

## Assoc. Prof. NECİBE BAŞARAN MUTLU AĞARDAN

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AEI-9890-2022

ScopusID: 35798621100

Yoksis Researcher ID: 132505

### Education Information

Doctorate, Gazi University, Sağlık Bilimleri Enstitüsü, Farmasötik Teknoloji (Dr), Turkey 2008 - 2013

Postgraduate, Gazi University, Sağlık Bilimleri Enstitüsü, Farmasötik Teknoloji (YI) (Tezli), Turkey 2005 - 2007

Undergraduate, Gazi University, Eczacılık Fakültesi, Eczacılık Pr. (4 Yıllık), Turkey 2001 - 2005

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, SERM (Selective estrogen receptor modulators) grubu raloksifen ve tamoksifen içeren yeni ilaç şekilleri üzerine çalışmalar, Gazi University, Sağlık Bilimleri Enstitüsü, Farmasötik Teknoloji (Dr), 2013

Postgraduate, Rivastigminin lipozom formülasyonunun geliştirilmesi ve hücre kültürlerinden geçişinin incelenmesi, Gazi University, Sağlık Bilimleri Enstitüsü, Farmasötik Teknoloji (YI) (Tezli), 2007

### Research Areas

Health Sciences, Pharmacology and Therapeutics, Pharmaceutics Technology

### Academic Titles / Tasks

Assistant Professor, Gazi University, Eczacılık Fakültesi, Eczacılık Teknolojisi, 2019 - 2022

Research Assistant PhD, Gazi University, Eczacılık Fakültesi, Eczacılık Teknolojisi, 2013 - 2019

Research Assistant, Gazi University, Eczacılık Fakültesi, Eczacılık Teknolojisi, 2005 - 2013

### Courses

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

- I. **Preparation and evaluation the effects of retinoic acid loaded proliposomal nanofibers on microbial biofilm inhibition**  
TORT S., ÖZTÜRK Z. C., KAYNAK ONURDAĞ F., Mutlu-Ağardan N. B.  
PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY, 2024 (SCI-Expanded)
- II. **Evaluation of the effect of process parameters on the protein content of silk fibroin**  
Yıldız A., MUTLU AĞARDAN N. B., ACARTÜRK F.  
Polymer Bulletin, vol.80, no.12, pp.13181-13198, 2023 (SCI-Expanded)
- III. **Cholesterol included self-assembled electrospun proliposomes as a feasible approach for drug delivery**  
Mutlu-Ağardan N. B., TORT S.  
Journal of Drug Delivery Science and Technology, vol.86, 2023 (SCI-Expanded)
- IV. **A New Insight to Silver Sulfadiazine Antibacterial Dressings: Nanoparticle-Loaded Nanofibers for Controlled Drug Delivery**  
Mutlu-Ağardan N. B., Tort S., Aydoğduoğlu Ş., Kıymacı M. E.  
AAPS PHARMSCITECH, vol.24, no.1, 2023 (SCI-Expanded)
- V. **Development of cyclosporine A nanosuspension: cytotoxicity and permeability on Caco-2 cell lines**  
Pinar S. G., PEZİK E., Ağardan B. M., Celebi N.  
PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY, vol.27, no.1, pp.52-62, 2022 (SCI-Expanded)
- VI. **Development of effective AmB/AmB- $\alpha$ CD complex double loaded liposomes using a factorial design for systemic fungal infection treatment**  
Mutlu-Ağardan N. B., Yılmaz S., KAYNAK ONURDAĞ F., Celebi N.  
Journal of Liposome Research, vol.31, no.2, pp.177-188, 2021 (SCI-Expanded)
- VII. ***In vitro* and *in vivo* evaluations on nanoparticle and phospholipid hybrid nanoparticles with absorption enhancers for oral insulin delivery.**  
Mutlu-Ağardan N. B., Han S.  
Pharmaceutical development and technology, vol.26, pp.157-166, 2021 (SCI-Expanded)
- VIII. ***In vitro* and *in vivo* evaluation of microneedles coated with electrospayed micro/nanoparticles for medical skin treatments**  
TORT S., MUTLU AĞARDAN N. B., Han D., Steckl A. J.  
JOURNAL OF MICROENCAPSULATION, vol.37, no.7, pp.517-527, 2020 (SCI-Expanded)
- IX. **Tamoxifen/raloxifene loaded liposomes for oral treatment of breast cancer**  
Ağardan N. B., Degim Z., Yılmaz S., Altintas L., Topal T.  
Journal of Drug Delivery Science and Technology, vol.57, 2020 (SCI-Expanded)
- X. **Cytotoxicity of Novel Redox Sensitive PEG2000-S-S-PTX Micelles against Drug-Resistant Ovarian and Breast Cancer Cells**  
Mutlu-Ağardan N. B., Sarisozen C., Torchilin V. P.  
Pharmaceutical Research, vol.37, no.3, 2020 (SCI-Expanded)
- XI. **Redox-triggered intracellular siRNA delivery**  
MUTLU AĞARDAN N. B., Sarisozen C., Torchilin V. P.  
CHEMICAL COMMUNICATIONS, vol.54, no.49, pp.6368-6371, 2018 (SCI-Expanded)
- XII. **The Effectiveness of Raloxifene-Loaded Liposomes and Cochleates in Breast Cancer Therapy**  
MUTLU AĞARDAN N. B., Degim Z., Yılmaz S., Altintas L., Topal T.  
AAPS PHARMSCITECH, vol.17, no.4, pp.968-977, 2016 (SCI-Expanded)
- XIII. **Antitumoral and MMP-2 inhibition activity of raloxifene or tamoxifen loaded nanoparticles containing dimethyl-beta-cyclodextrin**  
Ağardan N. B., Degim Z., Yılmaz S.

