the interaction between the antibacterial drug gemifloxacin and dsDNA using pencil graphite electrode, *Current Analytical Chemistry*, 8 (4), 2012, 528-534.
- 5) **Burçin Bozal**, Mehmet Gumustas, Burcu Dogan-Topal, Bengi Uslu, Sibel A. Ozkan, Fully validated simultaneous determination of bisoprolol fumarate and hydrochlorothiazide in their dosage forms using different voltammetric, chromatographic, and spectrophotometric analytical methods, *Journal of AOAC International*, 96 (1), 2013, 42-51.
- 6) Burcu Dogan-Topal, **Burçin Bozal-Palabiyik**, Bengi Uslu, Sibel A. Ozkan, Multi-walled carbon nanotube modified glassy carbon electrode as a voltammetric nanosensor for the sensitive determination of anti-viral drug valganciclovir in pharmaceuticals, *Sensors and Actuators B: Chemicals*, 177, 2013, 841-847.
- 7) Nurgul Karadas, **Burçin Bozal-Palabiyik**, Bengi Uslu, Sibel A. Ozkan, Functionalized carbon nanotubes with silver nanoparticles to fabricate a sensor for the determination of zolmitriptan in its dosage forms and biological samples, *Sensors & Actuators B: Chemical*, 2013, 186, 486-494.
- 8) **Burçin Bozal-Palabiyik**, Burcu Dogan-Topal, Bengi Uslu, Alp Can, Sibel A. Ozkan, Sensitive voltammetric assay of etoposide using modified glassy carbon electrode with a dispersion of multi-walled carbon nanotube, *Journal of Solid State Electrochemistry*, 17, 2013, 2815-2822.
- 9) **Burçin Bozal-Palabiyik**, Sevinc Kurbanoglu, Mehmet Gumustas, Bengi Uslu, Sibel A. Ozkan, Electrochemical approach for the sensitive determination of anticancer drug epirubicin in pharmaceuticals in the presence of anionic surfactant, *Revue Roumanie de Chimie*, 58 (7-8), 2013, 647-658.
- 10) Burcu Dogan-Topal, **Burçin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Investigation of anticancer drug lapatinib and its interaction with dsDNA by electrochemical and spectroscopic techniques, *Sensors and Actuators B: Chemical*, 194, 2014, 185-194.
- 11) Sevinc Kurbanoglu, **Burçin Bozal-Palabiyik**, Mehmet Gumustas, S. Kamacı, Bengi Uslu, Sibel A. Ozkan, Development and validation of a stability-indicating RP-LC method for the determination of anticancer drug epirubicin in pharmaceuticals, *Journal of Liquid Chromatography & Related Technologies*, 37, 2014, 1583-1596.
- 12) Cansu Yakar, **Burçin Bozal-Palabiyik**, Burcu Dogan-Topal, Sibel A. Ozkan, Bengi Uslu, Recent analytical applications on antihypertensive drugs, *Revue Roumanie de Chimie*, 60 (5-6), 2015, 427-445.
- 13) Burcu Dogan-Topal, **Burçin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Electrochemical oxidation mechanism of anticancer drug nilotinib, *Revue Roumanie de Chimie*, 60 (5-6), 2015, 467-475.
- 14) Sevinc Kurbanoglu, **Burçin Bozal-Palabiyik**, Mehmet Gumustas, Bengi Uslu, Sibel A. Ozkan, Investigation of voltammetric behavior and electroanalytical determination of anticancer epirubicin via glassy carbon electrode using differential pulse and square wave voltammetry techniques, *Revue Roumanie de Chimie*, 60 (5-6), 2015, 491-499.

