

Curriculum Vitae
April 2026
METINER TOSUN, Ph.D.
Professor of Pharmacology

Mailing Address:

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Education:

- 1997 Ph.D. University of Cincinnati, College of Medicine, Dept. of Pharmacology and Cell Biophysics, Cincinnati, OH, USA. (Thesis Title: Intracellular calcium and vascular contraction: Evidence for functional compartmentalization, Advisor: Dr. Robert M. Rapoport, Ph.D.)
- 1989 M.S. Institute of Health Sciences, Pharmacology, Ege University (EU), Izmir, Türkiye (Thesis Title: Investigation of the effects of some calcium channel blocking drugs on rabbit whole ear preparation, Advisor: Dr. Asli Ozer, Ph.D.)
- 1986 B.S. Faculty of Pharmacy, EU, Izmir, Türkiye

Professional Experience:

- 2022- Chair, Izmir University of Economics (IUE), School of Medicine, Dept. of Medical Pharmacology, Izmir, Türkiye
- 2016- Faculty member (Full Professor), IUE School of Medicine, Div. of Internal Medicine, Dept. of Medical Pharmacology, Izmir, Türkiye
- 2009-2016 Faculty member (Full Professor), EU, Faculty of Pharmacy, Dept. of Pharmacology, Izmir, Türkiye
- 2000-2009 Faculty member (Associate Professor), Ege University, Faculty of Pharmacy, Dept. of Pharmacology, Izmir, Türkiye
- 1998-1999 Quality Control Research associate, Turkish Army Pharmaceutical Factory Command, R&D Dept.
- 1998-2000 Faculty member (Assistant Professor), EU Faculty of Pharmacy, Dept. of Pharmacology, Izmir, Türkiye
- 1992-1997 Research Assistant, University of Cincinnati, College of Medicine, Dept. of Pharmacology and Cell Biophysics, Cincinnati OH, USA.
- 1986-1991 Research Assistant, EU, Faculty of Pharmacy, Dept. of Pharmacology and Toxicology, Izmir, Türkiye

Administrative duties:

- 2021-2025 Member of IEU Ethics Committee for Clinical Research at IEU MedicalPoint Hospital
- 2016-2021 Member of IEU Ethics Committee for Health Sciences Research
- 2016-2021 IUE Academic Review and Quality Assurance Board
- 2016-2019 Faculty Executive Board Member, IUE Faculty of Medicine
- 2016-2019 Faculty Advisory Board Member, IUE Faculty of Medicine
- 2015-2016 Biomedical and Biotechnology Research Infrastructure Strengthening Project Committee, EU Faculty of Pharmacy
- 2013-2016 Faculty Executive Board Member, EU Faculty of Pharmacy
- 2011-2016 Quality Assurance Coordinator, Pharmaceutical Sciences Research Laboratory, EU Faculty of Pharmacy
- 2009-2013 Farabi Exchange Program Coordinator, EU Institute of Health Sciences
- 2009-2013 Socrates-Erasmus Exchange Program Coordinator, EU Institute of Health Sciences
- 2000-2005 Education Committee, EU Faculty of Pharmacy
- 2000-2016 Pharmacy Internship Jury, EU Faculty of Pharmacy

Teaching Experience:

2020-	Therapeutic Reasoning and Prescription/ Clinical Clerkship, (CCS400s and CCS500s), IEU Faculty of Medicine, Clinical discussion sessions
2019-	Pharmacology, Scientific Basis of Medicine 3 (SBM301), IEU Faculty of Medicine
2018-2019	Research Skills in Biomedical Sciences (MED220), IEU Faculty of Medicine
2018-	Pharmacology, Scientific Basis of Medicine 2 (SBM202), IEU Faculty of Medicine
2017-2020	Pharmacology, Scientific Basis of Medicine 1 (SBM101), IEU Faculty of Medicine
2017-2020	Pharmacology, Fundamentals of Health III (HEM207), IEU Faculty of Health Sciences
2016-2018	Drugs and Society (HIM205), IEU Faculty of Health Sciences, Health Institutes Management
2016-2017	Pharmacology for Nursing School (HEM205), IEU Faculty of Health Sciences
2012-2015	Stem Cell Pharmacology, EU, Health Sciences Institute. (Graduate Level)
2007-2016	“Responsible Conduct in Science” EU Health Sciences Institute, (Graduate Level)
2000-2016	Introduction to Pharmacology. EU Faculty of Pharmacy
2000-2016	Introduction to Molecular Biology. EU, Faculty of Pharmacy
2000-2016	Technical English in Pharmacy, EU, Faculty of Pharmacy
2000-2016	Receptor Pharmacology, EU, Faculty of Pharmacy. (Graduate level)
1995-1996	Pharmacology Laboratory Practices, Dept. of Pharmacology and Cell Biophysics, University of Cincinnati, College of Medicine, Cincinnati, Ohio, USA
1986-91	Toxicology Laboratory Practices, EU Faculty of Pharmacy

