Asst. Prof. ZEYNEP BETTS

Personal Information

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International Researcher IDs
ORCID: 0000-0003-2391-7543
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Yoksis Researcher ID: 103720

Education Information

Doctorate, The University of Manchester, Faculty Of Life Sciences, United Kingdom 2008 - 2012
Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Biyoteknoloji (Yl) (Tezli), Turkey 2005 - 2007
Undergraduate, Ankara University, Fen Fakültesi, Biyoloji Bölümü, Turkey 2001 - 2005

Dissertations

Doctorate, Assessment of the influence of chromatin elements on stability of recombinant protein production in amplified CHO cells, The University Of Manchester, Faculty Of Life Sciences, 2012
Postgraduate, Polymerase chain reaction (PCR) for detection of Borrelia burgdorferi sensu lato, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Biyoteknoloji (Yl) (Tezli), 2007

Research Areas

Bioinformatics, Biotechnology, Molecular Biology and Genetics

Academic Titles / Tasks

Assistant Professor, Kocaeli University, Fen Edebiyat Fakültesi, Biyoloji, 2017 - Continues
Research Assistant, Kocaeli University, Biyoloji Bölümü, 2013 - 2017

Academic and Administrative Experience

Erasmus Coordinator, Kocaeli University, Fen Edebiyat Fakültesi, Biyoloji, 2014 - Continues

Courses

Microbiology II Lab, Undergraduate, 2019 - 2020
Cell Cloning, Undergraduate, 2019 - 2020

Advanced Recombinant DNA Technology, Postgraduate, 2019 - 2020
Genetics II, Undergraduate, 2019 - 2020
Immunology, Undergraduate, 2019 - 2020
General Biology I, Undergraduate, 2019 - 2020
Genetics Lab, Undergraduate, 2019 - 2020
Genetics I, Undergraduate, 2019 - 2020
Hayvan Hücre Kültürü Teknolojileri, Postgraduate, 2019 - 2020
Chromatograohic Methods Purification of Natural Substances, Undergraduate, 2019 - 2020

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Long term culture promotes changes to growth, gene expression, and metabolism in CHO cells that are independent of production stability**
Torres M., BETTS Z., Scholey R., Elvin M., Place S., Hayes A., Dickson A. J.
Biotechnology and Bioengineering, vol.120, no.9, pp.2389-2402, 2023 (SCI-Expanded)

II. **Investigation of the combined cytotoxicity induced by sodium butyrate and a flavonoid quercetin treatment on MCF-7 breast cancer cells**
BETTS Z., Deveci Ozkan A., YÜKSEL B., Alimudin J., AYDIN D., AKSOY Ö., Yanar S.
Journal of Toxicology and Environmental Health - Part A: Current Issues, vol.86, no.22, pp.833-845, 2023 (SCI-Expanded)

III. **Anticancer Properties of Eisenia Foetida Proteins in Prostate Cancer Cells In Vitro**
Ozkan A. D., Eskiler G. G., SARIHAN M., Kazan N., AKSOY Ö., YÜKSEL B., BETTS Z.
International Journal of Peptide Research and Therapeutics, vol.28, no.4, 2022 (SCI-Expanded)

IV. **Evaluation of the antioxidative and genotoxic effects of sodium butyrate on breast cancer cells**
Yüksel B., Deveci Ozkan A., Aydın D., Betts Z.
Saudi Journal of Biological Sciences, vol.29, pp.1394-1401, 2022 (SCI-Expanded)

V. **Protective effect of Eisenia foetida coelomic fluid against oxidative damage in human endothelial cells**
Kilciler Y., Ozkan A. D., BETTS Z.
TOXICOLOGICAL AND ENVIRONMENTAL CHEMISTRY, vol.104, no.2, pp.307-320, 2022 (SCI-Expanded)

VI. **In vitro chemo-protective effect of Eisenia foetida coelomic fluid against histone deacetylase inhibitor-induced oxidative toxicity in breast cancer cells**
Ozkan A. D., Alimudin J., Kilciler Y., YÜKSEL B., AKSOY Ö., BETTS Z.
INTERNATIONAL JOURNAL OF ENVIRONMENTAL HEALTH RESEARCH, vol.33, no.12, pp.1728-1737, 2022 (SCI-Expanded)

VII. **Metabolic profiling of Chinese hamster ovary cell cultures at different working volumes and agitation speeds using spin tube reactors**
Torres M., Elvin M., Betts Z., Place S., Gaffney C., Dickson A.
Biotechnology Progress, pp.3099-3118, 2020 (SCI-Expanded)

VIII. **Improved CHO Cell Line Stability and Recombinant Protein Expression During Long-Term Culture**
BETTS Z., Dickson A. J.
HETEROLOGOUS PROTEIN PRODUCTION IN CHO CELLS: METHODS AND PROTOCOLS, vol.1603, pp.119-141, 2017 (SCI-Expanded)

IX. **Ubiquitous Chromatin Opening Elements (UCOEs) effect on transgene position and expression stability in CHO cells following methotrexate (MTX) amplification**
Betts Z., Dickson A. J.
BIOTECHNOLOGY JOURNAL, vol.11, no.4, pp.554-564, 2016 (SCI-Expanded)

X. **Assessment of UCOE on Recombinant EPO Production and Expression Stability in Amplified Chinese Hamster Ovary Cells**
Betts Z., Dickson A. J.