- 15) Mariola Brycht, Slawomira Skrzypek, Nurgul Karadas, Sylwia Smarzewska, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Voltammetric behavior and determination of antidepressant drug paroxetine at carbon-based electrodes, *Ionics*, 21, 2015, 2345-2354.
- 16) **Burcin Bozal-Palabiyik**, Bengi Uslu, A novel electroanalytical nanosensor based on MWCNT/Fe<sub>2</sub>O<sub>3</sub> nanoparticles for the determination of antiparkinson drug ropinirole, *Ionics*, 22, 2016, 115-123.
- 17) **Burcin Bozal-Palabiyik**, Bengi Uslu, Comparative study for voltammetric investigation and trace determination of pramipexole at bare and carbon nanotube-modified glassy carbon electrodes, *Ionics*, DOI 10.1007/s11581-016-1774-2.
- 18) Sevinc Kurbanoglu, Burcu Dogan-Topal, Eva Plata Rodriguez, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Advances in electrochemical DNA biosensors and their interaction mechanism with pharmaceuticals, *Journal of Electroanalytical Chemistry*, 775, 2016, 8–26.
- 19) **Burcin Bozal-Palabiyik**, Sevinc Kurbanoglu, Bengi Uslu, Sibel A. Ozkan, Petr Zuman, Diffusion, adsorption and electrode kinetics of electrooxidations on a stationary solid electrode, *Electroanalysis*, DOI: 10.1002/elan.201600372.
- 20) **Burcin Bozal-Palabiyik**, Bengi Uslu, Voltammetric investigation and determination of piribedil in pharmaceutical dosage forms using carbon-based electrodes, *Current Pharmaceutical Analysis*, 1, 2017, 91-98.

#### SCI ve SCI - Expanded indeksler dışındaki diğer uluslararası indekslerde yer alan dergilerde yapılan yayınlar

- 1) Bengi Uslu, **Burcin Bozal**, Mehmet Emin Kuscu, Anodic voltammetry of ciprofloxacin and its analytical applications, *The Open Chemical and Biomedical Methods Journal*, 3, 2010, 108-114.
- 2) **Burcin Bozal**, Bengi Uslu, Sibel A. Özkan, A review of electroanalytical techniques for determination of anti-HIV drugs, *International Journal of Electrochemistry*, Article ID: 343947, 2011.
- 3) Serkan Altunsoy, **Burcin Bozal Palabiyik**, Bengi Uslu, Validation of liquid chromatographic method for simultaneous determination of quinapril and hydrochlorothiazide in pharmaceutical dosage forms, *Turkish Journal of Pharmaceutical Sciences*, 10 (2), 2013, 255-262.

#### Bildiriler

#### Uluslararası kongre, sempozyum, çalıştay ve panel gibi bilimsel toplantılara ait bildiri kitaplarında yer alan yayınlar

- 1) **Burcin Bozal**, Bengi Uslu, Voltammetric determination of lornoxicam in pharmaceuticals and human serum using a boron-doped diamond electrode, 9<sup>th</sup> International Symposium on Pharmaceutical Sciences (9<sup>th</sup> ISOPS), Ankara, Turkey, June 23-26, 2009, P-46.

- 2) Mehmet Gumustas, **Burcin Bozal**, Burcu Dogan-Topal, Sibel A. Ozkan, Bengi Uslu, Optimization of LC methods for the simultaneous determination of bisoprolol and hydrochlorothiazide in their pharmaceutical dosage forms, 28<sup>th</sup> International Symposium on Chromatography (ISC 2010), 12-16 September 2010, Valencia, Spain, P03-020.
- 3) Bengi Uslu, **Burcin Bozal**, Mehmet Gumustas, Burcu Dogan-Topal, Sibel A. Ozkan, Analytical applications of voltammetric methods for the simultaneous determination of bisoprolol fumarate and hydrochlorothiazide in their dosage forms, The 9<sup>th</sup> Spring Meeting of the International Society of Electrochemistry (ISE 2011), 8-11 May 2011, Turku, Finland, P-114.
- 4) Sevinc Tuncagil, Mehmet Gumustas, **Burcin Bozal**, Bengi Uslu, Sibel A. Ozkan, Electrochemical behavior of epirubicin at boron-doped diamond electrode and its determination in the presence of surfactants, 9<sup>th</sup> International Electrochemistry Meeting in Turkey, 25-29 September 2011, Çeşme, İzmir, MON-PP44.
- 5) Sevinc Tuncagil, Mehmet Gumustas, **Burcin Bozal**, Bengi Uslu, Sibel A. Ozkan, Understanding electrochemical mechanism of epirubicin on glassy carbon electrode via model pharmaceuticals, 9<sup>th</sup> International Electrochemistry Meeting in Turkey, 25-29 September 2011, Çeşme, İzmir, TUE-PP72.
- 6) **Burcin Bozal-Palabiyik**, Burcu Dogan-Topal, Bengi Uslu, Sibel A. Ozkan, Voltammetric determination of the anticancer drug etoposide using carbon nanotube modified glassy carbon electrode, 14<sup>th</sup> International Conference on Electroanalysis (ESEAC 2012), June 3-7, 2012, Portoroz, Slovenia, P2-7.
- 7) Sevinc Tuncagil, Mehmet Gumustas, **Burcin Bozal-Palabiyik**, Bengi Uslu, Sibel A. Özkan, Determination of anticancer drug epirubicine in pharmaceutical preparations via glassy carbon electrode, 14<sup>th</sup> International Conference on Electroanalysis (ESEAC 2012), June 3-7, 2012, Portoroz, Slovenia, P2-9.
- 8) **Burcin Bozal-Palabiyik**, Burcu Dogan-Topal, Bengi Uslu, Sibel A. Özkan, H.Y. Aboul-Enein, Electrochemical study of the interaction of antibacterial drug gemifloxacin with dsDNA on pencil graphite electrode, 10<sup>th</sup> International Symposium on Pharmaceutical Sciences (10<sup>th</sup> ISOPS), Ankara, Turkey, June 26-29, 2012, P-151.
- 9) Burcu Dogan-Topal, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Electrochemical and spectroscopic studies of the interaction between anticancer drug lapatinib and calf thymus DNA, XVII Euroanalysis, 25-29 August 2013, Warsaw, Poland, Abstract ID 0138.
- 10) Nurgul Karadas, **Burcin Bozal Palabiyik**, Bengi Uslu, Sibel A. Ozkan, COOH-functionalized carbon nanotubes with silver nanoparticles to fabricate a sensor for the determination of zolmitriptan, XVII Euroanalysis, 25-29 August 2013, Warsaw, Poland, Abstract ID 0282.
- 11) **Burcin Bozal-Palabiyik**, Burcu Dogan-Topal, Sibel A. Ozkan, Bengi Uslu, Voltammetric investigation of lapatinib at glassy carbon electrode, 6th Black Sea Basin Conference on Analytical Chemistry (6BBCAC), 10-14 September 2013, Trabzon, Turkey, P-88.