Technical skills:

Radioimmunoassay (RIA)
 Real time changes in intracellular calcium concentration (QM8-2005, PTI).
 Isolated vascular tissue contractility measurements (MP100, BioPac)
 Real-Time Cellular Analysis (xCelligence, RTCA MP, Roche)
 Real-Time Cellular Analysis (xCelligence, RTCA DP, Roche)
 Immunofluorescence microscopy (Olympus IX-71)
 Quantitative gene expression (LC 1.5 Roche)
 RNA interference
 Genome-wide transcription (IScan, Illumina)
 Flow cytometer (FACSCalibur, BD)

Awards:

2019	The best project award Turkish Association for Cancer Research and Control- Nov. 14-17, 2019, Antalya (Z Firtina Karagonlar, E Sariyar, M Tosun, E Erdal Bağrıyanık, PI: ZFK) “Investigation of the molecular effects of regorafenib in multicellular 3D tumor spheroids formed by sorafenib resistant cells.”
2012	The Best Poster Award, International ICOS Meeting, Isparta, Turkey
2011	Novartis (Turkey) 2009-2010 Scientific Research Award in Pharmacology (1 st prize)
2010	The Best Poster Award, International ICOS Meeting, Isparta, Turkey
2008	Novartis (Turkey) Scientific Research Support Award in Pharmacology
2007	Novartis (Turkey) 2005-2006 Scientific Research Award in Pharmacology (2 nd . Prize)
1996-97	Graduate Student Stipend Award, University of Cincinnati, College of Medicine,
1994-97	University Graduate Student Tuition Award, University of Cincinnati, College of Medicine
1991	EU Scholarship for overseas graduate education

Professional Societies:

Turkish Pharmacological Society
 Turkish Red Crescent

Publications:

1. Baris E, Portakal HS, Sezan Uydas S, Oztinen N, Hamurtekin E, Kosar M, Firtina Z and **Tosun M**. Anti-inflammatory and antioxidant effects of *Lavandula stoechas* L. on human macrophages and in silico prediction of $\alpha 7$ nicotinic acetylcholine receptor interaction. *BMC Complement Med Ther* (2026). <https://doi.org/10.1186/s12906-026-05350-1>
2. Baris E, Portakal HS, Aslan A, Firtina Karagonlar Z and **Tosun M**. Liraglutide modulates cyclooxygenase and $\alpha 7$ acetylcholine receptors: in vitro and in silico insights into its anti-inflammatory role in LPS-induced inflammation in RAW 264.7 macrophages. *Naunyn-Schmiedeberg's Arch Pharmacol*, 2025 (<https://doi.org/10.1007/s00210-025-04225-5>)

