

**Sedat Odabaş, PhD. Bioeng.**  
**Assoc. Prof.**  
**Curriculum Vitae**

Ankara University, Faculty of Science  
Department of Chemistry, Biochemistry Division  
Besevler Ankara / Turkey

Biomaterials and Tissue Engineering  
Research Laboratory  
<http://btelab.com/>

**Phone:** +90 507 873 4345

**E-mail:** [sedatodabas@gmail.com](mailto:sedatodabas@gmail.com)  
[odabas@ankara.edu.tr](mailto:odabas@ankara.edu.tr)

**Scopus ID :** 35082448000

**WOS Researcher ID:** AAG-7813-2020

<https://scholar.google.com.tr/citations?user=BuB6nGYAAAAJ&hl=en>

## **EDUCATION**

2011 Ph.D., Bioengineering, Hacettepe University

*Hacettepe University, Faculty of Engineering, Department of Chem. Engineering, Bioengineering Division, Ankara, Turkey.*

**GPA:** 4.00/4.00 *Supervisor: Prof. Dr. Erhan Piskin Ph.D., ChemEng.*

**Ph.D. Thesis:** *Development of novel tissue engineering strategies on Cartilage Tissue Formation. (This Thesis is mainly focused on using gene therapy perspective (here, using hBMP-7 plasmid via non-viral gene transfection) for Auricular Cartilage Engineering on Gelatin/Ox-Dextran Scaffolds both in-vitro and in-vivo Rabbit Animal Models)*

2006 M.Sc., Bioengineering, Hacettepe University

*Hacettepe University, Faculty of Engineering, Department of Chem. Engineering, Bioengineering Division, Ankara, Turkey.*

**GPA:** 3.75/4.00

**MSc Thesis:** *“Production of Magnetically Loaded Nanosorbents for Isolation of Mesenchymal Stem Cells.” (This thesis aimed to develop magnetically loaded (Fe<sub>3</sub>O<sub>4</sub>*

*magnetite) polymeric nanosorbents, carrying specific monoclonal antibodies (here, namely CD105 and CD73) for separation of mesenchymal stem cells from cell suspensions to develop a competitive and an easy handle and fast separation system)*

2004 B.Sc., Biology, Hacettepe University

*Hacettepe University, Faculty of Science, Biology, Ankara, Turkey.*

**GPA:** 3.69/4.00

*(Laboratory studies and internship focused on Microbiological Growth and Enzymatic Production Systems.)*

## **POST-DOCTORAL TRAINING**

**Dec. 2011 - Feb.2014** Tissue Engineering, Biomaterials and Nanobiotechnology Laboratory,  
Ankara University

## **PROFESSIONAL EXPERIENCE**

**2017-present** Associate Professor, Bioengineering with Tenure, Ankara University  
*Faculty of Science, Department of Chemistry, Biochemistry Division*

**2015-2017** Associate Professor, Bioengineering without Tenure, Ankara University  
*Faculty of Science, Department of Chemistry, Biochemistry Division*

**2014-2017** Assistant Professor, Department of Chemistry, Ankara University

## **ADMINISTRATIVE DUTIES**

**2017-2020** Vice-Dean, Faculty of Science, Ankara University

**2014-2016** Process Supervisor, Stem Cell Institute, Tissue, and Cell Processing Center  
(Authorized by Minister of Health), Ankara University

**2014-present** Advisory Board Member of Ankara Technology Transfer Office.

## **OUTGOING EXPERIENCE**

**2022** Guest Researcher, Technical University Munich (TUM), Munich, Germany

*Visiting Researcher, May - July 2022, Lieleg Lab. at Center for Functional Protein Assemblies (CPA) with Prof. Oliver Lieleg*  
<https://www.mae.ed.tum.de/en/bme/staff/oliver.lieleg@tum.de>

*The mini-projects that I conduct at Lieleg Lab. focused on processing and further rheological analysis of decellularized skin tissue (D-ECM) derived biomaterials.*

**2008-2010** Integrated Ph.D., Ludwig Boltzmann Institute (LBI), Vienna Austria

***Integrated Ph.D. Programme, Network of Excellence: Novel Therapeutic Strategies for Tissue Engineering of Bone and Cartilage Using Second Generation Biomimetic Scaffolds, European Commission, 6th Framework Programme for Research, FP6-2002-NMP-1.***

