

# Prof. ALİ DEMİR SEZER

## Personal Information

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## International Researcher IDs

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## Education Information

Doctorate, Marmara University, Institute of Health Sciences, Department of Pharmaceutics Biotechnology, Turkey 2000 - 2006

Postgraduate, Marmara University, Institute of Health Sciences, Farmasötik Teknoloji (YI) (Tezli), Turkey 1993 - 1996

Undergraduate, Istanbul University, Faculty Of Pharmacy , Eczacılık Pr., Turkey 1988 - 1992

## Research Areas

Pharmaceutical Biotechnology

## Academic Titles / Tasks

Professor, Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 2019 - Continues

Associate Professor, Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 2013 - 2019

Assistant Professor, Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 2009 - 2013

Lecturer, Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 2007 - 2009

Research Assistant, Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 2000 - 2007

Research Assistant, Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 1993 - 2000

## Academic and Administrative Experience

Marmara University, Faculty of Pharmacy, Pharmaceutical Technology, 2016 - Continues

## Courses

Proteins Produced by Using Recombinant DNA Technology, Undergraduate, 2019 - 2020

Blood Products, Undergraduate, 2019 - 2020

Intellectual Property Rights and Patent, Doctorate, 2019 - 2020

Introduction to Pharmacy and Terminology, Undergraduate, 2019 - 2020

Registration and Patent, Undergraduate, 2019 - 2020

Biosimilar Drugs, Undergraduate, 2019 - 2020

Pharmaceutical Biotechnology, Undergraduate, 2019 - 2020

## Advising Theses

- Sezer A. D., Preparation of Different Pharmaceutical Dosage Forms Containing TGF-BETA and Investigation of Their Activities Based on Cell Culture, Doctorate, A.ÇELİK(Student), 2020
- Sezer A. D., EGF İçeren Farklı Jel Formülasyonlarının Hazırlanması ve Özelliklerinin İncelenmesi, Doctorate, M.DOĞAN(Student), 2020
- Sezer A. D., Topçu Z., Kromatin düzenlenmesi ve transkripsiyonel regülasyonda rol alan histon asetiltransferaz komplekslerinin alt birimleri arasındaki etkileşimlerin karakterizasyonu, Doctorate, G.ÇALIŞKAN(Student), 2019
- Sezer A. D., Vankomisin içeren fukoidan-kitozan temelli nanopartikül formülasyonlarının hazırlanması ve in vitro karakterizasyonu, Postgraduate, F.YÜNKÜL(Student), 2019
- Sezer A. D., Vankomisin içeren kitosan-polivinil prolidon hidrojellerinin hazırlanması ve in vitro özelliklerinin incelenmesi, Postgraduate, A.AYDIN(Student), 2018
- Sezer A. D., Monoklonal antikor içeren manyetik nanopartiküllerin hazırlanması ve in vitro özelliklerinin incelenmesi, Postgraduate, N.AYATA(Student), 2018
- Sezer A. D., Hyaluronik asit içeren farmasötik hidrojel formlarının hazırlanması ve in vitro özelliklerinin incelenmesi, Postgraduate, H.BİĞÜN(Student), 2018
- Sezer A. D., Türkiye'de biyobenzerlerin ekonomisi ve referans insülin aspart ile biyobenzerinin analitik karşılaştırılması, Postgraduate, H.ONUR(Student), 2016
- Sezer A. D., Gen tedavisi için tasarlanan ve patent başvurusu yapılan farmasötiklerin incelenmesi ve değerlendirilmesi, Postgraduate, L.KUŞCU(Student), 2016
- Sezer A. D., Preparation of Laminarin-based Hydrogels and Evaluation of in vitro Properties, Postgraduate, S.TÜMEN(Student), 2016