3. Baris E, Arici MA and **Tosun M**. Nicotinic acetylcholine receptor-mediated effects of varenicline on LPS-elevated prostaglandin and cyclooxygenase levels in RAW 264.7 macrophages. *Front Mol Biosci*, 2024. (doi:10.3389/fmolb.2024.1392689)
4. Baris E, Omeroglu-Simsek G, Arici MA, Gumustekin M, Kilinc O, **Tosun M**. Retrospective evaluation of COVID-19 incidence during smoking cessation treatment with varenicline. *MCBU SBED*, 2024, 11(1):31-35. (<https://doi.org/10.34087/cbusbed.1276244>)
5. Baris E, Simsek O, Uysal Yoca O, Demir AB, **Tosun M**. Effects of kynurenic acid and choline on lipopolysaccharide-induced cyclooxygenase pathway. *Turk Biochem J*, 2023. (<https://doi.org/10.1515/tjb-2023-0017>)
6. Baris E, Simsek O, Arici MA and **Tosun M**. Choline and Citicoline ameliorate oxidative stress in acute kidney injury in rats. *Bratisl Med J (Bratisl Lek Listy)* 2023, 124 (1):47-52 (doi: 10.4149/BLL_2023_007)
7. Demir AB, Benvenuto D, Karacicek B, Erac Y, Spoto S, Angeletti S, Ciccozzi M and **Tosun M**. Implications of Possible HBV-Driven Regulation of Gene Expression in Stem Cell-like Subpopulation of Huh-7 Hepatocellular Carcinoma Cell Line. *J Pers Med*, 2022, 12, 2065. (doi: 10.3390/jpm12122065)
8. Baris E, Efe H, Gumustekin H, Arici MA and **Tosun M**. Varenicline Prevents LPS-Induced Inflammatory Response via Nicotinic Acetylcholine Receptors in RAW 264.7 Macrophages. *Frontiers Mol Biosci*, 2021. (doi: 10.3389/fmolb.2021.721533)
9. Baris E, Simsek O, Efe H, Oncu S, Gelal A, Hamurtekin E, **Tosun M**, Ozbal S, Yuce Z and Arici MA. Effects of CDP-Choline and Choline on COX Pathway in LPS-Induced Inflammatory Response in Rats. *Int J Pharmacol*, 17:84-96, 2021. (doi: 10.3923/ijp.2021.84.96)
10. Karacicek B, Erac Y **Tosun M**. Functional consequences of enhanced expression of STIM1 and Orail1 in Huh-7 hepatocellular carcinoma tumor-initiating cells. *BMC Cancer*, 19:751, 2019. (doi:10.1186/s12885-019-5947-z)
11. Selli C, Erac Y, **Tosun M**. Effects of cell seeding density on real-time monitoring of anti-proliferative effects of transient gene silencing. *J Biol Res-Thessaloniki*, 23:20, 2016. (doi:10.1186/s40709-016-0057-4)
12. Erac Y, Selli C, **Tosun M**. TRPC1 ion channel gene regulates store-operated calcium entry and proliferation in human aortic smooth muscle cells. *Turk J Biol*, 40:1336-1344, 2016. (doi:10.3906/biy-1602-57)
13. Selli C, Pearce DA, Sims AH, **Tosun M**. Differential expression of store-operated calcium and proliferation-related genes in hepatocellular carcinoma cells following TRPC1 ion channel silencing. *Mol Cell Biochem*, 420(1-2):129-140, 2016. (doi: 10.1007/s11010-016-2776-0)
14. Erac Y, Selli C, **Tosun M**. Alterations of store-operated calcium entry and cyclopiazonic acid-induced endothelium-derived relaxations in aging rat thoracic aorta. *Physiol Int*, 103 (2):146–156, 2016. (doi:10.1556/036.103.2016.2.2)
15. Selli C, Erac Y, **Tosun M**. Effects of 1-(2-trifluoromethylphenyl)-imidazole (TRIM) on receptor-independent and -dependent contractile responses in rat aorta. *Turk J Med Sci*, 46:1209-1214, 2016. (doi:10.3906/sag-1502-109)
16. Selli C and **Tosun M**. Effects of cyclopiazonic acid and dexamethasone on serotonin-induced calcium responses in vascular smooth muscle cells *J Physiol Biochem* 72(2):245-53, 2016 (doi: 10.1007/s13105-016-0474-8).
17. Selli C, Erac Y, Kosova B, Erdal SE and **Tosun M**. Silencing of TRPC1 regulates store-operated calcium entry and proliferation in Huh7 hepatocellular carcinoma cells. *Biomed Pharmacother*, 71:194–200, 2015. (doi: 10.1016/j.biopha.2015.02.024)
18. Selli C, Erac Y, **Tosun M**. Simultaneous measurement of cytosolic and mitochondrial calcium levels: Observations in TRPC1-silenced hepatocellular carcinoma cells. *J Pharmacol Toxicol Methods*. 72:29-34, 2014. (doi: 10.1016/j.vascn.2014.12.004).
19. Selli C, Erac Y, **Tosun M**. Cyclopiazonic acid alters serotonin-induced responses in rat thoracic aorta. *Vascul Pharmacol*. 61(2-3):43-8, 2014. (doi: 10.1016/j.vph.2014.03.008).
20. Erac Y, Selli C, Filik P and **Tosun M**. Effects of passage number on proliferation and store-operated calcium entry in A7r5 vascular smooth muscle cells. *J Pharmacol Toxicol Methods*, 70(1):1-5, 2014 (doi.org/10.1016/j.vascn.2014.03.001)
21. Selli C, Yıldırım G, Kaymak A, Karacicek B, Ogut D, Gungor T, Erem E, Ege M, Bümen N and **Tosun M**. Introducing basic molecular biology to Turkish rural and urban primary school children via hands-on PCR and gel electrophoresis activities. *Biochem Mol Biol Educ*, 42:114–120, 2014. (doi:10.1002/bmb.20758)
22. Pritchard TJ, Bowman PS, Jefferson A, **Tosun M**, Lynch RM and Paul RJ. Na⁺-K⁺-ATPase and Ca²⁺ clearance proteins in smooth muscle: a functional unit. *Am J Physiol Heart Circ Physiol* 299: H548-H556, 2010.