MOLECULAR BIOTECHNOLOGY, vol.57, no.9, pp.846-858, 2015 (SCI-Expanded)

XI. **Evaluating the interaction between UCOE and DHFR-linked amplification and stability of recombinant protein expression**
Betts Z., Croxford A. S., Dickson A. J.
BIOTECHNOLOGY PROGRESS, vol.31, no.4, pp.1014-1025, 2015 (SCI-Expanded)

XII. **Seroprevalence of bovine leptospirosis in Kayseri, Turkey and detection of leptospires by polymerase chain reaction**
GÜMÜŞSOY K. S., Ozdemir V., AYDIN F., Asian O., Atabek E., lea T., Dogan H. O., Duman Z., ÖZTÜRK A.
Journal of Animal and Veterinary Advances, vol.8, no.6, pp.1222-1229, 2009 (SCI-Expanded)

Articles Published in Other Journals

I. **DETERMINATION OF THE EFFECT OF RUTIN ON EPITHELIAL TO MESENCHYMAL TRANSITION IN PROSTATE CANCER CELLS**
Bal E., ÖZKAN A. D., Betts Z.
Acta Medica Nicomedia, vol.6, no.1, pp.131-136, 2023 (Peer-Reviewed Journal)

Books & Book Chapters

I. **Improved CHO Cell Line Stability and Recombinant Protein Expression During Long-Term Culture**
BETTS Z., DICKSON A. J.
in: Heterologous Protein Production in CHO Cells, Paula Meleady, Editor, Springer, New-York, pp.119-141, 2017

Refereed Congress / Symposium Publications in Proceedings

I. **Stability of recombinant protein production in CHO cell lines: A molecular approach**
BETTS Z., Place S., DICKSON A. J.
BioProNET 6th Annual Science Meeting, 3 - 04 June 2019

II. **Molecular Mechanism of rekombinant protein production instability**
BETTS Z., Ramberg V., Barsoum E., Ingrid L., Smith D., DICKSON A. J., Place S.
26th ESACT Meeting, 5 - 08 May 2019

III. **Instability in CHO cells: Diagnosis and Cure**
BETTS Z., Place S., DICKSON A. J.
BioProNET 5th Annual Science Meeting, 10 - 11 October 2018

IV. **Effect of Sodium Butyrate on the Surrounding Chromatin Environment in AMplified CHO cells**
BETTS Z., Alan J D.
International Conference on Biochemistry and Molecular Biology, Paris, France, 22 - 23 April 2015

V. **Effect of transgene location on productivity and stability of recombinant protein expression**
BETTS Z., Alan J D.
European Federation of Biotechnology, Focus on Frontiers in Industrial Biotechnology, Londrina, Brazil, 17 November 2014 - 19 November 2013

VI. **Sodyum butiratin amplifiye edilmis CHO hucrelerinde rekombinant protein ekspresyonuna etkisi**
BETTS Z., Alan J D.
22. Ulusal Biyoloji kongresi, Eskişehir, Turkey, 23 - 27 June 2014

VII. **Stability of recombinant protein production in amplified CHO cells**
BETTS Z., DICKSON A. J., Croxford A. S.
22nd European Society for Animal Cell Technology Meeting, Viyana, Austria, 15 - 18 May 2011

VIII. **Stability of recombinant protein production in Chinese Hamster Ovary Cells**

BETTS Z., Croxford A. S., DICKSON A. J.
20th Annual Conference ESACT-UK, UK Society for Cell Culture and Biotechnology, Loughborough, United Kingdom, 6 - 07 January 2010

IX. **Stability of recombinant protein production in amplified Chinese hamster ovary cells**
BETTS Z., DICKSON A. J., Croxford A. S.
9th Conference on Protein Expression in Animal Cells, Jackson Hole, United States Of America, 19 - 23 September 2009

Metrics

Publication: 24
Citation (WoS): 84
Citation (Scopus): 83
H-Index (WoS): 6
H-Index (Scopus): 5

Scholarships

UKRI BBSRC Flexible Talent Mobility Account, Other International Organizations, 2019 - 2019
2219-International postdoctoral fellowship, TUBITAK, 2018 - 2019
Yurt Dışı Doktora Bursu, Ministry of Education, 2008 - 2012
Yurt İçi Yüksek Lisans Bursu, TUBITAK, 2005 - 2007
Lisans Eğitim Bursu, TUBITAK, 2002 - 2005