Assist. Prof. Dr. Şeyma Taşdemir

CONTACT INFORMATION	
Address	Manisa Celal Bayar University, Faculty of Engineering, Bioengineering Department, Yunusemre, Manisa, 45140, Turkey
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EDUCATION			
Degree	**University**	**Department/Program**	**Years**
Ph.D.	Ege University	Department of Bioengineering	2013-2019
Master	Ege University	Department of Bioengineering	2010-2013
B.Sc.	Ege University	Department of Bioengineering	2006-2010

RESEARCH INTERESTS	
1	Animal cell culture
2	Tissue engineering
3	Biomaterials
4	Biocompatibility
5	Stem cell technology
6	Nanomaterials
7	*in vitro* and *in vivo* disease models
8	Neuroregeneration

THESIS	
Ph.D.	Investigation of The Neuroregenerative Effect of Nanoparticle and Graphene Reinforced Tissue Engineering Products *in vitro* and *in vivo* Parkinson Models
Master	Investigation of Attachment and Proliferation Properties of Rat Bone Marrow and Adipose Tissue Derived Mesenchymal Stem Cells on PCL Nanofibrous Surfaces

AWARDS AND HONORS

1	**PhD scholarship;** February, 2013- March, 2017; The Scientific and Technological Research Council of Turkey, 2211-E.
2	**Master scholarship;** October, 2010- September, 2012; The Scientific and Technological Research Council of Turkey, 2210.

EXPERIENCE

Title	University	Position/Research Topics	Years
Assoc. Prof. Dr.	-	-	-
Assist Prof. Dr.	Manisa Celal Bayar University	Faculty of Engineering, Department of Bioengineering	May 2022-present
Graduate Research Assistant	Sinop University	Faculty of Engineering, Department of Bioengineering	April 2019-May 2022
Research Assistant	Ege University	Faculty of Engineering, Department of Bioengineering	April 2014-April 2019
Research Assistant	Sinop University	Faculty of Engineering, Department of Bioengineering	February 2014- April 2014

PROJECTS

Position	Supported by	Title
Researcher	**TUBITAK 1001**	Evaluation of Neuroregenerative Effects of Novel Hydroxypyridinone Derivatives in Alzheimer's Disease Models, 2022-continued.
Researcher	**TUBITAK 1001**	Development of a 3D Printer Implanted Thermoelectric Power Generation System for Implanted Medical Devices, 2021-continued.
Researcher	**TUBITAK 1002**	Investigation of the potential of using new microalgae-containing biochemobryonic material as bone tissue scaffold, 2021-2022.
Scholar	**TUBITAK 1001**	Investigation of the Neuroregenerative Effects of Iron Oxide (Fe3O4) Nanoparticle and Graphene Reinforced Self-Assembling Peptide Tissue Engineering Products on *in vitro* and *in vivo* Parkinson's Disease Models, 2016-2019.
Scholar	**TUBITAK 1002**	Investigation of Use of Lipases Immobilized on Iron Oxide Magnetic Nanoparticles in Biodiesel Production, 2014-2015.
Researcher	**MCBU BAP**	Investigation of the Effects of Anti-arhythmic Drugs on Electrocardiography in Anesthetized Mice, 2013-1015.

Researcher	**EGE University BAP**	Investigation of Neuronal Differentiation and Neurotransmitter Production of of PC12 cells on Electrospun PEO-Fe3O4 Nanofibrous Surfaces, 2013 – 2014.
Researcher	**EGE University BAP**	Investigation of Attachment and Proliferation Properties of Rat Bone Marrow and Adipose Tissue Derived Mesenchymal Stem Cells on PCL Nanofibrous Surfaces, 2011-2012.