23. Erac Y, Selli C, Kosova B, Akcali KC and **Tosun M**. Expression levels of TRPC1 and TRPC6 ion channels are reciprocally altered in aging rat aorta: implications for age-related vasospastic disorders. *AGE*, 32(2):223-230, 2010.
24. Erac Y, Selli C and **Tosun M**. Role of Endothelium on Cyclopiazonic Acid-induced Vascular Contractions in Rat Aorta. *Hacettepe University Journal of the Faculty of Pharmacy*. 28:35-46, 2009.
25. Selli C, Erac Y, Kosova B and **Tosun M**. Post-transcriptional silencing of TRPC1 ion channel gene by RNA interference upregulates TRPC6 expression and store-operated Ca²⁺ entry in A7r5 vascular smooth muscle cells. *Vascul Pharmacol*, 51: 96-100, 2009.
26. Ozsarlak-Sozer G, Kerry Z, Oran I, Gokce G, **Tosun M**, Bechard L, Reel B, Yasa M, Lebe B and Topçu Z. "Telomeric restriction analysis of vascular smooth muscle cells following balloon angioplasty in rabbits." *J Physiol Biochem*, 65 (3):243-250, 2009.
27. **Tosun M**, Erac Y, Selli C and Karakaya N. Sarcoplasmic-endoplasmic reticulum Ca²⁺ ATPase inhibition prevents endothelin A receptor antagonism in rat aorta. *Am J Physiol Heart Circ Physiol*. 292:H1961-H1966, 2007.
28. Kerry Z, Yasa M., Akpınar R, Sevin G, Yetik G, **Tosun M**, Özdemir N, Erhan Y, Ustunes L and Ozer, A. Effects of nifedipine on collar-induced intimal thickening and vascular reactivity in the rabbit. *J. Pharm. Pharmacol*. 51:441-447, 1999.
29. **Tosun M**, Paul RJ and Rapoport RM. Coupling of store-operated Ca²⁺ entry to contraction in rat aorta. *J Pharmacol Exp Ther*. 285:759-766, 1998.
30. **Tosun M**, Paul RJ and Rapoport RM. Role of extracellular Ca²⁺ influx via L-type and non-L-type Ca²⁺ channels in thromboxane A2 receptor-mediated contraction in rat aorta. *J Pharmacol Exp Ther*. 284:921-928, 1998.
31. **Tosun M**, Paul RJ and Rapoport RM. Intracellular Ca²⁺ Elevation and contraction due to prostaglandin F_{2α} in rat aorta. *Eur J Pharmacol*. 340:203-208, 1997.
32. **Tosun M**. "Intracellular calcium and vascular contraction: Evidence for functional compartmentalization" Ph.D. Thesis, June 1997, University of Cincinnati, College of Medicine, Department of Pharmacology and Cell Biophysics, Cincinnati, OH U.S.A.
33. **Tosun M** and Rapoport RM. Methylene blue inhibits endothelial prostacyclin release: support for prostacyclin as contracting factor. *Pharm Sci*. 2(10):503-504, 1996.
34. Zuccarello M, Boccaletti R, **Tosun M** and Rapoport RM. Role of extracellular Ca²⁺ in subarachnoid hemorrhage-induced spasm of the rabbit basilar artery. *Stroke* 27:1896-1902, 1996.
35. Ertan G, Karasulu E, Abou-Nada M, **Tosun M** and Ozer A. Sustained-release dosage form of nitrofurantoin. Part 2. *In vivo* urinary excretion in man. *J. Microencapsulation*. 11(2):137-140, 1994.
36. Berkan T, Ustunes L, Kerry Z, Karol M, **Tosun M**, Yalcinkaya C and Özer A. The effect of a single treatment with cigarette smoke on the blood levels and hemodynamic effects of propranolol in rats. *Eur. J. Drug Metabol. Pharmacokin*. 14(3):221-228, 1989.
37. **Tosun M**: The effects of verapamil, diltiazem, cinnarizine and papaverine in blood vessels of the whole rabbit ear. M.S. Thesis in Pharmacology, EU Institute of Health Sciences, Izmir, Turkey, 1989.