***Coordinator: Ludwig Boltzmann Institute – Vienna Austria – Prof. Dr. Heinz REDL***

*This integrated Ph.D. program is a part of an FP6 Network of Excellence Expertissues Project, which aims to give the mobility to the selected Ph.D. students and have changed to take a part of the selected research group from EUROPE for improving their ability and help their education as well as their thesis project.*

**2008** Visiting Researcher, Ludwig Boltzmann Institute (LBI), Vienna Austria

*Visiting Researcher, October - December 2008, Ludwig Boltzmann Institute (LBI) for experimental and clinical Traumatology*

*Donaueschingenstrasse 13, 1200 Wien Austria, with Georg Feichtinger, Heinz Redl*  
<http://www.lbitrauma.org/georg.feichtinger@lbitrauma.org>

*This mini-project was focused on plasmid modeling for cartilage tissue engineering, fundamental nucleic acid/protein analysis, and related works, transformation, and gene transfection via non-viral cationic or non-viral vectors to different cell lines as well as the primary cells.*

**2010-2011** R&D Coordinator, BMT Calsis Co., Ankara Turkey

*BMT Calsis is the first orthobiologic product manufacturer in TURKEY, working at the development and production line for hard and soft tissue repair products. Like as porous bio-resorbable ceramic (Tricalcium phosphate*

*granules and putty materials), matrix-mediated products (natural/collagen & synthetic/polymeric based materials).*

*Further experience on test systems and analyses for the cleanroom and product validation and quality control via related ISO standards.*

*[www.bmtcalsis.com](http://www.bmtcalsis.com)*

**2007-2009** R&D Specialist, Anthus Engineering Co. Ltd., Ankara Turkey

*Focused on chromatographic systems and particle-based isolation systems*

**2004-2006** Research Scientist, Genkord Cord Blood Bank & Stem Cell Laboratories, İstanbul Turkey

*Genkord is a Cord Blood Bank, established in Istanbul. Experience for stem cell researches & therapy applications (e.g., Diabetic ulcers...), primary cell culture, cell differentiation from the umbilical cord and peripheral blood, cell-matrix interactions. [www.genkord.com](http://www.genkord.com)*

**2004-2006** **Research Scientist**, Biyomedtek: Center for Biomedical Technologies, Ankara Turkey

*This center aims to build a collaboration between the university and the industry and support young researches according to university & industry needs. [www.biyomedtek.org](http://www.biyomedtek.org)*

## **RESEARCH EXPERIENCES and TOPICS**

- 1. Tissue Engineering:** Production of scaffolds from natural or synthetic polymeric hybrid materials for in-vitro cell differentiation or in-vivo cell or tissue replacement and repair, which mainly focused on Cartilage and Bone Tissue Engineering.
- 2. Biomaterials:** Production and characterization of 3D polymeric biomaterials (basic or 3D printed) and modification of the surface of polymeric biomaterials by different methods (by chemically, biologically, etc.); tissue/organ decellularization both animal and plant originated, hybrid materials composed of decellularized ECM, calcium phosphate ceramics and various other macromolecules.
- 3. Gene Therapy:** Production of the non-viral vectors, which are mostly cationic polymers (magnetic or non-magnetic) for in-vitro transfection. Transfection & Transformation and related PCR work.
- 4. Polymer Technology:** Production of polymers, which have a different type of bulk and surface characteristics, shapes and geometries with different techniques.
- 5. Nano and Meso particles:** Production of superparamagnetic magnetite nano and meso nanoparticles for separation, transfection, immobilization, or related applications. Silicon nanowires and related biological applications.

## OTHER RESEARCH / NON- RESEARCH EXPERIENCES

- Process Control and Management of Quality Control at GMP facilities under ISO regulations and standards
- Biocompatibility Testing, according to ISO 10993: Biological evaluation of medical devices.
- Microbiology Test methods / Contamination Control & Environmental Monitoring: I have advanced skills for basic microbiological test systems as well as Sterility Testing via European Pharmacopeia.
- EN ISO related Product validation: I know ISO 13485 Quality Control Systems and product validation and releasing parts. Validation and Test systems for Steam Sterilization and Radiation Sterilization. EN ISO related Clean Room Control & Management.
- Laboratory Animals Practice: I have the certificate for animal experience from the university that is approved by the Ministry of Health, TURKEY. I have the operation experience in the rat (cranial bone defects) and rabbit models (auricle cartilage defects).