PUBLICATIONS (SCI & SCI EXPANDED)	
1	O. Colpankan Gunes, A. Ziylan, **S. Tasdemir**, A. Sendemir, (2020), "Wet-electrospun PHBV nanofiber reinforced carboxymethyl chitosan-silk hydrogel composite scaffolds for articular cartilage repair", 10.1177/0885328220930714, 35: 4-5, p: 515-531.
2	Z.G. Morcimen, **S. Tasdemir**, C. Erdem, F. Gunes, A. Sendemir, (2019), "Investigation of the Adherence and Proliferation Characteristics of SH-SY5Y Neuron Model Cells on Graphene Foam Surfaces", Materials Today: Proceedings, 19: 40–46.
3	S.Erden Tayhan, **S. Tasdemir**, İ. Deliloglu Gurhan, E. Mir, (2016), "Comparison for Osteogenic Differentiation Capacity of Adipose Tissue Derived Mesenchymal Stem Cells from Humans and Rats", Turkish Journal of Biology, doi: 10.3906/biy-1507-128, 40:5.
4	S. Cesur, Y. Kucukgoksel, **S. Tasdemir**, A. Sendemir-Urkmez (2016), "Polycaprolactone-Hydroxy Apatite Composites for Tissue Engineering Applications", Journal of Vinyl & Additive Technology, doi: 10.1002/vnl.21569, 24:3, p: 248-261.

PUBLICATIONS (OTHERS)	
1	A. A. Dogan, **S. Tasdemir**, A. Sendemir-Urkmez (2016), "Comparison of Microtissue Forming Capacity of SH-SY5Y and SK-N-AS Cell Lines", Dokuz Eylul University Faculty Of Engineering Journal Of Engineering Science, 18:1(52), p. 40-48, 10.21205/deufmd.20165217544.
2	**S. Tasdemir**, C. Gorgun, A. Sendemir-Urkmez (2016), "Final Declaration of The 1st Workshop on Emergence of Engineered Models in Personalizing Regenerative Medicine", Dokuz Eylul University Faculty Of Engineering Journal Of Engineering Science, 18:1 (52), p.15-20.
3	B.Kayhan, **S. Tasdemir**, P. Coruk-İlhan, C. Gorgun, A. Sendemir-Urkmez (2015), "Graphene oxide has a neuroprotective effect against glutamate-induced excitoxicity on B35 neuroblastoma cell line" Anatomy: International Journal of Experimental & Clinical Anatomy, 9(3).

BOOK CHAPTER	
1	M. Anıl, D. Ayyildiz-Tamis, **S. Tasdemir**, A. Sendemir-Urkmez, S. Gulce-Iz, (2016), Bioinspired Materials and Biocompatibility, Chapter 11, Emerging Research on Bioinspired Materials Engineering, Mohamed Bououdina (Editor), Hershey, PA: IGI Global, doi: 10.4018/978-1-4666-9811-6.
2	**S.Tasdemir**, A. Sendemir-Urkmez, Y. Missirlis, (2018), Stem Cells and Neural Tissue Engineering: All The Appropriate Signals are Necessary, Biomaterials and Stem Cells: From Basics to Applications, Bora Garipcan (Editor), Book Series – 50th year of Hacettepe University Series.