- JOURNAL OF INCLUSION PHENOMENA AND MACROCYCLIC CHEMISTRY, vol.80, pp.31-36, 2014 (SCI-Expanded)
- XIV. **New perspective for the treatment of Alzheimer diseases: Liposomal rivastigmine formulations**  
MUTLU AĞARDAN N. B., Degim Z., Yilmaz S., EŞSİZ D., NACAR A.  
DRUG DEVELOPMENT AND INDUSTRIAL PHARMACY, vol.37, no.7, pp.775-789, 2011 (SCI-Expanded)
- XV. **Investigation of liposome formulation effects on rivastigmine transport through human colonic adenocarcinoma cell line (CACO-2)**  
Degim Z., Mutlu N. B., Yilmaz S., Essiz D., Nacar A.  
Pharmazie, vol.65, no.1, pp.32-40, 2010 (SCI-Expanded)
- XVI. **DEVELOPMENT OF LIPOSOME FORMULATION OF RIVASTIGMINE AND INVESTIGATION OF TRANSPORT PROPERTIES THROUGH MDCK AND CACO-2 CELL LINES**  
Degim Z., MUTLU AĞARDAN N. B., Yilmaz S., EŞSİZ D.  
EUROPEAN JOURNAL OF PHARMACEUTICAL SCIENCES, vol.38, no.1, pp.88-89, 2009 (SCI-Expanded)

## Articles Published in Other Journals

- I. **AN OVERVIEW OF TARGETED DRUG DELIVERY SYSTEMS FOR RHEUMATOID ARTHRITIS TREATMENT**  
**ROMATOID ARTRIT TEDAVISİNDE HEDEFLENDİRİLMİŞ İLAÇ TAŞIYICI SİSTEMLERE GENEL BAKIS**  
Durmaz N., Ağardan N. B.  
Ankara Üniversitesi Eczacılık Fakültesi Dergisi, vol.48, no.1, pp.1-15, 2023 (Scopus)
- II. **Recent Advances in Oral Insulin Therapy by Nanoparticulate Drug Delivery Systems: Systematic Review**  
Mutlu Ağardan N. B.  
Literatür Eczacılık Bilimleri Dergisi, vol.11, no.1, pp.104-118, 2022 (Peer-Reviewed Journal)
- III. **AN OVERVIEW OF SUBUNIT-BASED VACCINES FOR PULMONARY ADMINISTRATION**  
Ongun M., Mutlu Ağardan N. B., Acartürk F.  
ANKARA ÜNİVERSİTESİ ECZACILIK FAKÜLTESİ DERGISİ, vol.45, no.1, pp.109-130, 2021 (Scopus)
- IV. **Studies on the formulation optimization and controlled ionic gelation of chitosan nanoparticles using TPP-HP-beta-CD inclusion complex**  
Ağardan M.  
İSTANBUL JOURNAL OF PHARMACY, vol.50, no.1, pp.54-59, 2020 (ESCI)
- V. **Development of Liposome Formulations of Tamoxifen and Assessment of Caco-2 Cell Transportation Properties**  
MUTLU AĞARDAN N. B., DEĞİM Z., Yılmaz Ş.  
FABAD J. Pharm. Sci, vol.43, no.1, pp.1-6, 2018 (Scopus)
- VI. **Bioavailability file: Rivastigmine tartrate**  
Mutlu N. B., Değim Z.  
Fabad Journal of Pharmaceutical Sciences, vol.30, no.3, pp.150-157, 2005 (Scopus)