## PUBLICATIONS

1. Puza, F., Rostami, S., Ozcolak, B., **Odabaş, S.**, Jandt, K. D., & Garipcan, B. Anisotropic Bone Surface Topography Mimicked Chitosan/Graphene Oxide Membranes. *Advanced Engineering Materials*. 2022/8. 10.1002/adem.202200777.
2. Unver N, Birlik Demirel G, **Odabas S**, Gul OT. Hollow Microneedle Array Fabrication with Rational Design to Prevent Skin Clogging in Transdermal Drug Delivery. *ChemRxiv*. Cambridge: Cambridge Open Engage; 2022. doi.org/10.26434/chemrxiv-2022-zwssl
3. Z Cimen, S Babadag, **S Odabas**, S Altuntas, G Demirel, GB Demirel “Injectable and Self-Healable pH-Responsive Gelatin–PEG/Laponite Hybrid Hydrogels as Long-Acting Implants for Local Cancer Treatment” *ACS Applied Polymer Materials*, (2021), 1-15.
4. M Eryildiz, M Altan, **S Odabas** Improvement of Mechanical and Biological Properties of PLA/HNT Scaffolds Fabricated by Foam Injection Molding: Skin Layer Effect and Laser Texturing, *International Polymer Processing*, (2021), <https://doi.org/10.1515/ipp-2020-4090>.
5. Bilirgen, Asu; Toker, Melis; **Odabas, Sedat**; Yetisen, Ali; Garipcan, Bora; Tasoglu, Savas, "Plant-Based Scaffolds in Tissue Engineering". *ACS Biomaterials Science & Engineering*, (2021), 7, 3, 926–938.
6. **Odabas, S.**, Tevlek, A., Erenay, B., Aydin, H. M., Suloglu, A. K., Saglam, A. S. Y., & Garipcan, B. Magnetically stimulated cryogels to enhance osteogenic and chondrogenic

- differentiation of stem cells. bioRxiv. (2021), <https://doi.org/10.1101/2021.02.15.431106> (pre-print).
7. Erenay, B., Garipcan, B., **Odabaş, S.** Fabrication of Homogenous Magnetic PDMS Membranes to Mediate Cell Behavior. *Surface Innovations*, (2021), 1-9, [doi.org/10.1680/jsuin.20.00085](https://doi.org/10.1680/jsuin.20.00085).
  8. Toker, M., Rostami, S., Kesici, M., Gul, O., Kocaturk, O., **Odabas, S.**, Garipcan, B. (2020). Decellularization and characterization of leek: a potential cellulose-based biomaterial. *Cellulose*, 27(13), 7331-7348.
  9. **S. Odabas**, B Erenay, B Garipcan Effects of modified and bone surface mimicked PDMS membranes and protein modifications on osteoblast cell behaviour. *Bone Reports* 13, 100384. (ECTS'21 Conference Article).
  10. Öztürk-Öncel, M. Ö., **Odabaş, S.**, Uzun, L., Hür, D., & Garipcan, B. (2020). A facile surface modification of poly (dimethylsiloxane) with amino acid conjugated self-assembled monolayers for enhanced osteoblast cell behavior. *Colloids and Surfaces B: Biointerfaces*, 196, 111343.
  11. Betül Suyumbike Yagci, Sedat Odabas, and Eda Ayse Aksoy. Development of metformin chain extended polyurethane elastomers as bone regenerative films, *European Journal of Pharmaceutical Sciences*, 2019, 131, 84-92.
  12. A. Tevlek, **S. Odabas**, E. Çelik, H.M. Aydın; Preparation of MC3T3-E1 cell sheets through short-term osteogenic medium application; *Artificial cells, Nanomedicine, and Biotechnology*, 2018;46(sup2):1145-1153.
  13. **Sedat Odabaş**, Kadriye Tuzlakoğlu, *Biomaterials and Stem Cells: From Basics to Applications, Decellularized Matrices in Stem Cell Research*, Eds. Bora Garipcan, Book Series 50th Years of Hacettepe University, Palme Yayınları , 2018., 201-212.
  14. Sedat Odabaş, İleri Biyomalzemeler: Biyomalzeme ve Nanomalzeme Uygulamaları, Bölüm15. Mekanik İletim ve Hücrelere Etkisi, Eds. Filiz Kurulay Book Series 50th Years of Hacettepe University, Palme Yayınları , 2018., 285-297.
  15. Vural Altuğhan Cahit, **Odabaş Sedat**, Korkusuz Petek, Yar Sağlam Atiye Seda, Bilgiç Elif, Çavuşoğlu Tarık, Bişkin Erhan, Vargel İbrahim Cranial bone regeneration via BMP-2 encoding mesenchymal stem cells. *Artificial Cells, Nanomedicine, and Biotechnology*, 2017, 45 (3), 544-550.
  16. **Odabas, Sedat**; Functional Polysaccharides Blended Collagen Cryogels, *Hacettepe Journal of Biology and Chemistry*, 2018 46 (1) 113-120.
  17. B Bilgen, S Odabas, Effects of Mechanotransduction on Stem Cell Behavior, *Advanced Surfaces for Stem Cell Research*, Wiley Publishing, Book Eds. Ashutosh Tiwari, Bora Garipcan, Lokman Uzun, p45-65.