Scientific meetings (Oral and Poster presentations):

1. Baris E, **Tosun M**. Interaction of Choline and Kynurenic Acid in an Inflammation Model Established in RAW 264.7 Rat Macrophage Cell Cultures. (Turkish Society of Physiological Sciences, 47th Turkish Physiology Congress 1-4 November 2022, Antalya, Oral Communications) OC10. *Acta Physiol*, 237:20, 2023, e13909 (doi:10.1111/apha.13909)
2. Baris E, Simsek O, Arici M and **Tosun M**. Choline and CDP-Choline Ameliorate Oxidative Stress in Acute Kidney Injury in Rat Endotoxemia Model (Poster), 8th European Congress of Pharmacology-EPHAR 2021, (Dec. 06-08)
3. **Tosun M**. Effects of altered TRPC1 ion channel gene expression in human aortic smooth muscle cells, International Symposium on Cellular Therapy in Cardiovascular Medicine: Stem Cell Opportunity, October 30- November 1, Anadolu Hotel, Ankara, 2019.
4. **Tosun M**. Functional Implications of Altered Gene Expression Pattern of Store-Operated Calcium Channels in Liver Cancer. 2nd International Cancer and Ion Channels Congress, September 22-24, Wyndham Grand Özdilek, İzmir, 2019.
5. Demir A, Kartal-Yandım M, Fırtına-Karagonlar Z, Unay D, **Tosun M**. PP-012 Developing Research Skills in Biomedical Sciences During Undergraduate Medical Education. *Turk J Biochem*, 43(s4):22-22, 2018. Published Online: 2019-01-22 (doi:10.1515/tjb-2018-43s445)

