

Curriculum Vitae

1. **Name Surname** : Ahmet Emin Topal
2. **Date of Birth** : January 9, 1990
3. **Title** : Assistant Professor
4. **Educational Status** : Doctorate (PhD)
5. **Institution of Employment**: Bahçeşehir University

Degree	Area	University	Year
BS	Molecular Biology and Genetics	İhsan Doğramacı Bilkent University	2011
Master of Science	-	-	-
Doctorate	Materials Science and Nanotechnology	İhsan Doğramacı Bilkent University	2017

5. Academic Titles

- Assistant Professor Date : November 10, 2022
Associate Professorship History :
Professorship History :

6. Managed Master's and Doctoral Theses

- 6.1. Master Theses
- 6.2. PhD Theses

7. Publications

7.1. **Articles** published in international refereed journals (SCI, SSCI, Arts and Humanities)

1. Sevimli M, Inan U, Seyidova N, Guluzade L, Ahmadova Z, Gulec K, **Topal AE**, Semerci Sevimli T. In vitro Chondrogenic Induction Promotes the Expression Level of IL-10 via the TGF- β /SMAD and Canonical Wnt/ β -catenin Signaling Pathways in Exosomes Secreted by Human Adipose Tissue-derived Mesenchymal Stem Cells. *Cell Biochem Biophys* (2024). <https://doi.org/10.1007/s12013-024-01461-z>
2. Dikecoglu, FB, **Topal, AE**, Ozkan, AD, Tekin, ED, Tekinay, AB, Guler, MO and Dana, A., 2018. Force and time-dependent self-assembly, disruption and recovery of supramolecular peptide amphiphile nanofibers. *Nanotechnology*, 29 (28), p.285701.
3. Ozkan, AD, **Topal, AE**, Dikecoglu, FB, Guler, MO, Dana, A. and Tekinay, AB, 2018, January. Probe microscopy methods and applications in imaging of biological materials. In *Seminars in Cell & Developmental Biology* (Vol . 73, pp. 153 – 164). AcademicPress.
4. Arioz , I, Erol, O, Bakan, G, Dikecoglu, FB, **Topal, AE**, Urel, M, Dana, A, Tekinay, AB and Guler, MO, 2018. Biocompatible electroactive tetra (aniline)- conjugated peptide nanofibers for neural differentiation. *ACS Applied Materials & Interfaces*, 10 (1), pp.308 – 317.
5. Beter, M, Kara, HK, **Topal, AE**, Dana, A, Tekinay, AB and Guler, MO, 2017. Multivalent presentation of cationic peptides on supramolecular nanofibers for antimicrobial activity. *Molecular Pharmaceutics*, 14 (11), pp.3660 – 3668.
6. Arslan, E, Hatip Koc, M., Uysal, O, Dikecoglu, B, **Topal, AE**, Garifullin, R, Ozkan, AD, Dana, A, Hermida-Merino, D, Castelletto, V and Edwards-Gayle, C, 2017. Supramolecular

peptide nanofiber morphology affects mechanotransduction of stem cells. *Biomacromolecules*, 18 (10), pp.3114 – 3130.

7. **Topal, AE** , Tansik, G, Ozkan, AD, Guler, MO, Dana, A and Tekinay, AB, 2017. Nanomechanical characterization of osteogenic differentiation of mesenchymal stem cells on bioactive peptide nanofiber hydrogels. *Advanced Materials Interfaces*, 4 (20), p.1700090.
8. Khalily , MA, Minister, G, Kucukoz , B, **Topal, AE** , Karatay, A, Yaglioglu , HG, Dana, A. and Guler , MO, 2017. Fabrication of supramolecular n/p-nanowires via coassembly of oppositely charged peptide-chromophore systems in aqueous media. *ACS Nano*, 11 (7), pp.6881 – 6892 .
9. Guner, H, Ozgur, E, Kokturk, G, Celik, M., Esen, E, **Topal, AE**, Ayas, S, Uludag, Y., Elbuken, C. and Dana, A., 2017 A smartphone based surface plasmon resonance imaging (SPRi) platform for on-site biodetection. *Sensors and Actuators B: Chemical*, 239 , pp.571 – 577.
10. Tohumeken, S, Gunduz, N, Demircan, MB, Gunay, G, **Topal, AE** , Khalily, MA, Tekinay, T., Dana, A., Guler, MO and Tekinay, AB, 2017. A modular antigen presenting peptide/oligonucleotide nanostructure platform for inducing potent immune response. *Advanced Biosystems*, 1 (5), p.1700015.
11. Ozkan, AD, **Topal, AE**, Dana, A, Guler, MO, Tekinay, AB, 2016. Atomic force microscopy for the investigation of molecular and cellular behavior. *Micron*, 89, 60–76. doi:10.1016/j.micron .2016.07.011
12. Kibar, G, **Topal, AE**, Dana, A, Tuncel , A, 2016. Newly designed silver coated-magnetic, monodisperse polymeric microbeads as SERS substrate for low-level detection of amoxicillin. *Journal of Molecular Structure*, 1119, pp.133 – 138.
13. Mammadov, R, Cinar , G, Gunduz , N, Goktas , M, Kayhan , H, Tohumeken , S, **Topal, AE**, Orujalipoor , I, Delibasi, T, Dana, A. and Ide, S, 2015. Virus-like nanostructures for tuning immune response. *Scientific Reports*, 5 (1), pp.1 – 15.
14. Ayas , S., **Topal ,AE** , Cupallari , A., Güner , H., Bakan , G. and Dana, A., 2014. Exploiting native Al₂O₃ for multispectral aluminum plasmonics. *ACS Photonics*, 1 (12), pp.1313–1321.
15. Kaya, Y., Ayas , S., **Topal ,AE**, Guner , H. and Dana, A., 2014. Sensitivity comparison of localized plasmon resonance structures and prism coupler. *Sensors and Actuators B: Chemical*, 191, pp.516–521.