18. Parmaksız Mahmut, Arın Doğan, **Odabaş Sedat**, Elçin Ayşe Eser, Elçin Yaşar Murat. Clinical applications of decellularized extracellular matrices for tissue engineering and regenerative medicine. *Biomedical Materials*, 2016, 11(2), 22003, Doi: 10.1088/1748-6041/11/2/022003.
19. **Odabas S.** Collagen-carboxymethyl cellulose-tricalcium phosphate multi-lamellar cryogels for tissue engineering applications: Production and characterization. *Journal of Bioactive and Compatible Polymers*, 2016, 31 (4),411-422.
20. Ilyas Inci, **Sedat Odabas**, Ibrahim Vargel, Elif Guzel, Petek Korkusuz, Tarik Cavusoglu, Harald Kirsebom, Hakan Hamdi Celik, Figen Demirkazik, Bo Mattiasson, and Erhan Piskin, Gelatin-Hydroxyapatite Cryogels with Bone Morphogenetic Protein-2 and Transforming Growth Factor Beta-1 for Calvarial Defects, *Journal of Biomaterials and Tissue Engineering*, Vol. 4, 1–8, 2014.
21. **Sedat Odabas**, A. Eser Elcin, and Y. Murat Elcin, *Chapter 3: Isolation and Characterization of Mesenchymal Stem Cells*, Meral Beksaç (ed.), *Bone Marrow and Stem Cell Transplantation, Methods in Molecular Biology*, vol. 1109, DOI 10.1007/978-1-4614-9437-9\_3, © Springer Science+Business Media New York 2014.
22. **S. Odabas**, G.A. Feichtinger, P.Korkusuz, I.Inci, E.Bilgic, A.S.Yar, T.Cavusoglu, S.Menevse, I.Vargel, E.Piskin. Auricular cartilage repair using cryogel scaffolds loaded with BMP-7-expressing primary chondrocytes, *J. Tissue Eng. Regen. Med.* 2013, 7 (10) 831-840, DOI: 10.1002/term.1634.
23. Lehninger, *Biyokimyanın Temelleri*, Çeviri Ed. Y. Murat Elçin Palme Yayıncılık Beşinci Baskıdan Çeviri / *Lehninger Principles of Biochemistry Fifth edition*, D. L. Nelson, M. M. Cox **Contributor as Translator of the Chapters**
24. **Odabas, Sedat**; Inci, İlyas; Piskin, Erhan. *Gelatin/Oxide-Dextran Cryogels: In-Vitro Biocompatibility Evaluations Hacettepe Journal of Biology and Chemistry*, 2012 40 (4) 409-417.
25. Kavaz D, **Odabas S**, A. Vaseashta, E.Denkbas. *A Practical Methodology of IgG Purification via Chitosan Based Magnetic Nanoparticles, Digest J. Nanomat. Biostruct.*, 2012, 7 (3) 1165-1177.
26. ZA. Gencer, **S. Odabas**, HT Sasmazel, E. Piskin *Macroporous silicone biomaterials with modified surface chemistry: Production and characterization. Journal of Bioactive Compatible Polymers*, 2012, 27 (5) 419-428 doi: 10.1177/0883911512455115.
27. **B. Garipcan\***, **S. Odabas\***, G. Demirel, J. Burger, B. Nabet, J.E. Spanier, E.Piskin *In vitro Biocompatibility of n-type and Undoped Silicon Nanowires, Advanced Biomaterials*, 2011, 13,1-2, B3-B9, **DOI: 10.1002/adem.200980045**. \*equally contributed.
28. Doga Kavaz, **Sedat Odabas**, Eylem Güven, **Murat Demirbilek** and Emir Baki Denkbaş. *Bleomycin Loaded Magnetic Nanoparticles as Multifunctional Nanocarriers. Journal of Bioactive and Compatible Polymers*. 2010, 25: 305-318. DOI: 10.1177/0883911509360735.