- 12) Bengi Uslu, Burcu Dogan-Topal, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Sensitive determination of antiviral drug valganciclovir based on multi-walled carbon nanotube modified glassy carbon electrode in pharmaceutical dosage forms, 6th Black Sea Basin Conference on Analytical Chemistry (6BBCAC), 10-14 September 2013, Trabzon, Turkey, P-89.
- 13) Burcu Dogan-Topal, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Electrochemical mechanism of anticancer drug lapatinib and its interaction with dsDNA by comparison spectroscopic techniques, Symposium of the Analytical Division of SPQ-2014, 14-15 April 2014, Coimbra, Portugal
- 14) Burcu Dogan-Topal, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Electrochemical mechanism and kinetic studies of nilotinib, 2nd International Conference on Analytical Chemistry, 17-21 September 2014, Targoviste, Romania, S4\_P06.
- 15) **Burcin Bozal-Palabiyik**, Bengi Uslu, New perspectives for determination of pramipexole. Multi-walled carbon nanotubes modified electrode, 2nd International Conference on Analytical Chemistry, 17-21 September 2014, Targoviste, Romania, S4\_P07.
- 16) **Burcin Bozal-Palabiyik**, Bengi Uslu, Design of novel nanosensor for the determination of the antiparkinson drug ropinirole from pharmaceutical dosage forms, 2nd International Conference on Analytical Chemistry, 17-21 September 2014, Targoviste, Romania, S4\_P08.
- 17) Burcu Dogan-Topal, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Application of various electrochemical biosensors, 11th International Symposium on Pharmaceutical Sciences, 09-12 June 2015, Ankara, Turkey.
- 18) **Burcin Bozal-Palabiyik**, Bengi Uslu, Voltammetric determination of entacapone from pharmaceutical dosage forms, 26th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2015), 05-08 July 2015, Tbilisi, Georgia, PP3.
- 19) Sibel A. Ozkan, **Burcin Bozal-Palabiyik**, Sevinc Kurbanoglu, Bengi Uslu, Petr Zuman, Diffusion, adsorption and electrode kinetics of electro-oxidations on a stationary solid electrode, 10th Aegean Analytical Chemistry Days, 29 September – 2 October, 2016, Çanakkale, TURKEY, P4-17.
- 20) **Burcin Bozal-Palabiyik**, Bengi Uslu, Ersin Demir, Recai İnam, Modified electrode design for sensitive detection of vardenafil from pharmaceutical dosage forms, SIWAN (7th Szeged International Workshop on Advances in Nanoscience), 12-15 October 2016, Szeged, Hungary, T04-09.