PRESENTATIONS PRESENTED AT INTERNATIONAL MEETINGS	
1	A.A. Dogan, Z.G. Morcimen, **S. Tasdemir**, S.E. Turunç, A., A. Şendemir, (2023), *In vitro* Parkinson's Disease Models: 2D or 3D?, International Multidiciplinary Symposium on Drug Research & Development (DRD23), 4-6th May 2023, Izmir, Turkey, oral, abstract.
2	Z.G. Morcimen, **S. Tasdemir**, S.E. Turunç, A., A. Şendemir, (2022), Graphene doped composite self-assembled peptide gels show regenerative effects on in vitro three-dimensional Parkinson's disease model, 26th International Biomedical Science and Technology Symposium (BIOMED), 25-27th November 2022, Ankara, Turkey, oral, abstract.
3	Z.G. Morcimen, **S. Tasdemir**, Ç. Erdem, F. Güneş, Aylin Şendemir, (2019), Investigation of The Adherence and Proliferation Characteristics of SH-SY5Y Neuron Model Cells on Graphene 3D Foam and 2D Film Surfaces, 24nd International Biomedical Science and Technologies Syposium (BIOMED2019), 17-20th October 2019, Izmir-Turkey, poster, abstract.
4	O. Colpankan Gunes, A. Ziylan Albayrak, **S. Tasdemir**, A. Şendemir, (2019), Wet-electrospun PHBV nanofiber reinforced carboxymethyl chitosan/silk hydrogel scaffolds for cartilage regeneration, EUROMAT2019, 1-5th September 2019, Stockholm-Sweeden, p.1605, oral, abstract.
5	G. Sengül, S. Bayar, **S. Tasdemir**, B. Kayhan, A. Şendemir, Neuroprotective Effect of Humanin in an in vitro Parkinson's Disease Model, FENS Regional Meeting, 10-13th July 2019, Belgrad-Serbia, p.313, poster, abstract.
6	**S. Tasdemir**, Z.G. Morcimen, A. Şendemir Urkmez, (2019), Is it safe to use on neural cells of graphene?, 16th International Conference on Nanosciences & Nanotechnologies (NN19), 2-5th July 2019 , Thessaloniki-Greece, poster, abstract.
7	**S. Tasdemir**, A. Sendemir Urkmez, (2018), Iron Oxide Nanoparticle Reinforced Self-Assembled Peptide Gel Production and Characterization, 4th International Symposium on Composite Materials (KOMPEGE 2018), 6-8 th September 2018, Izmir- Turkey, poster, abstract.
8	Z.G. Morcimen, **S. Tasdemir**, C. Erdem, F. Günes, A. Sendemir Urkmez, (2018), Investigation of the Adherence and Poliferation Characteristics of SH-SY5Y Neuron Model Cells on 3D Graphene Foam Surfaces, 15th International Conference on Nanosciences & Nanotechnologies (NN18), 3-6th July 2018, Thessaloniki- Greece, p.243, poster, abstract.
9	Y. Erdal, **S. Tasdemir**, S.E. Turunç, A. Sendemir Urkmez, (2018), Investigation of in vitro neural differentiation of olfactory mucosal mesenchymal stem cells in 2D and 3D, The Second International Biomedical Engineering Congress 2018 (IBMEC-2018), 24-27th May 2018, Lefkosia-Cyprus, p.145, poster,

