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Education Information

Doctorate, Istanbul University, Institute Of Graduate Studies In Sciences, Biyoloji/ Moleküler Biyoloji, Turkey 2017 - 2023

Postgraduate, Istanbul University, Institute of Graduate Studies In Sciences, Biyoloji / Moleküler Biyoloji Anabilim Dalı, Turkey 2013 - 2017

Undergraduate, Istanbul University, Faculty Of Science, Biyoloji, Turkey 2009 - 2013

Research Areas

Life Sciences, Molecular Biology and Genetics, Natural Sciences

Academic Titles / Tasks

Research Assistant PhD, Istanbul University, Faculty Of Science, Department Of Biology, 2016 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Preconditioning of human umbilical cord mesenchymal stem cells with deferoxamine potentiates the capacity of the secretome released from the cells and promotes immunomodulation and beta cell regeneration in a rat model of type 1 diabetes**
Isildar B., Ozkan S., ŞAHİN H., ERÇİN M., Gezginci-Oktayoglu S., KOYUTÜRK M.
International Immunopharmacology, vol.129, 2024 (SCI-Expanded)
- II. **Investigation of conditioned medium properties obtained from human umbilical cord mesenchymal stem/stromal cells preconditioned with dimethyloxalylglycine in a correlation with ultrastructural changes**
Olcár H. N., Isildar B., Ozkan S., ERÇİN M., Gezginci-Oktayoglu S., KOYUTÜRK M.
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- III. **UR-144, synthetic cannabinoid receptor agonist, induced cardiomyoblast toxicity mechanism comprises cytoplasmic Ca²⁺ and DAPK1 related autophagy and necrosis**
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TOXICOLOGY MECHANISMS AND METHODS, vol.33, no.1, pp.56-64, 2023 (SCI-Expanded)
- IV. **Therapeutic potential of conditioned medium obtained from deferoxamine preconditioned umbilical cord mesenchymal stem cells on diabetic nephropathy model**
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STEM CELL RESEARCH & THERAPY, vol.13, no.1, 2022 (SCI-Expanded)

- V. **2D and 3D cultured human umbilical cord-derived mesenchymal stem cell-conditioned medium has a dual effect in type 1 diabetes model in rats: immunomodulation and beta-cell regeneration**
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- VI. **Metformin induces mitochondrial remodeling and differentiation of pancreatic progenitor cells into beta-cells by a potential mechanism including suppression of the T1R3, PLCβ2, cytoplasmic Ca⁺², and AKT.**
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Journal of physiology and biochemistry, vol.78, no.4, pp.869-883, 2022 (SCI-Expanded)
- VII. **Exendin-4 inhibits small intestinal glucose sensing and absorption through repression of T1R2/T1R3 sweet taste receptor signalling in streptozotocin diabetic mice.**
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- VIII. **Aspartame induces cancer stem cell enrichment through p21, NICD and GLI1 in human PANC-1 pancreas adenocarcinoma cells**
Gezginci-Oktayoglu S., Ercin M., Sancar S., Celik E., Koyutürk M., Bolkent S., Bolkent S.
FOOD AND CHEMICAL TOXICOLOGY, vol.153, 2021 (SCI-Expanded)
- IX. **Tub and beta-catenin play a key role in insulin and leptin resistance-induced pancreatic beta-cell differentiation**
Ercin M., Sancar-Bas S., Bolkent S., Gezginci-Oktayoglu S.
BIOCHIMICA ET BIOPHYSICA ACTA-MOLECULAR CELL RESEARCH, vol.1865, no.12, pp.1934-1944, 2018 (SCI-Expanded)
- X. **4-Methylcatechol prevents streptozotocin-induced acute kidney injury through modulating NGF/TrkA and ROS-related Akt/GSK3 beta/beta-catenin pathways**
Gezginci-Oktayoglu S., Coskun E., Ercin M., Bolkent S.
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- XI. **The Role of Epigenetic Regulation and Pluripotency-Related MicroRNAs in Differentiation of Pancreatic Stem Cells to Beta Cells**
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- XII. **Exendin-4 partly ameliorates - hyperglycemia-mediated tissue damage in lungs of streptozotocin-induced diabetic mice**
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- XIII. **Vitamin U has a protective effect on valproic acid-induced renal damage due to its anti-oxidant, anti-inflammatory, and anti-fibrotic properties.**
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Refereed Congress / Symposium Publications in Proceedings

- I. **İnsan göbek kordonu mezenkimal kök hücrelerinin deferoksamin ile ön koşullandırılmasıyla elde edilen şartlandırılmış medyumun STZ ile indüklenen sıçan diyabet modeli üzerine etkileri**
Oktayoğlu S., Işıldar B., Erçin M., Koyutürk M.
26. Ulusal Elektron Mikroskopi Kongresi, Eskişehir, Turkey, 20 - 23 September 2023, pp.52-53
- II. **Mesenchymal Stem/Stromal Cells: EVALUATION OF MESENCHYMAL STEM CELLS PROCONDITIONED WITH DIMETHYLOXALYLGLYCINE WITH RESPECT TO CHANGES IN CELLULAR AND SECRETORY PROFILES**
Işıldar B., Erçin M., Oktayoğlu S., Koyutürk M.

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III. Mesenchymal Stem/Stromal Cells: THERAPEUTIC EFFECTS OF CONDITIONED MEDIUM FROM HUMAN UMBILICAL CORD MESENCHYMAL STEM CELLS WITH/WITHOUT DEFEROXAMINE-PRECONDITIONING ON THE SEVERE TYPE 1 DIABETES MODEL IN RATS

Işıldar B., Erçin M., Oktayoğlu S., Koyutürk M.