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

- I. **Preparation and In Vitro Characterization of Monoclonal Antibody Ranibizumab Conjugated Magnetic Nanoparticles for Ocular Drug Delivery**  
Ayata N., Sezer A. D., Bucak Ş., Tahir Turanlı E.  
Brazilian Journal Of Pharmaceutical Sciences, vol.56, pp.18171-18186, 2020 (SCI-Expanded)
- II. **Targeting of temozolomide using magnetic nanobeads: an in vitro study**  
Gurten B., Yenigul E., SEZER A. D., Altan C., MALTA S.  
BRAZILIAN JOURNAL OF PHARMACEUTICAL SCIENCES, vol.56, 2020 (SCI-Expanded)
- III. **Complexation and enhancement of temozolomide solubility with cyclodextrin**  
GÜRTEEN B., YENİGÜL E., SEZER A. D., MALTA S.  
Brazilian Journal Of Pharmaceutical Sciences, 2018 (SCI-Expanded)
- IV. **Complexation and enhancement of temozolomide solubility with cyclodextrins**  
Gurten B., Yenigul E., SEZER A. D., MALTA S.  
BRAZILIAN JOURNAL OF PHARMACEUTICAL SCIENCES, vol.54, no.2, 2018 (SCI-Expanded)
- V. **Future prospects for gene delivery systems**  
Kuscu L., SEZER A. D.  
EXPERT OPINION ON DRUG DELIVERY, vol.14, no.10, pp.1205-1215, 2017 (SCI-Expanded)
- VI. **Development and characterization of vancomycin-loaded levan-based microparticulate system for drug delivery**  
SEZER A. D., Sarilmiser H. K., RAYAMAN E., Cevikbas A., Oner E. T., Akbuga J.  
PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY, vol.22, no.5, pp.627-634, 2017 (SCI-Expanded)
- VII. **Topical drug delivery using chitosan nano- and microparticles**  
SEZER A. D., Cevher E.  
EXPERT OPINION ON DRUG DELIVERY, vol.9, no.9, pp.1129-1146, 2012 (SCI-Expanded)
- VIII. **The design of biodegradable ofloxacin-based core-shell microspheres: Influence of the formulation parameters on in vitro characterization**

- SEZER A. D., Akbuga J.  
 PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY, vol.17, no.1, pp.118-124, 2012 (SCI-Expanded)
- IX. **Levan-based nanocarrier system for peptide and protein drug delivery: Optimization and influence of experimental parameters on the nanoparticle characteristics**  
 SEZER A. D., Kazak H., Oner E. T., Akbuga J.  
 CARBOHYDRATE POLYMERS, vol.84, no.1, pp.358-363, 2011 (SCI-Expanded)
- X. **Topical Application of Antisense Oligonucleotide-Loaded Chitosan Nanoparticles to Rats**  
 Özbaşı Turan S., Akbuga J., Sezer A. D.  
 OLIGONUCLEOTIDES, vol.20, pp.147-153, 2010 (SCI-Expanded)
- XI. **Comparison on In Vitro Characterization of Fucospheres and Chitosan Microspheres Encapsulated Plasmid DNA (pGM-CSF): Formulation Design and Release Characteristics**  
 SEZER A. D., Akbuga J.  
 AAPS PHARMSCITECH, vol.10, no.4, pp.1193-1199, 2009 (SCI-Expanded)
- XII. **Preparation of Fucoidan-Chitosan Hydrogel and Its Application as Burn Healing Accelerator on Rabbits**  
 SEZER A. D., Cevher E., HATİPOĞLU F., Ogurtan Z., BAŞ A. L., Akbuga J.  
 BIOLOGICAL & PHARMACEUTICAL BULLETIN, vol.31, no.12, pp.2326-2333, 2008 (SCI-Expanded)
- XIII. **The use of fucosphere in the treatment of dermal burns in rabbits**  
 Sezer A. D., Cevher E., Hatipoglu F., Ogurtan Z., Bas A. L., Akbuga J.  
 EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS, vol.69, no.1, pp.189-198, 2008 (SCI-Expanded)
- XIV. **Chitosan film containing fucoidan as a wound dressing for dermal burn healing: Preparation and in Vitro/In vivo evaluation**  
 Sezer A. D., Hatipoglu F., Cevher E., Ogurtan Z., Bas A. L., Akbuga J.  
 AAPS PHARMSCITECH, vol.8, no.2, 2007 (SCI-Expanded)
- XV. **In vitro evaluation of enrofloxacin-loaded MLV Liposomes**  
 Sezer A. D., Akbuga J., Bas A. L.  
 DRUG DELIVERY, vol.14, no.1, pp.47-53, 2007 (SCI-Expanded)
- XVI. **Release characteristics of chitosan treated alginate beads: II. Sustained release of a low molecular drug from chitosan treated alginate beads**  
 Sezer A. D., Akbuga J.  
 JOURNAL OF MICROENCAPSULATION, vol.16, no.6, pp.687-696, 1999 (SCI-Expanded)
- XVII. **Release characteristics of chitosan treated alginate beads: I. Sustained release of a macromolecular drug from chitosan treated alginate beads**  
 Sezer A. D., Akbuga J.  
 JOURNAL OF MICROENCAPSULATION, vol.16, no.2, pp.195-203, 1999 (SCI-Expanded)
- XVIII. **Controlled release of piroxicam from chitosan beads**  
 SEZER A. D., Akbuĝa J.  
 International Journal of Pharmaceutics, vol.121, no.1, pp.113-116, 1995 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Preparation and in vitro characterization of laminarin based hydrogels**  
 Tümen Erden S., Ekentok Atıcı C., Cömez B., Sezer A. D.  
 Journal of Research in Pharmacy, vol.25, no.2, pp.164-172, 2021 (ESCI)
- II. **Synthesis of crosslinked PVA/Chitosan hydrogels loaded EGF and evaluation in vitro characterization**  
 Doĝan M., Sezer A. D.  
 Cumhuriyet Tıp Dergisi, vol.42, no.1, pp.86-93, 2020 (Peer-Reviewed Journal)
- III. **Preparation and characterization of poly(lactic-co-glycolic acid) nanoparticles containing TGF-beta 1**