**Ulusal kongre, sempozyum, çalıştay ve panel gibi bilimsel toplantılara ait bildiri kitaplarında yer alan yayınlar**

- 1) **Burcin Bozal**, Burcu Doğan, Bengi Uslu, Sibel A. Özkan, İlaçlardan ve kan serumundan irbesartan'ın elektrokimyasal yöntemlerle tayini, IV. Ulusal Analitik Kimya Kongresi, Elazığ, 25-27 Haziran 2008, P-9.
- 2) **Burcin Bozal Palabiyik**, Burcu Doğan Topal, Bengi Uslu, Sibel A. Özkan, Etopozit'in farmasötik dozaj şekillerinden karbon nanotüp ile modifiye edilmiş elektrot kullanarak tayini, 6. Ulusal Analitik Kimya Kongresi, 03-07 Eylül 2012, Hatay, Sözlü sunum 14.

- 3) **Burcin Bozal-Palabiyik**, Bengi Uslu, Voltammetric determination of ropinirol in tablet dosage forms, I. Uluslararası Katılımlı Elektrokimya Çalıştayı, 23-28 Haziran 2013, Muğla, E8.
- 4) **Burcu Dogan-Topal, Burcin Bozal**, B. Tolga Demircigil, Bengi Uslu, Sibel A. Ozkan, Simultaneous determination of amlodipine and atorvastatine from pharmaceutical dosage forms by voltammetric methods, I. Uluslararası Katılımlı Elektrokimya Çalıştayı, 23-28 Haziran 2013, Muğla, E14.
- 5) Mariola Brycht, Slawomira Skrzypek, Nurgul Karadas, Sylwia Smarzewska, **Burcin Bozal-Palabiyik**, Sibel A. Ozkan, **Bengi Uslu**, Voltammetric behavior and determination of antidepressant drug paroxetine at carbon based electrodes, 7. Ulusal Analitik Kimya Kongresi, 01-05 Eylül 2014, Kahramanmaraş, Poster 21.
- 6) **Burcin Bozal-Palabiyik**, Bengi Uslu, Ropinirol'ün modifiye karbon pasta elektrot kullanarak voltammetrik tayini, 7. Ulusal Analitik Kimya Kongresi, 01-05 Eylül 2014, Kahramanmaraş, Poster 28.
- 7) Cansu Yakar, **Burcin Bozal-Palabiyik**, **Burcu Dogan-Topal**, Sibel A. Ozkan, Bengi Uslu, Antihipertansif ilaçların kromatografik yöntemlerle analizinde son gelişmeler, 15. Ulusal Kromatografi Kongresi, 08-10 Nisan 2015, Uşak.
- 8) **Burcu Dogan-Topal, Burcin Bozal-Palabiyik**, Sibel A. Ozkan, Bengi Uslu, Voltametri, UV ve florimetrik spektroskopi yöntemleri ile lapatinib-dsDNA etkileşim mekanizmasının aydınlatılması, 27. Ulusal Kimya Kongresi, 23-27 Ağustos 2015, Çanakkale.

### Projeler

- 1) Yeni nesil nanosensör tasarımı ve antiparkinson ilaç analizlerinde kullanımı (13L3336001), A.Ü. BAP Lisansüstü Tez Projesi (Doktora), 15.03.2013 - 15.06.2015, Proje bütçesi: 29.997,00 TL, Araştırmacı
- 2) Paroksetin'in elektrokimyasal incelenmesi (15H0237002), A.Ü. BAP Hızlandırılmış Destek Projesi, 04.02.2015 - 04.09.2015, Proje bütçesi: 9.900,00 TL, Araştırmacı
- 3) Modifiye Edilmiş Karbon Esaslı Elektrotlar ile Bazı İlaçların Elektrokimyasal Analizleri (16H0237007), A.Ü. BAP Hızlandırılmış Destek Projesi, 29.04.2016 - 29.10.2016, Proje bütçesi: 19.000,00 TL, Araştırmacı
- 4) Terazosin hidroklorür dihidrat ve Tamsulosin HCl'nin kapiler elektroforez ile analizi ve validasyonu (16H0237011), A.Ü. BAP Hızlandırılmış Destek Projesi, 08.06.2016 – devam ediyor, Proje bütçesi: 19.886,00 TL, Yürütücü