6. Karacicek B, Erac Y, **Tosun M.** Functional Genomics Analysis of Hepatocellular Tumor-Initiating Cells. Global Biotechnology Congress, Boston, Ma, USA, July 10-13, 2017 (Regenerative Medicine, Invited Speaker)
7. Karacicek B, Erac Y, **Tosun M.** Effects of STIM1 and Orail proteins on the differentiation of hepatocellular cancer stem cell-like cells. *FEBS J*, 283(suppl.1):308-308, 2016. (doi: 10.1111/febs.13808)
8. **Tosun M.** Targeting Store-Operated Calcium Entry. 7th European Congress of Pharmacology, EPHAR2016, Military Museum and Cultural Center, Istanbul, June 26- 30, 2016. (Invited speaker)
9. Karacicek B, Erac Y, Selli C, Kosova B, **Tosun M.** Role of Endoplasmic Reticulum in phenotypical differentiation of Huh7 Hepatocellular Carcinoma Cell Lines. EMBO, EMBL Symposium: Frontiers in Stem Cells and Cancer. Heidelberg, Germany, March 29-31, 2015
10. **Tosun M.** Expressional and functional consequences of an ion channel gene in vascular smooth muscle cell. MicroRNA cancer Biomarkers and next generation sequencing techniques workshop organized for The German –Turkish Year of Science & Technology, November 4-5, 2014, Gediz University, İzmir (Invited Speaker)
11. **Tosun M.** Investigation of calcium signaling pathways and related microRNAs affected by changes in TRPC1 expression levels in human primary aortic cells. 5th International Congress on Cell Membranes and Oxidative Stress: Focus on Calcium Signaling and TRP Channels, ICOS, 9-12 Sept. 2014, Suleyman Demirel University, Isparta, Turkey (Invited speaker) *Cell Membranes Free Radic Res*, 6(1):309, 2014.
12. **Tosun M.** Functional Genomic Analysis of TRPC1 Gene Silencing in Liver Cancer. 4th International Congress on Cell Membranes and Oxidative Stress: Focus on Calcium Signaling and TRP Channels, ICOS, 26-29 Haziran 2012, Suleyman Demirel University, Isparta, Turkey. (Invited speaker), *Cell Membranes Free Radic Res*, 4(1):8, 2012)
13. Selli C, Erac Y, Kosova B, Erdal E, **Tosun M.** TRPC1 silencing suppresses proliferation of HuH-7 human hepatoma cell line. *Cell Membranes Free Radic Res*, 4(1):57, 2012
14. Erac Y, Selli C, Ballar P, Kosova B, **Tosun M.** Effects of altered TRPC1 expression in primary human aortic smooth muscle cells. 4th International Congress on Cell Membranes and Oxidative Stress: Focus on Calcium Signaling and TRP Channels, ICOS, 26-29 June 2012, Suleyman Demirel University, Isparta, Turkey.
15. Selli C, Erac Y, Kosova B, **Tosun M.** TRPC1 gene-silencing upregulates TRPC6 and store-operated calcium entry in vascular smooth muscle cells. International Postgraduate Student Meeting on Pharmaceutical Sciences (IPSMPS 2010) 24-27 June 2010, Cesme, Izmir.
16. Selli C, Erac Y, Kosova B, Erdal E, **Tosun M.** Store-operated calcium entry increases in shTRPC1-expressing vector-transfected hepatocellular carcinoma cell line. ICOS, 24-27 Haziran 2010, Suleyman Demirel University, Isparta, Turkey.
17. **Tosun M.** A therapeutic target validation in vascular aging: Gene silencing and its functional consequences. *Winter School on Frontiers in Nanomedicine and Nanobiotechnology*” Bilkent University, 10-16 January 2010, Ankara. (Invited speaker)
18. Selli C, Erac Y, Kosova B, Akcali KC and **M Tosun.** Investigation of Relationship Between TRPC Gene Expression and its Function via Gene Silencing, *Turk J Biochem*, 2008; 33.
19. Selli C, Erac Y, Kosova B, **Tosun M.** Functional consequences of TRPC1 gene-silencing in vascular smooth muscle cells. ICOS, 25-28 Haziran 2008, Suleyman Demirel University, Isparta.
20. Erac Y, Selli C, Kosova B, Akcali KC and **M Tosun.** Differential Expression of TRPC Gene Family in Aging Rat Aorta. The Biochemical Society’s Focused Meeting on Cell and Molecular Biology of TRP channels, 7-8 Sept. 2006, University of Bath, Bath, U.K.
21. Erac Y, Selli C, Aydin IT, Kosova B, Akcali KC and **Tosun M.** Expressional and functional profile of TRPC gene family in aging rat aorta. *FEBS J*. 273(1):108, 2006.
22. Paul R, Bullard D, **Tosun M**, Lynch R, Pritchard T. α -isoforms of the Na-K ATPase (NKA) & VSM function. *FEBS J*. 273(1):332, 2006.
23. **Tosun M**, Erac Y, Selli C and Karakaya N. Sarcoplasmic-endoplasmic reticulum Ca^{2+} ATPase inhibition prevents endothelin A receptor antagonism in rat aorta. *Am J Physiol Heart Circ Physiol*. 292:H1961-H1966 2007.
24. **Tosun M**, Pritchard TJ, Lynch RM and Paul RJ. Role of Capacitative Ca^{2+} Influx (CCI) in VSM expressing the α_2 -isoform of the Na^+K^+ ATPase (NKA). *FEBS J*. 273(1):343, 2006.
25. **Tosun M**, Paul, R.J. and Rapoport, R.M. Coupling of store-operated Ca^{2+} entry to contraction in rat aorta. *FASEB J*. 12:A402, 1998.
26. **Tosun M**, Paul RJ and Rapoport RM Inhibition of SR Ca^{2+} -ATPase and vascular contraction in rat aorta. XIV. National Pharmacology Meeting. Nov. 2-7, 1997, Antalya, Turkey (oral presentation).