#### **and evaluation of in vitro wound healing effect**

Soysal A. C., Şahbaz S., Uğurlu T., Sezer A. D.

JOURNAL OF RESEARCH IN PHARMACY, vol.24, pp.277-289, 2020 (ESCI)

- IV. **Synthesis of 1,4-diazabicyclo[2.2.2]octane and pyridinium based cationic polymers via ROMP technique and examination of their antibacterial activity and cytotoxicity**  
Kaymaz A. P., Acaroğlu-Degitz İ., Yapaöz M. A., SEZER A. D., Malta S., Aksu B., EREN T.  
Materialia, vol.5, 2019 (Scopus)
- V. **Analytical and Sales Data Comparison of Reference Product of Insulin Aspart and its Biosimilar in Turkey**  
Dal O. H., SEZER A. D.  
MARMARA PHARMACEUTICAL JOURNAL, vol.21, no.3, pp.675-687, 2017 (ESCI)
- VI. **Examination and evaluation of pharmaceutical designed and made patent applications for gene therapy**  
Kuscu L., SEZER A. D.  
MARMARA PHARMACEUTICAL JOURNAL, vol.20, no.2, pp.52-63, 2016 (ESCI)
- VII. **Gen Tedavisi için tasarlanan ve patent başvurusu yapılan farmasötiklerin incelenmesi ve değerlendirilmesi**  
SEZER A. D.  
MARMARA PHARMACEUTICAL JOURNAL, 2016 (Peer-Reviewed Journal)
- VIII. **Biosimilar products: Definitions and registration process**  
Dal O. H., Karadogan M., SEZER A. D.  
MARMARA PHARMACEUTICAL JOURNAL, vol.19, no.3, pp.252-258, 2015 (ESCI)