	abstract.
10	Z.G. Morcimen, **S. Tasdemir**, Ç. Erdem, F. Güneş, A. Sendemir Urkmez, (2018), Investigation of the adherence and proliferation characteristics of SH-SY5Y neuron model cells on 2D graphene film layers, The Second International Biomedical Engineering Congress 2018 (IBMEC-2018), 24-27th May 2018, Lefkosia-Cyprus, p.142, oral, abstract.
11	Z.G. Morcimen, **S. Tasdemir**, Ç. Erdem, F. Güneş, A. Sendemir Urkmez, (2018), Investigation of the adherence and proliferation characteristics of SH-SY5Y neuron model cells on 2D graphene film layers, The Second International Biomedical Engineering Congress 2018 (IBMEC-2018), 24-27th May 2018, Lefkosia-Cyprus, p.142, oral, abstract.
12	**S. Tasdemir**, Y. Erdal, H, Kabadayı, S. Vatansever, A. Sendemir Urkmez, (2018), Comparison of proliferation and multilineage differentiation capacity of mesenchymal stem cells from bone marrow and olfactory mucosa for tissue engineering, The Second International Biomedical Engineering Congress 2018 (IBMEC-2018), 24-27th May 2018, Lefkosia-Cyprus, p.119, poster, abstract.
13	P. İlhan, C. Görgün, B. Kayhan, **S. Tasdemir**, A. Sendemir Urkmez, G. Şengül, (2017), Using carbon based biomaterials for neural cells, International Brain Research Organization (IBRO) Kemali School on Brain Connectivity and Connectomics, 14- 22th September 2017, Morocco, p.22, poster, abstract.
14	**S. Tasdemir**, A.A. Dogan, A. Sendemir Urkmez, (2017), Neuroregenerative effects of graphene on dopaminergic neurons in vitro, 28th European Conference on Biomaterials, 4–8th September 2017, Athens-Greece, p.835, poster, abstract.
15	**S. Tasdemir**, A.A. Dogan, C. Görgün, A. Sendemir Urkmez, (2017), Concentration and Size Dependent Side Effects of PEG Functionalized Iron Oxide Nanoparticles on Dopaminergic Neurons, 28th European Conference on Biomaterials, 4–8th September 2017, Athens-Greece, p.834, poster, abstract.
16	A. A. Dogan, **S. Tasdemir**, C. Gorgun, Aylin Sendemir- Urkmez, (2017), Comparison of Microtissue Forming Capacity of Differentiated and Non-differentiated PC12 Neuron-like Cells, 22nd International Biomedical Science and Technologies Syposium, 12-14th May 2017, Ankara-Turkey, poster, abstract.
17	G. Sengul, **S. Tasdemir**, P. Coruk, B. Kayhan, A. Sendemir-Urkmez, "Investigation of the resistance to glutamate-induced excitoxicity in mouse motor neuron-like NSC-34 cells on graphene oxide films", Socity of Neuroscience, 12-16th November 2016, Sen Diego, USA.
18	A.A. Dogan, **S. Tasdemir**, E. Bedir, A. Sendemir- Urkmez, "Effects Cycloastragenol on an in vitro Parkinson's Disease Model", Basel Life Science Week (BLSW) & Miptec, 19-23th September 2016, Basel, Switzerland.
19	C. Gorgun, **S. Tasdemir**, I. Eltutan, A. Sendemir Urkmez, "Magnetic Elektrospun Scaffolds Stimulate Dopamine Production in vitro" 22nd Congress of European Society of Biomechanics, 10-13th July 2016, Lyon, France.
20	**S. Tasdemir**, A. A. Dogan, A. Sendemir Urkmez, "Size Effect of PEG functionalized Iron Oxide Magnetic Nanoparticles on Neurotoxicity", 13th International Conference on Nanosciences & Nanotechnologies (NN16), 5-8th July 2016, Thessaloniki, Greece.
21	A. A. Dogan, **S. Tasdemir**, A. Sendemir- Urkmez, "Effects of Graphene on Neuronal Connectivity on SH-SY5Y Neurons Cultured in Silk Fibroin (SF) Scaffolds", 13th International Conference on Nanosciences & Nanotechnologies (NN16), 5-8th July 2016, Thessaloniki, Greece.
22	A.A. Dogan, **S. Tasdemir**, A. Sendemir Urkmez, Comparison of microtissue forming capacityof SH-SY5Y and SK-N-AS cell lines, VII. International Bioengineering Congress (BEC 2015), 19-22nd November, 2015, İzmir, Turkey.
23	A.A. Dogan, **S. Tasdemir**, E. Bedir, A. Sendemir Urkmez, Investigation of Cycloastragenol's neuroprotective and neuroregenerative effects in 3D in vitro model of Attention Deficit and Hiperactivity Disorder and Parkinson's Disease, VII. International Bioengineering Congress (BEC 2015), 19-22nd November, 2015, İzmir, Turkey.
24	A. A. Doğan, **S. Tasdemir**, A. Sendemir Urkmez, (2015), "Determination of Biocompatibility of Silk Fibroin (SF) – Hydroxyapatite (HAp) Nano-fiber Composite Coated Polyether-ether-ketone (PEEK) Spinal Implants", 21st International Biomedical Science and Technology Symposium, 22-24th October, Antalya, Turkey.

