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**Bölüm** : Biomedikal Mühendisliği Bölümü

**Kişisel Akademik Bilgiler**

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**Doç. Dr. Açelya Yılmaz Aktuna**

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**Eğitim ve Akademik Kariyer**

<b>Dr. Araştırma Görevlisi</b>	Ankara Üniversitesi, Fen Fakültesi, Biyoloji Bölümü, Ankara, Türkiye Temmuz 2013- Şubat 2015
<b>Doktora Sonrası Araştırmacı</b>	University College London, (UCL) Eczacılık Fakültesi, Londra, İngiltere. Şubat 2012- Mart 2013
<b>Ph.D.</b>	University College London, (UCL) Eczacılık Fakültesi, Londra, İngiltere. Ekim 2008- Şubat 2012
<b>M.Sc.</b>	Nottingham Üniversitesi, Moleküler Tıp Bilimleri Okulu, Nottingham, İngiltere. Kanser İmmünoterapisi (Yüksek Şeref) Eylül 2007 – Ağustos 2008
<b>B.Sc.</b>	Orta Doğu Teknik Üniversitesi, Biyolojik Bilimler Bölümü, Ankara, Türkiye (Yüksek Şeref, Bölüm Birincisi) Eylül 2003 – Haziran 2007

**BİLİMSEL PROJELER**

- Avrupa Birliği Araştırma Projesi- Yürütücü, 2016- 2019, Characterization of Graphene immune impacts through omics approaches and genotoxic analysis, Ankara University, Turkey (FlagERA- Joint Translational Call).
- Araştırma Projesi- Yürütücü, 2014- 2017, Hücre programlamanın kanser tedavisi olarak kullanılması, Ankara Üniversitesi, Türkiye (TÜBİTAK- Kariyer Geliştirme Projesi- 113S897).
- Araştırma Projesi, 2012- 2013, Developing novel miRNA vectors for gene therapy applications, Nanotıp Laboratuvarı, UCL Eczacılık Fakültesi, İngiltere.
- Araştırma Projesi, 2012- 2013, Investigating the role of autophagy on nucleic acid based gene delivery, Nanotıp Laboratuvarı, UCL Eczacılık Fakültesi, İngiltere.
- Araştırma Projesi, 2011- 2013, Derivation of induced pluripotent stem cells in vitro and in vivo by novel gene delivery vectors, Nanotıp Laboratuvarı, UCL Eczacılık Fakültesi, İngiltere.

- PhD Projesi, 2008-2012, Artificial Lipid Envelopment of Adenovirus for Safe and Efficient Gene Delivery, Prof. Kostas Kostarelos danışmanlığında, Nanotıp Laboratuvarı, UCL Eczacılık Fakültesi, İngiltere.
- MSc Projesi, 2008 - Expression of IL-17 in different tumour microenvironments, Dr Andrew Jackson danışmanlığında, Nottingham Üniversitesi, İngiltere.
- BSc Bitirme Projesi, 2007 - In vitro cancer therapy using cationic liposomes containing cisplatin, Prof. Vasıf Hasırcı danışmanlığında, Orta Doğu Teknik Üniversitesi, Türkiye.