7.2. Articles published in other international peer-reviewed journals

7.3. Presented at international scientific meetings and in the proceedings book printed papers

1. Özel, C, Koc, Y, **Topal, A**, Ebrahimi, A, Sengel, T, Ghorbanpoor, H, Guzel, F, Uysal, O, Eker Sariboyaci A, Avci, H. Investigation of Mesenchymal cells in the Microfluidic Cell Culture Device. 8. International Fiber and Polymer Research Symposium 18–19 June 2021, At: Eskişehir Osmangazi University-Turkey
2. **Topal, AE**, Tekinay, AB, Guler, MO, & Dana, A (2016). Mechanical Properties of Differentiating Stem Cells on Peptide Nanofibers. *Biophysical Journal*, 110(3), 624a. <http://doi.org/10.1016/j.bpj.2015.11.3345>

3. **Ahmet Emin Topal** , Mustafa Urel, Alper Devrim Özkan, Berna Şentürk, Mustafa Özgür Güler, Ayşe Begüm Tekinay, Aykutlu Dana. Nanomechanical Characterization of Regenerating Extracellular Matrix via Force-Distance Mapping, COST Action TD 1003 Meeting, Integrated approaches for biomolecular detection: nanostructures, biosensors and lab-on-chip devices, University of Catania, April 28–30, 2014.

7.4. International books or chapters in books written

1. **Topal, AE** , Ozkan, AD, Dana, A., Tekinay, AB, & Guler , MO (2016). Biosensors for Early Disease Diagnosis. In Therapeutic Nanomaterials (pp. 235–270). <https://doi.org/10.1002/9781118987483.ch10>

7.5. Articles published in national peer-reviewed journals

1. Özel, C., Koç, Y., **Topal, A.**, Ebrahimi , A., Şengel, T., Ghorbanpoor , H., Doğan Guzel , F., Uysal, O., Eker Sarıboyacı, A. & Avcı, H. (2021). Investigation of 3D culture of human adipose tissue-derived mesenchymal stem cells in a microfluidic platform. *Eskisehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering* , Vol:22-8th ULPAS - Special Issue 2021, 85–97. DOI: 10.18038/estubtda.983881

7.6. Papers presented at national scientific meetings and published in the proceedings book

7.7. Other publications

8. Projects

1. Bahçeşehir University BAU BAP Project No: BAP.2022-02.49, Investigation of ring-shaped supramolecular oligomer structures of rhodopsin proteins, Project Leader, In Progress, Project Start/End Dates: 21.06.2022 - 21.06.2025.
2. Eskişehir Osmangazi University BAP, Project No: TOA-2022-2307. Three-Dimensional Model of Liver Cancer on Microfluidic Chip and Development of a Targeted Diagnostic and Drug Screening Kit. Start Date: 19.04.2022. Duration: 24 months. Approved Budget: 509968.24 TL. Project Coordinator: Assoc. Prof. Dr. Hüseyin Avcı, Researchers: **Asst. Prof. Dr. Ahmet Emin Topal**, Dr. Aliakbar Ebrahimi, Dr. Murat Kaya, Dr. Instructor Fatma Doğan Guzel, Asst. Prof. Hamed Ghorbanpoor, Lecturer Tayfun Şengel, Dr. Ceren Özel.
3. 118C539, Co-culture of liver cells on chip under interstitial flow, BIDEB-2218, Project Leader, Resulted, BIDEB-2218, BIDEB - Education Scholarship And Activity Support Group, Project Start/End Dates : 01.12.2021 - 01.12.2023.
4. 2515 – EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY – COST (EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY) PROGRAM, COST Action Title : From nano to macro biomaterials (design, processing, characterization, modeling) and applications to stem cells regenerative orthopedic and dental medicine (NAMABIO), COST Number – *MP1005*. Project No. 214M011, Nanomechanical characterization of osteogenic differentiation of mesenchymal stem cells, International, Scholarship, Resulted, ARDEB, MAG - Engineering Research Support Group, Join/Leave the Project Dates: 01.03.2015 - 01.06.2017, Project Start/End Dates: 01.03.2015 - 01.06.2017.
5. 20AG031, Regenerative and Restorative Medicine Research and Practices, 1004 - Center of Excellence Support Program, Scholarship, In effect, ARDEB, KAMAG -

9. Administrative Duties

10. Memberships to Scientific and Professional Organizations

- Biophysical Society, Student Membership, Member ID: 84298 (September 7, 2015 – July 12, 2017)

11. Awards

- Bronze Award, International Genetically Engineered Machine Competition, iGEM 2011 Regional Jamboree: Europe, Vrije Universiteit Amsterdam, Netherlands.
http://2011.igem.org/Jamboree/Team_Abstracts#EUROPE .
http://2011.igem.org/Team:Bilkent_UNAM_Turkey .
<https://old.igem.org/Results?year=2011&name=Championship&division=igem>.

12. Fill in the table below for the undergraduate and graduate level courses you have taught in the last two years.

Academic Year	Period	Course title	Weekly Time		Number of Students
			Theoric	Application	
2024–2025	Fall	PHAR1007 Molecular Biology and Genetics	3		66
	Spring				
	Annual	DENT2007 Biochemistry	1		117
2023–2024	Fall	PHAR1007 Molecular Biology and Genetics	3		74
	Spring				
		DENT2007 Biochemistry	1		124

Note: If opened, the courses given in the summer term will also be added to the table.