## Books & Book Chapters

- I. **Farmasötik Teknoloji Laboratuvar Kitabı**  
Acartürk F., İlbasmış Tamer S., İnceçayır T., Mutlu Ağardan N. B., Takka S., Teksin Z. Ş., Tırnaksız F. F., Tort S., Tuğcu Demiröz F. N., Aydoğduoğlu Ş., et al.  
Gazi Üniversitesi Yayınları, Ankara, 2023
- II. **Farmasötik Teknoloji Laboratuvar Kitabı**  
ACARTÜRK F., İLBASMIŞ TAMER S., İNCEÇAYIR T., MUTLU AĞARDAN N. B., TAKKA S., TEKSİN Z. Ş., TIRNAKSIZ F. F., TORT S., TUĞCU DEMİRÖZ F. N., EDİSAN Ş., et al.  
Güngörler Matbaacılık San. Tic. LTD. ŞTİ., Ankara, 2023
- III. **Farmasötik Teknoloji Laboratuvar Kitabı**

ACARTÜRK F., İLBASMIŞ TAMER S., İNCEÇAYIR T., MUTLU AĞARDAN N. B., TAKKA S., TEKSİN Z. Ş., TIRNAKSIZ F. F., TORT S., TUĞCU DEMİRÖZ F. N., AYDOĞDUOĞLU Ş., et al.  
Gazi Üniversitesi Yayınları, Ankara, 2023

**IV. Engineering of stimuli-sensitive nanopreparations to overcome physiological barriers and cancer multidrug resistance**

MUTLU AĞARDAN N. B., TORCHILIN V.

in: Engineering of Nanobiomaterials Applications of Nanobiomaterials Volume 2, Alexandru Grumezescu, Editor, William Andrew, Elsevier Inc, Oxford, pp.1-28, 2016

**V. Farmasötik Teknoloji Laboratuvar Kitabı 4 Baskı**

ACARTÜRK F., AĞABEYOĞLU T. İ., ÇELEBİ F. N., DEĞİM İ. T., DEĞİM Z., İLBASMIŞ TAMER S., DOĞANAY T., TAKKA S., TEKSİN Z. Ş., TUĞCU DEMİRÖZ F., et al.

ŞAFAK MATBACILIK SANAYİİ, Ankara, 2007

## Refereed Congress / Symposium Publications in Proceedings

- I. **Development of Mesalazine Loaded Hydrogel Formulations by 3D Printing Technology**  
YILDIZ A., MUTLU AĞARDAN N. B., ACARTÜRK F.  
20th International Pharmaceutical Technology Symposium, Ankara, Turkey, 21 - 23 February 2022
- II. **Optimization and validation of silk fibroin production process**  
Yıldız A., MUTLU AĞARDAN N. B., ACARTÜRK F.  
3rd International Gazi Pharma Symposium Series (GPSS-2021), Ankara, Turkey, 08 September 2021, pp.144
- III. **The effects of a new cyclosporine A nanosuspension on nephrotoxicity after oral administration: HK-2 cell culture and in vivo histopathological evaluation**  
GÜLBAĞ PINAR S., MUTLU AĞARDAN N. B., IŞIK GÖNÜL İ., ÇELEBİ F. N.  
3rd International Gazi Pharma Symposium Series (GPSS-2021), Ankara, Turkey, 08 September 2021
- IV. **Studies on formulation optimisation of hyaluronic acid coated chitosan nanoparticles loaded with hydrocortisone acetate**  
Durmaz N., MUTLU AĞARDAN N. B.  
3rd International Gazi Pharma Symposium Series (GPSS-2021), Ankara, Turkey, 08 September 2021, pp.149
- V. **Preparation of chitosan tripolyphosphate and chitosan sulfobutyl-ether- $\beta$ -cyclodextrin nanoparticles for oral insulin delivery**  
Turan T., MUTLU AĞARDAN N. B.  
3rd International Gazi Pharma Symposium Series (GPSS-2021), Ankara, Turkey, 08 September 2021, pp.109
- VI. **Optimization and Validation of Silk Fibroin Production Process**  
YILDIZ A., MUTLU AĞARDAN N. B., ACARTÜRK F.  
3rd International Gazi Pharma Symposium Series, Ankara, Turkey, 8 - 10 September 2021
- VII. **Romatoid Artrit Tedavisinde Kullanılmak Üzere Hedeflendirilmiş Nanopartiküllerin Deney Tasarımı ile Geliştirilmesi Üzerine Çalışmalar**  
Durmaz N., MUTLU AĞARDAN N. B.  
7th International Hippocrates Congress on Medical and Health Sciences, Ankara, Turkey, 03 September 2021
- VIII. **Studies on modifications of established silk fibroin production methods to enhance protein content**  
YILDIZ A., MUTLU AĞARDAN N. B., ACARTÜRK F.  
12th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology (PBP), Viyana, Austria, 11 - 15 May 2021
- IX. **Studies on modifications of established silk fibroin production methods to enhance protein content**  
Yıldız A., MUTLU AĞARDAN N. B., ACARTÜRK F.  
12th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Turkey, 11 May 2021
- X. **Development of Amphotericin B loaded chitosan sulfobutylether- $\beta$ -cyclodextrin nanoparticles with sodium deoxycholate**  
MUTLU AĞARDAN N. B.