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IV. Administration of Exendin-4 to Diabetic Mice Reduces Blood Glucose Levels By Supressing Sweet Taste Receptor Signaling

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VII. Tıbbi Biyoloji ve Genetik Kongresi, İstanbul, Turkey, 28 - 31 October 2021, pp.137-138

V. Aspartame Induces Cancer Stem Cell Enrichment Through P21, NICD And GLI1 In Human Pancreas Adenocarcinoma Cells

Erçin M., Sancar S., Çelik E., Koyutürk M., Bolkent H. S., Oktayoğlu S., Bolkent Ş.

İstinye Üniversitesi Kök Hücre ve Doku Mühendisliği Sempozyumu, İstanbul, Turkey, 27 - 28 February 2021, pp.91-92

VI. Metformin Induces Mitochondrial Remodeling and Differentiation of Pancreatic Progenitor Cells into Beta-Cells by Suppressing T1R3/PLCβ2/Ca+2/CAMKK2/LKB1/AKT Pathway

Çelik E., Erçin M., Bolkent Ş., Oktayoğlu S.

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VII. THE EFFECT OF INSULIN AND LEPTIN RESISTANCE ON PANCREATIC BETA-CELL DIFFERENTIATION

Erçin M., Oktayoğlu S.

5th BBDC-JOSLIN-UCPH conference Prevention of Beta Cell Dysfunction in T1D and T2D: Role of Inter-organ Communication, Kobenhavn, Denmark, 26 - 27 October 2018, pp.25

VIII. Exendin-4 impairs intestinal tissue damage through its proliferative and anti-fibrotic effects in diabetic rats

Ercin M., Gezginci-Oktayoglu S., Bolkent S.

40th Congress of the Federation-of-European-Biochemical-Societies (FEBS) - The Biochemical Basis of Life, Berlin, Germany, 4 - 09 July 2015, vol.282, pp.152-153

IX. Reversing effect of vitamin U on valproic acid-induced renal damage through its antioxidant, anti-inflammatory and anti-fibrotic properties

Gezginci-Oktayoglu S., Turkyilmaz I. B., Ercin M., Yanardag R., Bolkent S.

FEBS EMBO 2014 Conference, Paris, France, 30 August - 04 September 2014, vol.281, pp.162

Supported Projects

OKTAYOĞLU S., ERÇİN M., Project Supported by Higher Education Institutions, Pankreatik BetaHücre

Dediferensiyasyonunun Moleküler Mekanizmalarının Endoplazmik Retikulum-Mitokondri Ekseninde Araştırılması, 2022 - Continues

SANCAR S., BOLKENT H. S., ÖZDEN S., BOLKENT Ş., ERÇİN M., OKTAYOĞLU S., Project Supported by Higher Education Institutions, KANSER KÖK HÜCRELERİNDE EPİGENETİK DEĞİŞİKLİKLER YOLU İLE YENİDEN PROGRAMLANMA ÜZERİNE ROS'UN ETKİLERİNİN ARAŞTIRILMASI, 2015 - Continues

OKTAYOĞLU S., ERÇİN M., Project Supported by Higher Education Institutions, Tip 2 Diyabet Gelişiminde Pankreatik Beta-Hücre Fonksiyon Kaybının Araştırılması, 2019 - 2023

OKTAYOĞLU S., ÇELİK E., SANCAR BAŞ S., ERÇİN M., Project Supported by Higher Education Institutions, Moleküler Biyoloji Araştırmalarında Simple Western Yöntemi İle Proteomik Analizlerin Yapılabilmesi İçin Gerekli Alt Yapının Geliştirilmesi, 2018 - 2022

OKTAYOĞLU S., ERÇİN M., Project Supported by Higher Education Institutions, Antisens Oligonukleotid Kullanımı ile Tub Ekspresyonunun İn Vitro Baskılanması, 2018 - 2019

OKTAYOĞLU S., KOYUTÜRK M., BOLKENT H. S., BOLKENT Ş., SANCAR BAŞ S., ERÇİN M., ÇELİK E., Project Supported by

Higher Education Institutions, Yapay Tatlandırıcıların Kanser Kök Hücre Karakteri Üzerindeki Olası Rolü ile İlişkili Moleküler Mekanizmaların Araştırılması, 2015 - 2018
OKTAYOĞLU S., ERÇİN M., Project Supported by Higher Education Institutions, Pankreatik β -Hücre Farklılaşmasında miRNA'ların Rolü, 2015 - 2016

Patent

Oktayoğlu S., Çoşkun E., Erçin M., BETA HÜCRE OLUŞUMUNU SAĞLAMAK İÇİN BAZI MİKRO RNA'LARIN KULLANILMASI , Patent, CHAPTER A Human Needs, The Invention Registration Number: TR 2016/20292B , Standard Registration, 2016, 2023

Oktayoğlu S., Çoşkun E., Erçin M., İNSÜLİN İLE İLİŞKİLİ HASTALIKLARIN TANISINDA BAZI MİKRO RNA'LARIN KULLANILMASI (BAŞVURU), Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2016/20274 , Standard Registration, 2016

Oktayoğlu S., Çoşkun E., Erçin M., İNSÜLİN İLE İLİŞKİLİ HASTALIKLARIN TEDAVİSİNDE BAZI MİKRO RNA'LARIN KULLANILMASI , Patent, CHAPTER A Human Needs, The Invention Registration Number: TR 2016/20327B , Standard Registration, 2016, 2023

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