### **Books & Book Chapters**

- I. **Diabetic Neuropathy and Treatment Strategy- New Challenges and Applications**  
Bayram E. H., Sezer A. D., Elçioğlu H. K.  
in: Smart Drug Delivery System, Ali Demir Sezer, Editor, InTech, Rijeka, pp.373-388, 2016
- II. **Smart Delivery Systems with Shape Memory and Self-Folding Polymers**  
Erkeçoğlu S., Sezer A. D., Bucak Ş.  
in: Smart Drug Delivery System, Ali Demir Sezer, Editor, InTech, Rijeka, pp.1-29, 2016
- III. **QbD İmplementation in Biotechnological Product Development Studies**  
AKSU N. B., SEZER A. D., YEĞEN G.  
in: Special Topics in Drug Discovery, Taosheng Chen, Sergio C. Chai, Editor, İNTECH, Rijeka, pp.133-156, 2016
- IV. **Bioengineered wound and burn healing substitutes: novel design for biomedical applications and general aspects**  
CEVHER E., SEZER A. D., YILDIZ PEKÖZ A.  
in: Natural Polymers for drug delivery, Harsha Kharkwal, Srinivas Janaswamy, Editor, CABİ, Oxfordshire, pp.183-202, 2016
- V. **Nanoparticle Insulin Drug Delivery- Applications and New Aspects**  
Elçioğlu H. K., Sezer A. D.  
in: Application of Nanotechnology in Drug Delivery, Ali Demir Sezer, Editor, InTech, Rijeka, pp.237-257, 2014
- VI. **Liposomes as Potential Drug Carrier Systems for Drug Delivery**  
Çağdaş M., Sezer A. D., Bucak Ş.  
in: Application of Nanotechnology in Drug Delivery, Ali Demir Sezer, Editor, InTech, Rijeka, pp.1-50, 2014
- VII. **Magnetic Nanoparticles: Synthesis, Surface Modification and Application in Drug Delivery**  
Bucak Ş., Yavuztürk B., Sezer A. D.  
in: Recent Advances in Novel Drug Carrier Systems, Ali Demir Sezer, Editor, InTech, Rijeka, pp.165-200, 2012
- VIII. **Gene Delivery Systems: Recent Progress in Viral and Non-Viral Therapy**  
Cevher E., Sezer A. D., Çağlar E. Ş.

- in: Recent Advances in Novel Drug Carrier Systems, Ali Demir Sezer, Editor, InTech, Rijeka, pp.437-470, 2012
- IX. Biopolymers as Wound Healing Materials: Challenges and New Strategies**  
Sezer A. D., Cevher E.  
in: Biomaterials Applications for Nanomedicine, Rosario Pignatello, Editor, InTech, Rijeka, pp.383-414, 2011
- X. Fucoidan: A Versatile Biopolymer for Biomedical Applications**  
Sezer A. D., Cevher E.  
in: Biomaterials and Nanostructures for Active Implants, Meital Zilberman, Editor, Springer-Verlag, Berlin, pp.377-406, 2011
- XI. Chitosan: Properties and Its Pharmaceutical and Biomedical Aspects**  
Sezer A. D.  
in: Focus on Chitosan Research, Samuel P. Davis, Editor, NOVA Science Publishers Inc., New-York, pp.377-397, 2011