8th BBBB Conference on Pharmaceutical Sciences, İzmir, Turkey, 14 - 16 October 2019

- XI. **Evaluation of Dissolution Properties of Cyclosporine a Nanosuspensions Prepared with Two Different Top Down Technologies**  
GÜLBAĞ S., MUTLU AĞARDAN N. B., ÇELEBİ F. N.  
8th BBBB Conference on Pharmaceutical Sciences, İzmir, Turkey, 14 - 16 October 2019
- XII. **The Effect of Process Parameters of the Cyclosporine A Nanosuspension Produced by Wet Milling Stabilized with Hydroxypropyl methylcellulose**  
GÜLBAĞ S., KARAKÜÇÜK A. E., MUTLU AĞARDAN N. B., ÇELEBİ F. N.  
Controlled Release Society (CRS) Annual Meeting Exposition, Valencia, Spain, 21 - 24 July 2019
- XIII. **AmB / AmB- $\alpha$ CD çifte yüklü lipozomların antifungal etkinlik ve sitotoksosite çalışmaları**  
MUTLU AĞARDAN N. B., KAYNAK ONURDAĞ F., Yılmaz ş., Çelebi n.  
2. Ulusal Marmara Eczacılık Kongresi (UMEK-2), İstanbul, Turkey, 14 - 16 November 2018
- XIV. **Preformulation studies of cyclosporine A nanosuspension stabilized by hydroxypropyl methylcellulose and soluplus**  
GÜLBAĞ S., KARAKÜÇÜK A. E., MUTLU AĞARDAN N. B., Çelebi N.  
12th International Symposium on Pharmaceutical Sciences, Ankara, Turkey, 26 - 29 June 2018
- XV. **Top down production of cyclosporine A nanosuspensions: Formulation design and characterization for oral delivery**  
GÜLBAĞ S., KARAKÜÇÜK A. E., MUTLU AĞARDAN N. B., ÇELEBİ N.  
EUFEPS Annual Meeting 2018, Atina, Greece, 24 - 26 May 2018
- XVI. **Studies on formulation development of amphotericin B-double loaded liposomes using design of experiment (DoE)**  
MUTLU AĞARDAN N. B., Çelebi N.  
EUFEPS Annual Meeting 2018, Atina, Greece, 24 - 26 May 2018
- XVII. **Development of Amphotericin B-double loaded liposomes using design of experiment (DoE)**  
MUTLU AĞARDAN N. B., Çelebi N.  
16th International Conference and Exhibition on Pharmaceutics Novel Drug Delivery Systems, Berlin, Germany, 19 - 21 March 2018, vol.47, pp.88
- XVIII. **Preparation and characterization of cyclosporine A nanosuspensions for oral administration II: The effect of Poloxamer types on physical stability of formulations**  
GÜLBAĞ S., KARAKÜÇÜK A. E., MUTLU AĞARDAN N. B., Çelebi F. N.  
11th WORLD MEETING on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Granada, Nicaragua, 19 - 21 March 2018
- XIX. **Redox potential sensitive smart nanopreparations for drug and siRNA delivery in cancer**  
MUTLU AĞARDAN N. B.  
16th International Conference and Exhibition on Pharmaceutics Novel Drug Delivery Systems, Berlin, Germany, 19 - 21 March 2018, vol.7, pp.46
- XX. **STUDIES ON ABSORPTION ENHANCEMENT OF TAMOXIFEN BY LIPOSOME FORMULATIONS**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., ALTINTAŞ L.  
2nd International Gazi Pharma Symposium Series, Ankara, Turkey, 11 - 13 October 2017
- XXI. **ANTITUMORAL AND MMP-2 ENZYME INHIBITION ACTIVITIES OF RALOXIFENE NANOCOCHLEATES ON MCF-7 AND MDA MB-231 CELL LINES**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş.  
2nd International Gazi Pharma Symposium Series, 11 - 13 October 2017
- XXII. **Tamoxifen loaded liposomes/nanoparticles**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., ALTINTAŞ L.  
International Gazi Pharma Symposium Series, Antalya, Turkey, 12 - 15 November 2015
- XXIII. **Development of raloxifene nanoparticles with absorption enhancers and investigation of transport properties through Caco-2 cell line**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., ALTINTAŞ L.  
International Multidisciplinary Symposium on Drug Research Development, Antalya, Turkey, 28 - 29 November