27. **Tosun M**, Ustunes L, Lermioglu F and Ozer A. The effects of verapamil, diltiazem, cinnarizine and papaverine in blood vessels of the whole rabbit ear. 50th International Congress of F.I.P. September 3-7, 1990, Istanbul, Turkey.

Research Projects:

Ongoing:

1. Functional Genomic Analysis of Varenicline's Cholinergic Anti-Inflammatory Pathway-Mediated Effects and Pharmacotherapeutic Target Validation in a Rat Endotoxemia Model. TUBITAK 225S489 (1.206.463,00 TL), Nov 7 2025- 2027 (3051 Career development project to E Baris, PI) Advisor
2. Investigation of the Interaction between the Mechanosensitive TRPV4 Calcium Channel and the Cholinergic Anti-inflammatory Pathway on Osteogenic Differentiation in a Spheroid Model (IEU BAP 2024-09, PI: M Tosun), 2024-2026.
3. Evaluation of Cholinergic Anti-inflammatory Pathway Activation in Patient-derived In Vitro Osteoarthritis Models and an In Vivo Rat Model TUBITAK 124S435 (COST, European Cooperation in Science and Technology, PI: Z Firtina) 2024-2027, Investigator.
4. The Effect of Mycophenolate Mofetil and Human Adipose Tissue-Derived Mesenchymal Stem Cells on the Proliferation of CD4(+) T Regulatory Cells in an In Vitro Alloimmunization Model, 2023-2025, 24 months (2024-TDU-TIPF-0005, PI: T Temiz), Investigator.
5. The Effect of Tacrolimus (FK506) and Human Adipose Tissue-Derived Mesenchymal Stem Cells on the Proliferation of CD4(+) T Regulatory Cells in an In vitro Alloimmunization Model, 2023-2025, 24 months (2024-TDU-TIPF-0004, PI: B Karadas), Investigator.

Completed:

1. Alpha7 Nicotinic Acetylcholine Receptor Mediated Effects of Varenicline on Cyclooxygenase and Prostaglandins in an In Vitro Inflammation Model Induced by Lipopolysaccharide in Raw 264.7 Macrophage Cultures. TUBITAK 113S125 1.4.2023-1.4.2024, 12 Months (PI: Elif Barış), Investigator
2. Development of Personalized Chemotherapy Efficacy Test in Colorectal Carcinoma Tumoroids, TUBITAK TEYDEP 119823 (PI: Esra Erdal, March 2021- (18 Months), Investigator
3. Investigation of regorafenib response of sorafenib-resistant cells in a multicellular 3D Tumor spheroid model created with sorafenib-resistant cells and parental cells TUBITAK 1001 118S542 (PI: Zeynep Firtina Karagonlar), Advisor
4. The Effect of Choline on Endotoxin-Induced Sepsis Model in RAW264.7 Macrophage Cells via $\alpha 7$ Nicotinic Acetylcholine Receptors. Izmir University of Economics Scientific Research Projects 2019-03, Nov. 2019- Sept. 2021, Primary Investigator (PI)
5. Effects of choline on COX expression and some inflammatory parameters in LPS-induced endotoxemic rats Dokuz Eylul University Scientific Research Projects 2018.KB.SAG.055 (PI: Aylin Arici), Investigator, Nov. 2018-2021, Investigator
6. $\alpha 7$ nicotinic acetylcholine receptor-mediated effects of varenicline on inflammation and migration processes in lipopolysaccharide-induced in vitro sepsis model in RAW 264.7 macrophage cell cultures TUBITAK 1002- 119S936, PI, Feb. 2020- March 2021
7. Functional genomics analysis of store-operated Ca^{2+} entry in phenotypical differentiation of Huh7 human hepatocellular carcinoma cell lines, TUBITAK 113S399, 2013-2017 (PI)
8. Functional genomics analysis of miRNA expressional profile associated with post-transcriptional control of TRPC ion channel genes in human primary aortic smooth muscle cells TUBITAK 110S096, 2015. (PI)
9. Investigation of functional expression profile of TRPC gene family in carcinogenesis via Post-Transcriptional Gene Silencing. TUBITAK 108S072, 2011. (PI)
10. Pharmacological and molecular approaches in controlling Capacitative Calcium Entry in vasospasm development. TUBITAK 104S568, September 2007. (PI)
11. The role of differential expression pattern of *Trpc* gene family in rat vascular smooth muscle during aging TUBITAK 103S176, June 2007. (PI)
12. Investigation of telomerase activity and maintenance in vascular smooth muscle cell proliferation developed following balloon angioplasty in rabbit iliac artery TUBITAK 104S058, 2007. (Co- PI)