29. **S. Odabas**, F. Sayar, G. Güven, G. Yanikkaya-Demirel, E. Piskin. Separation of Mesenchymal Stem Cells with Magnetic Nanosorbents Carrying CD105 and CD73 Antibodies in Flow-Through and Batch Systems. *J. ChromB.* , Volume 861, 2008, Pages 74-80.

## **PATENTS, REPORTS, AND THESIS**

### **TPE 2014-16111 Turkish Patent**

*“An ECM Material”* - 02/2018

This patent describes a decellularized ECM derived scaffold where the decellularization has been performed via step-by-step multiple cocktails.

### **Consultant at Biovalda Co.**

*“Determining the R&D Infrastructure of Biotechnological Product Turnout in Turkey”*

### **Philosophy of Doctorate Thesis**

*“Development of novel tissue engineering strategies on Cartilage Tissue Formation.”*

### **Master of Science Thesis:**

*“Production of Magnetically Loaded Nanosorbents for Isolation of Mesenchymal Stem Cells”*

## **PROJECTS**

- MAG-220S423- TUBITAK MiniProjects Development of 3D Printed Scaffolds From Decellularized Plants and Investigation of Its Effects on Cartilage Tissue Differentiation (2021-2022). (**Principal Investigator**) - **5.000 Euro**
- SBAG-220S423- TUBITAK MiniProjects Development of injectable hydrogels from human Periodontal Ligament Fibroblast (hPDLF) and human vascular endothelial cell (HUVEC) derived exosomes and their in vivo applications - (2021-2022) (**Senior Researcher**) – **5.000 Euro**
- MAG-217M551 - The Scientific and Technological Research Council of Turkey Research Projects Development of bone tissue-like patterned magnetic stimulated polydimethylsiloxane (PDMS) tissue matrices and their efficacy evaluations, (2018-2020) (**Principal Investigator**) - **75.000 Euro**
- MAG-119S511 - The Scientific and Technological Research Council of Turkey Research New Placenta Models and Investigation of Their Effectiveness, (2018-2020) (**Consultant**) - **90.000 Euro**
- MAG-118M610 - The Scientific and Technological Research Council of Turkey Research Projects Development of skeletal muscle tissue-specific 3D combined bioactive tissue matrix and evaluation of their influence on myogenic cell activities under electrical stimulation (2018-2021) (**Senior Researcher**) – **65.000 Euro**



- TÜBİTAK- 3501 - CAREER Research Projects Fabrication of Polymer Supported Carbon Nanotube Micro Needle Array for Intradermal Drug 1001 Delivery, (2018-2021) (**Senior Researcher**) – **40.000 Euro**.
- MAG-115M522 – 3501 Early Career Project (CAREER) Production of Magnetic Based Scaffolds and Comprehensive Investigation of Their Mechano-Transductive Effects on Stem Cell Behaviors, (2016-2018) (**Principal Investigator**) – **80.000 Euro**
- MAG-214M159 –The Scientific and Technological Research Council of Turkey Research Projects and COST BM1302 Comparative Evaluations of Effectiveness of ECM from Pluripotent, Multipotent and Somatic Cell Culture as a Natural Niche and Biomimetic Component of Tissue Engineered Scaffolds (2015- 2018 ) (**Senior Researcher**) – **195.000 Euro**
- SBAG-111S497 - The Scientific and Technological Research Council of Turkey Research Projects Investigation of Adipose Derived Mesenchymal Stem Cell Differentiation on Nanostructured Gels (2011-2014) (**Researcher**) – **165.000 Euro**
- Hacettepe University - BAB-0801602012 “Development of new tissue engineering strategies for cartilage development” 2009-2011 (**Senior Researcher**) – **45.000 Euro**
- TBAG-107T112 - The Scientific and Technological Research Council of Turkey Research Projects Development of Plasmid DNA Purification Kits Based on Magnetically Loaded Polymeric Nanoparticles 2008-2010 (**Researcher**) – **200.000 Euro**
- KOSGEB- **Small & Medium Enterprises Development Organization**: Technology development and innovation support; Development of different types chromatographic column systems for HPLC. 2008-2009. (**Chief Scientist**) – **52.000 Euro**
- Network of Excellence: Novel Therapeutic Strategies for Tissue Engineering of Bone and Cartilage Using Second Generation Biomimetic Scaffolds, European Commission, 6th Framework Programme for Research, FP6-2002-NMP-1, 2004-2009 (**Integrated researcher**) – **7.200.000 Euro**
- Production of Magnetically Loaded Nanosorbents for Separation and the Culture of Mesenchymal Stem cells. TUBITAK-SBAG Project no: 104S559, July 2005- Oct 2006, (**Researcher**) – **185.000 Euro**