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

- I. Determination of Load-Efficiency of Vancomycin in Nanoparticles System**  
Furkan Y., AKSU N. B., SEZER A. D.  
12th CESPT, 20 - 22 September 2018
- II. Mechanical and bioadhesion properties of epidermal growth factor (EGF) containing hydrogel formulations**  
DOĞAN M., SEZER A. D., ŞAHBAZ S., UĞURLU T.  
20th International Pharmaceutical Technology Symposium, 17 - 19 September 2018
- III. Preparation and characterization of pva/chitosan hydrogels embedded plga nanoparticles containing transforming growth factor  $\beta$ 1 (TGF- $\beta$ 1)**  
ÇELİK A., SEZER A. D., ŞAHBAZ S., UĞURLU T.  
20th International Pharmaceutical Technology Symposium, 17 - 19 September 2018
- IV. Antistaphylococcal Activity Of Chitosan Based Vancomycin Containing Hydrogel Formulations**  
Özgüler K., Güncü M. M., Aydın A., AKSU M. B., SEZER A. D.  
10th Balkan Congress of Microbiology, Sofija, Bulgaria, 16 - 18 November 2017
- V. Hyaluronik asit içeren farmasötik hidroje formlarının hazırlanması ve in vitro özelliklerinin incelenmesi**  
DURAN M., SEZER A. D.  
1.Ulusal Marmara Eczacılık Kongresi, İstanbul, Turkey, 3 - 05 November 2016
- VI. Vankomisin içeren kitosan bazlı farmasötik hidrojel formlarının hazırlanması ve in vitro özelliklerinin incelenmesi**  
SEZER A. D.  
1.Ulusal Marmara Eczacılık Kongresi, İstanbul, Turkey, 3 - 05 November 2016
- VII. Preliminary study of magnetic nanoparticles containing monoclonal antibody Ranibizumab formulation and in vitro characterization**  
SEZER A. D.  
18'th International Pharmaceutical Technology Symposium, Antalya, Turkey, 18 - 21 September 2016
- VIII. Analytical Comparison of Reference Insulin Aspart and Biosimilar Insulin Aspart**  
SEZER A. D.  
18'th International Pharmaceutical Technology Symposium, Antalya, Turkey, 18 - 21 September 2016
- IX. Preparation of Laminarin-based Hydrogels and Evaluation of in vitro Properties**  
Tümen S., Sezer A. D.  
4th World Biotechnology Congress, Sharjah, United Arab Emirates, 15 - 18 February 2016
- X. Research and Assesment of Pharmaceutical Products Which are Designed for Gene Therapy and Applied for Patent Protection**  
KUŞCU L., SEZER A. D.

75th FIP World Congress of Pharmacy and Pharmaceutical Sciences, 29 October - 03 November 2015

**XI. Topical delivery of antisense oligonucleotide using chitosan nanoparticles**

ÖZBAŞ TURAN S., Akbuğa J., SEZER A. D.

16th Annual Congress of the European-Society-of-Gene-and-Cell-Therapy, Brugge, Belgium, 13 - 16 November 2008, vol.19, pp.1167

**XII. Preparation and evaluation of fucoïdan microspheres**

SEZER A. D., KARSLI ÇEPPİOĞLU S., AKBUĞA J.

11th European Congress on Biotechnology, 6 - 09 August 2003

## Supported Projects

Sezer A. D., Çelik A., Project Supported by Higher Education Institutions, Preparation of Different Pharmaceutical Dosage Forms Containing TGF-BETA and Investigation of Their Activities Based on Cell Culture, 2017 - 2020

Sezer A. D., Doğan M., Project Supported by Higher Education Institutions, Preparation of Different Gel Formulations Containing Epidermal Growth Factor and Investigation of Their Properties, 2016 - 2020

Sezer A. D., Eren T., Aksu M. B., TÜBİTAK Project, Vankomisin ile antibakteriyel polimerlerin konjugasyonu ile sinerjistik antibakteriyel etkinliđinin incelenmesi, 2016 - 2019

Topcuođlu H. R., Altınkut Uncuođlu A., Mertođlu B., Kayaman Apohan N., Kahraman M. V., Sezer A. D., TÜBİTAK Project, Marmara Üniversitesinin ARDEB Programlarına Yönelik Proje Desteklerinden Faydalanma Potansiyelinin Artırılması, 2014 - 2017

Sezer A. D., Ayata N., Project Supported by Higher Education Institutions, Preparation of magnetic nanoparticles containing monoclonal antibody and investigation of in vitro properties, 2015 - 2016

Sezer A. D., Project Supported by Higher Education Institutions, Preparation of Laminarin-based Hydrogels and Evaluation of in vitro Properties, 2014 - 2016

Sezer A. D., Malta S., Gürtan B., TÜBİTAK Project, Targeting of anti-cancer drugs to a specific area using magnetic nanoparticles, 2013 - 2016