2013

- XXIV. **Comparison of antitumoural and MMP-2 inhibition activity of dimethyl- $\beta$ -cyclodextrin containing nanoparticles of raloxifene-tamoxifen**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş.  
European Conference on Cyclodextrins, Antalya, Turkey, 2 - 04 October 2013
- XXV. **Development of tamoxifen loaded nanoparticles with absorption enhancers and investigation of transport properties through Caco-2 cell lines**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., ALTINTAŞ L.  
16th International Pharmaceutical Technology Symposium, Antalya, Turkey, 10 September 2012, pp.156-158
- XXVI. **Development of liposome formulation of rivastigmine with enhancers and investigation of transport properties through MDCK cell line**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., EŞSİZ D.  
18 th International Symposium on Microencapsulation, Antalya, Turkey, 12 - 14 September 2011
- XXVII. **Development of liposome formulations of rivastigmine with absorption enhancers and investigation of transport properties of liposomes through Caco-2**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., EŞSİZ D.  
PBP World Meeting, Valletta, Malta, 8 - 11 March 2010
- XXVIII. **Development of liposome formulation of rivastigmine and investigation of transport properties through MDCK and Caco-2 cell lines**  
DEĞİM Z., MUTLU AĞARDAN N. B., YILMAZ Ş., EŞSİZ D.  
3rd BBBB-Bosphorus International Conference on Pharmaceutical Sciences, Antalya, Turkey, 26 - 28 October 2009
- XXIX. **Investigation of rivastigmine transport through MDCK cell line**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., EŞSİZ D.  
14th International Pharmaceutical Technology Symposium, Antalya, Turkey, 8 - 11 September 2008
- XXX. **Investigation of rivastigmine transport through human colon carcinoma cells, Caco-2**  
MUTLU AĞARDAN N. B., DEĞİM Z., YILMAZ Ş., EŞSİZ D., ALTINTAŞ L., GÜNKAYA G.  
35th Annual Meeting of Controlled Release Society, New York, United States Of America, 12 - 16 July 2008

## Supported Projects

ALTINIŞIK H., ERTEN CAN S. H., BERKKAN A., MUTLU AĞARDAN N. B., GÜNEY M., Project Supported by Higher Education Institutions, Florür Yüklü Kitosan Nanopartikülleri İle Modifiye Cam İyonomer Simanın Sekonder Çürükleri Önleme Etkinliğinin İn Vitro Değerlendirilmesi, 2020 - 2023

## Memberships / Tasks in Scientific Organizations

FARMASÖTİK BİLİMLER ANKARA DERNEĞİ, Member, 2006 - Continues, Turkey

TURKISH PHARMACEUTICAL TECHNOLOGY SCIENTISTS' ASSOCIATION, Member, 2006 - Continues, Turkey

## Scientific Refereeing

FABAD JOURNAL OF PHARMACEUTICAL SCIENCES, National Scientific Refreed Journal, November 2021

JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY, SCI Journal, September 2021

## Metrics

Publication: 65

Citation (WoS): 250

Citation (Scopus): 286

H-Index (WoS): 9

H-Index (Scopus): 10

## **Scholarships**

2219-International Postdoctoral Research Fellowship Program for Turkish Citizens, TUBITAK, 2014 - 2015

## **Non Academic Experience**

Northeastern University-Center for Pharmaceutical Biotechnology and Nanomedicine