#### **TEACHING (2014 – Present) and SUPERVISING ACTIVITIES (2017-Present)**

- **General Chemistry (KIM 101-102)** – Undergraduate / Biology Program
- **Biochemistry (CHM 0319-0320)** – Undergraduate / Chemistry Program in EN
- **Biochemistry Laboratory (CHM 358)** – Undergraduate / Chemistry Program in TR/EN
- **Cytology for Chemist (KIM 425-CHM 425)** – Undergraduate / Chemistry Program in TR/EN
- **Biopolymers** – Graduate / Interdisciplinary
- **Tissue Biochemistry** - Graduate / Interdisciplinary

- I. Berkay Erenay: The Effect of Bone Surface Mimicked Magnetic Particle Embedded PDMS Membranes on Human Osteoblast Cell Behavior (accomplished)
- II. Gürkan Tiryaki: Development of 3D printed poly (lactic acid) scaffolds patterned with strontium-nano-zeolite A for bone regeneration. (accomplished)
- III. Rihab Ksouri: Development of exosome incorporated 3D printed magnetic PLA scaffolds and evaluation of their effect on osteogenic differentiation. (accomplished)
- IV. Fulya Özcan: Synthesis of Novel Visible Light Cross-Linker Biomolecules and Investigation of Their Potential Use. (On-going)
- V. Melek İpek Ertugrul: Melt Electrowritten (MEW) Scaffolds from Decellularized Skin Tissues (On-going)
- VI. Süveyda Kocacık: Investigation of Osteoblast Cell Behavior on Bone Surface Mimicked Methacrylated Hydrogels. (On-going)
- VII. Sena Babadağ: The Potential Use of Decellularized Plants for Tissue Regeneration (dropped!!)

## SCHOLARSHIPS & AWARDS

**2009-2011** The Scientific and Technological Research Council of Turkey, Young Scientist Supporting Program / Full Scholarship for Graduate / Ph.D. Students in Basic Sciences.

**2004-2006** The Scientific and Technological Research Council of Turkey, Young Scientist Supporting Program / Full Scholarship for Graduate / Master Students in Basic Sciences.

**2004** Hacettepe University / Ihsan Dogramaci “Graduation With a Great Success Award” 1<sup>st</sup> Degree in Biology Department and 2<sup>nd</sup> Degree in Faculty of Science, **(2004)** Graduation Year.

*“Prof. Dr. Ihsan Dogramaci was the founder of Hacettepe University and Bilkent University and was in the chair of the Middle East Technical University board of trustees. He was the founder Fellow of the Royal College of Pediatrics and Child Health, London, and has been an Honorary Scientific Advisor to the International Centre for Childhood Studies in England. He was the president of the IPA/UNICEF/WHO task force.”*

**2001-2004** The Scientific and Technological Research Council of Turkey, Young Scientist Supporting Program / Full Scholarship for Young Undergraduate Students in Basic Sciences.

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

Materials Research Society (MRS), Membership (2021-...)

Royal Society of Chemistry, Membership, (2020-...)

European Society for Biomaterials, Membership, (2017-...)

TERMIS, Annual Conference Based Membership, (2013-2014)

Society for Biomedical Technologies (BIYOMEDTEK-TURKEY), charter member, (2008-2013)