Sezer A. D., Project Supported by Higher Education Institutions, The Development of Gene Carrier Nanoparticulate System, 2009 - 2012

Sezer A. D., Toksoy Öner E., Akbuğa J., Kazak H., TÜBİTAK Project, Investigation of Potential Industrial Applications of a Novel Microbial Biopolymer, 2008 - 2010

Sezer A. D., Akbuğa J., Özbaş S., Enneli B., Project Supported by Higher Education Institutions, Developing Chitosan Base Carrier Systems Containing Antisense Oligonucleotides In vivo Studies, 2007 - 2009

Sezer A. D., Baş A. L., Maden M., Hatipođlu F., Hadimli H. H., Üney K., Akbuğa J., TÜBİTAK Project, Cytological Enzymological Diagnosis in Experimentally Induced Pneumonia via Klebsiella pneumonia Serotype II in Rats Treated with Liposome Encapsulated Enrofloxacin, 2006 - 2008

Sezer A. D., Akbuğa J., Hatipođlu F., Ođurtan Z., Project Supported by Higher Education Institutions, The Evaluation of Different Pharmaceutical Forms Containing Fucoïdan on Treatment of Burns, 2002 - 2006

Sezer A. D., Baş A. L., Akbuğa F. J., Project Supported by Higher Education Institutions, Preparation of Different Liposome encapsulated Enrofloxacin Formulations An Experimental Study, 2002 - 2003

## Patent

Sezer A. D., Fucoïdan Microparticulate drug Carrier Systems, Patent, CHAPTER A Human Needs, The Invention Registration Number: WO 2006/091180 A2 , 2006

## Activities in Scientific Journals

Journal of Advanced Clinical Pharmacology, Editor, 2018 - Continues

Journal of Research in Pharmacy, Editor, 2018 - Continues  
Journal of Nanomedicine and Biotherapeutic Discovery, Publication Committee Member, 2013 - Continues  
Journal of PharmSciTech, Publication Committee Member, 2013 - Continues  
Frontiers in Synthetic Biology, Publication Committee Member, 2013 - Continues  
International Journal of Medicine and Biomedical Research, Assistant Editor/Section Editor, 2012 - Continues  
Global Journal of Pharmacology, Assistant Editor/Section Editor, 2011 - Continues  
International Journal of Pharmacy and Medical Sciences, Assistant Editor/Section Editor, 2011 - Continues  
Indian Journal of Fundamental and Applied Life Sciences, Publication Committee Member, 2011 - Continues  
Journal of Biotechnology Letters, Publication Committee Member, 2011 - Continues  
International Journal of Advances in Pharmaceutical Sciences, Editor, 2010 - Continues  
Asian Journal of Pharmaceutics, Publication Committee Member, 2010 - Continues

## **Scientific Refereeing**

CARBOHYDRATE POLYMERS, SCI Journal, February 2018  
DRUG DEVELOPMENT AND INDUSTRIAL PHARMACY, SCI Journal, December 2017  
Biomacromolecules, Other Indexed Journal, September 2015  
Journal of Biomedical Materials Research Part B: Applied Biomaterials, Other Indexed Journal, March 2014  
JOURNAL OF TISSUE ENGINEERING AND REGENERATIVE MEDICINE, Journal Indexed in SCI-E, January 2014  
JOURNAL OF PHARMACEUTICAL SCIENCES, SCI Journal, January 2014  
CELLULOSE, SCI Journal, December 2013  
EXPERT OPINION ON DRUG DELIVERY, SCI Journal, May 2013  
INTERNATIONAL JOURNAL OF PHARMACEUTICS, SCI Journal, May 2013  
JOURNAL OF MICROENCAPSULATION, SCI Journal, May 2013  
AAPS PharmSciTech, Other Indexed Journal, March 2013  
INTERNATIONAL JOURNAL OF NANOMEDICINE, SCI Journal, March 2013  
Research and Reports in Biology, Other Indexed Journal, March 2012

## **Metrics**

Publication: 52  
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H-Index (Scopus): 11