(TUBITAK: Scientific and Technological Research Council of Turkey)

Patents:

Title: Repurposing Varenicline as an Antiinflammatory Agent with its Suppressor Effects on Inflammatory Cytokines; Submission #: 050421; Application #: PCT/TR2022/050421; Submission date: May 15, 2022

Short sabbaticals as Research Scholar

1. 2005 (2 mo.) University of Cincinnati, College of Medicine, Department of Molecular and Cellular Physiology, Cincinnati, U.S.A., (Two photon molecular imaging applications in isolated intact mouse bladder.)
2. 2001 (3 mo.) University of Cincinnati, College of Medicine, Department of Molecular and Cellular Physiology, Cincinnati, U.S.A., (Alterations in contractile proteins in porcine coronary artery organ culture: Hypoxic coronary vasodilatation.)

Graduate students:

1. Ph.D.: Investigation of functional expression profile of TRPC ion channels via post-transcriptional gene silencing, Cigdem Selli, 2011.
2. M.S.: Functional consequences of differential expression patterns of serotonin and SERCA genes in A7r5 vascular smooth muscle cell lines, Pelin Filik, 2009.
3. Ph.D.: The role of differential expression pattern of *Trpc* gene family in vascular smooth muscle responses in aging rat aorta, Yasemin Erac, 2007.
4. M.S.: The role of vascular SERCA inhibition on serotonin responses: an evidence for “secretion-like” coupling, Cigdem Selli, 2005.
5. M.S.: Vascular SERCA inhibition and loss of competitive endothelin receptor antagonism, Nuri Karakaya, 2005.
6. M.S.: Comparative investigation of dose-response relationships of vasoactive substances from *in vitro* and *in situ* models, Yasemin Tulum, 2001.

Other: Courses and workshops

1. EMBL advanced course on whole transcriptome data analysis, European Molecular Biology Laboratory, Heidelberg, Germany, June 25-27, 2013
2. Condensed Bioinformatics Applications, April 5-7, 2012, DONE Genetics Bioinformatics, Istanbul, Turkey
3. EBI Bioinformatics Roadshow, October 12-14 2010 Dokuz Eylül University, Health Sciences Institute, Izmir, Turkey.
4. European Union “Bioentrepreneurship Boot Camp”, October 20-22, 2008, EBILTEM, EU Izmir Turkey.
5. “Patch Clamp” Workshop. 2. Congress on International ion channels and oxidative stress. Suleyman Demirel University, Isparta, Turkey, June 2008.

Laboratory certificates

TS EN ISO/IEC 17025 Method Validation for Testing Laboratories, Measurement Uncertainty, Accreditation Standard, Strengthening the Quality Infrastructure in Turkey, 2012. European Union Central Finance and Contracts Unit (Project #TR0702.12.01/001)

TS EN ISO/IEC 17025 Measurement Uncertainty for Testing Laboratories, Accreditation Standard, ISO 17025, European Union Central Finance and Contracts Unit (Project #TR0702.12.01/001)