25	B. Kayhan, **S. Tasdemir**, P. Coruk, A. Sendemir Urkmez, G. Sengul, Investigation of the “Effects of Glutamate Stress in a Model Central Nervous System Cell Line on Graphene Oxide Sheets”, XXIV. International Symposium on Morphological Sciences (ISMS 2015), 2–6th September, Istanbul, Turkey.
26	P. Coruk, C. Gorgun, B. Kayhan, **S. Tasdemir**, G. Sengul, A. Şendemir Urkmez, (2015), “Investigation of the Effects of Hypoxia on SH-SY5Y cells on Graphene Oxide Sheets”, XXIV. International Symposium on Morphological Sciences (ISMS 2015), 2–6th September, Istanbul, Turkey.
27	G. Cosar, **S. Tasdemir**, A. Sendemir Urkmez, (2015), “Production of Graphene Reinforced Poly ε-caprolactone (PCL) Scaffolds”, 8th International Symposium on Flexible Organic Electronics (ISFOE15), 6-9th July, Thessaloniki-Greece, poster, abstract.
28	Y. Kucukgoksel, **S. Tasdemir**, S. Cesur, A. Sendemir Urkmez, (2015), "Cell Proliferation Performance of Polycaprolactone-Hydroxy Apatite Composites in Tissue Engineering", 4th International Polymeric Composites Symposium, 7-9th May, Çeşme, Turkey, oral, full text.
29	G. Dogan, **S. Cogan**, G. Basal, İ. Deliloglu Gurhan, Cytotoxicity of Silk Fibroin (Shell)/ Hyaluronic Acid and Olive Leaf Extract (Core) Coaxial Nanofiber Webs, Nanoscience and Nanotechnology for the Next Generation International Conference (NANOG14), 20-22th Agust 2014, Elazığ-Turkey, p.55-56, oral, abstract.
30	O.M. Duman, **S. Cogan**, M. C. Minaz, C. Celik, A. Sendemir Urkmez (2013), “Fe3O4 reinforced polycaprolactone nanofibrous scaffolds”, VIth Bioengineering Congress (BEC), 12-15th November, Aydın-Turkey, oral, abstract
31	O.M. Duman, **S. Cogan**, C. Minaz, C. Celik, A. Sendemir-Urkmez (2013), “PCL/Fe3O4 Scaffold Production with Electrospinning”, Advanced Materials World Congress (AMWC 2013), September 16 – 19, 2013, Izmir-Turkey, oral abstract.
32	**S. Cogan**, M. Capkin, A. Sendemir-Urkmez, M. Gumusderelioglu, I. Deliloglu Gurhan (2013), “Comparison of Attachment and Proliferation Properties of Rat Bone Marrow and Adipose Tissue Derived Mesenchymal Stem Cells on PCL Nanofibrous Surfaces”, 19th Congress of the European Society of Biomechanics (ESB2013), August 25–28, Patras-Greece.
33	U.S. Demir, **S. Cogan**, T. Nesil, M. O. Ozen, A. Sendemir Urkmez (2012), “Neuronal Differentiation of Mesenchymal Stem Cells on Fibrous Surfaces by Co-Culture Technique”, 18th International Biomedical Science & Technology Symposium (BIOMED 2012), September 10-13, Tokat-Turkey, poster, abstract.
34	**S. Cogan**, M. Çapkın, İsmet Deliloglu Gurhan, M. Gümüsderelioglu, Investigation of Attachment and Proliferation Properties of Rat Bone Marrow and Adipose Tissue Derived Mesenchymal Stem Cells on PCL Nanofibrous Surfaces, 18th International Biomedical Science & Technology Symposium, 10-13 September 2012, Tokat-Turkey, p.55, poster, abstract.
35	Senses, Y. M., Erden, S., Yesıl, P., **Cogan, S**., Olcum, M., Gama, F. M. P., Delıloglu Gurhan, S. I., Sendemır Urkmez, A., The Future Prospects of Bacterial Cellulose in Tissue Engineering Applications “In vitro and in vivo biocompatility tests”, Third East Mediterranean ICLAS Symposium & XV. ICLAS General Assembly, 13-15 June 2011, Istanbul-Turkey, p. 72, Poster, Abstract.

PRESENTATIONS PRESENTED AT NATIONAL MEETINGS	
1	S. Bayar, S. Taşdemir, B. Kayhan, A. Sendemir Urkmez, G. Sengül, (2019), "Investigation of the neuroprotective effect of humanin in an in vitro Parkinson disease model", 17. National Neuroscience Congress, 04-07th April 2019, Trabzon-Turkey, oral, abstract.
2	P. İlhan, B. Kayhan, S. Tasdemir, A. Sendemir Urkmez, G. Sengül, (2018), Three Dimension (3D) Cell Culture and Neural Stem Cells, 16. National Neuroscience Congress, 20-23th May 2018, İstanbul-Turkey, poster abstract.
3	A. Sendemir, S. Tasdemir, Z.G. Morcimen, Y. Erdal, S.E. Turunç, (2018), "Investigation of 2D and 3D In vitro Neural Differentiation of Olfactory Mesenchymal Stem Cells", 23. Biomedical Science and Technology Symposium BIOMED2018-TR, 15-16th December 2018, Istanbul-Turkey, poster, abstract.
4	P. Coruk, C. Gorgun, B. Kayhan, S. Tasdemir, G. Sengül, A. Sendemir Urkmez, "Investigation of the Effects of Hypoxia on SH-SY5Y cells on Graphene Oxide Sheets", 14. National NeuroScience Congress, 26-29 May 2016, Ankara, Turkey.
5	B. Kayhan, S. Tasdemir, P. Coruk, C. Gorgun, A. Sendemir Urkmez, G. Sengül, "Investigation of the Effects of Glutamate Stress in a Model Central Nervous System Cell Line on Graphene Oxide Sheets", 14. National NeuroScience Congress, 26-29 May 2016, Ankara, Turkey.

TRAININGS AND CERTIFICATES	
1	GLP- Good Labrotary Practise, TSC Yönetim Sistemleri Akademisi, 2018.
2	ISO/IEC 17025: 2017, TSC Yönetim Sistemleri Akademisi, 2018.
3	ISO 9001:2015 Quality management system, TSC Yönetim Sistemleri Akademisi, 2018.
5	GMP Good Manufacturing Practise, TSC Yönetim Sistemleri Akademisi, 2018.
6	Hazardous Waste Management, Ege University ÇEVMER, 2016.
7	Occupational Health and Safety, Ege University Occupational Health and Safety Coordinator, 2015.
8	Certificate of Animal Use in Experimental Research, Ege University, Animal Research Ethic Committee, 14- 25 March 2011.

OTHER SCIENTIFIC ACTIVITIES	
1	Co-chairman in Artificial Tissue and Organ Symposium: Current Approaches to the Increasing Need for Organs, 27 October 2009.
2	Organization Committee Member and instructor in Basic Cell Culture and Alternative Methods Course, 14-17 June 2011.
3	Organization Committee Member in the VIth Bioengineering Congress (BEC), 12-15 November 2013.
4	Organization Committee Member in the VIIth Bioengineering Congress (BEC), 19-21 November 2015.
5	Secretariat and Organization Committee Member in Emergence of Engineered Models in Personalizing Regenerative Medicine Workshop, 21 November 2015.
6	Invited Speaker at Cell Culture Training, 2016.
7	Organization Committee Member in 3D Biointerfaces and Biotherapeutics, 26- 27 October 2017.

REVIEWER & EDITORIAL DUTIES	
1	Reviewer of Turkish Journal Biology, 2018.
2	Reviewer of Aquatic Science, 2020.
3	Referee of TÜBİTAK TEYDEB, 2021.
4	Referee of Pamukkale University BAP, 2023.

COURSES TAUGHT	
Bachelor's Degree (Undergraduate)	
1	Tissue Engineering
2	Thermodynamics
3	Bioprocess Control
4	Biotechnology and Genetic Engineering
5	Social Responsibility Project
6	Vocational Training in Workplace
7	Graduation Project II
8	Graduation Project I
Master's Degree (Postgraduate)	
1	Animal Cell Culture Technologies

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