## HAKEMLİ DERGİLERDE YAYIMLANAN MAKALELER

1. GURCAN C, TAHERI H, BIANCO A, DELOGU LG, **YILMAZER A\***. A closer look at the genotoxicity of graphene based materials. *Submitted to Journal of Physics: Materials. Special Issue - Women in Graphene (Invited review). In press.*
2. GAZZI A, FUSCO L, KHAN A, VITALE F\*, **YILMAZER A\***, DELOGU L G\*. Photodynamic therapy based on graphene and MXene in cancer theranostics. *Frontiers in Bioengineering and Biotechnology. (Invited review). In press.*
3. KILIC P, BAY M, YILDIRIM Y, COSKUN O, SEKER S, BAYDIN P, LALEGUL ULKER O, PARMAKSIZ M, CUBUKCUOGLU DENIZ G, **YILMAZER A**, DALVA K, ELCIN AE, AKCALI KC, ILHAN O, GURMAN G. A CD34+ Cell Enrichment Protocol of Hematopoietic Stem Cells in a Well-Established Quality Management System. *Cells Tissues Organs.* 2019;207(1):15-20.
4. CASAJUS PELEGAY E, PUZZO F, **YILMAZER A\***, CAGIN U. Targeting Mitochondrial Defects to Increase Longevity in Animal Models of Neurodegenerative Diseases. *Adv Exp Med Biol.* 2019;1134:89-110.
5. TAHERI H, CAGIN U, **YILMAZER A\***(2019) Reprogramming of Human Melanocytes and Melanoma Cells with Yamanaka Factors. *Methods in Molecular Biology.* 1916:249-261.
6. DE LÁZARO I, **YILMAZER A** et al. (2019) Non-viral, Tumor-free Induction of Transient Cell Reprogramming in Mouse Skeletal Muscle to Enhance Tissue Regeneration. *Molecular Therapy.* S1525-0016(18)30503-3.
7. **YILMAZER A\*** (2018) Evaluation of cancer stemness in breast cancer and glioblastoma spheroids in vitro. *3Biotech,* 8(9):390
8. **YILMAZER A\*** (2018) Tendency of K562 chronic myeloid leukemia cells towards cell reprogramming. *Turkish Journal of Hematology,* 35(4): 260–264.
9. AYDIN T, GURCAN C, TAHERI H, **YILMAZER A\*** (2018) Graphene Based Materials in Neural Tissue Regeneration. *Adv Exp Med Biol.* 1107:129-142.
10. **YILMAZER A\*** (2017) Cancer cell lines involving cancer stem cell populations respond to oxidative stress. *Biotechnology Reports,* Available online 23 November 2017
11. **YILMAZER A\***, TAHERI H, CAN A (2017). Efficient transduction of melanoma cells with Sendai viralvectors. *Turkish Bulletin of Hygiene and Experimental Biology,* 74(2), 113-120., Doi: 10.5505/TurkHijyen.2017.98705
12. **YILMAZER A\***, TAHERI H (2017). Reprogramming human melanocytes and melanoma cells with Yamanaka factors. *Hacettepe Journal of Biology and Chemistry,* Doi: 10.15671/HJBC.2017.164
13. YENER İLÇE B, CAGIN U, **YILMAZER A\*** (2017). Cellular reprogramming: a new way to understand aging mechanisms. *Wiley Interdisciplinary Reviews: Developmental Biology,* Doi: 10.1002/wdev.308
14. ÇELİKKAN F T, **YILMAZER A**, GÜNGÖR ORDUERİ N E, CAN A. (2017) A Glance at the 2016 Guidelines for Stem Cell Research and Clinical Translation by International Society of Stem Cell Research (ISSCR). *J Med Ethics Law Hist-Special Topics* 2017;3(2):61-73.
15. TERALI K, **YILMAZER A\*** (2016). New surprises from an old favourite: The emergence of telomerase as a key player in the regulation of cancer stemness. *Biochimie,* 121, 170-178., Doi: 10.1016/j.biochi.2015.12.001
16. **YILMAZER A**, DE LÁZARO I, TAHERI H (2015). Reprogramming cancer cells: A novel approach for cancer therapy or a tool for disease modelling. *Cancer Letters,* 369(1), 1-8., Doi: 10.1016/j.canlet.2015.06.027
17. **YILMAZER A**, BOWEN T, KOSTAS K (2014). Development of Dual Activity Vectors by Co Envelopment of Adenovirus and SiRNA in Artificial Lipid Bilayers. *PLoS ONE,* 9(12), 114985, Doi: 10.1371/journal.pone.0114985
18. DE LAZARO I, BUSSY CYRILL, **YILMAZER A**, JACKSON MS, HUMPHREYS N, KOSTARELOS K (2014). Generation of induced pluripotent stem cells from virus free in vivo reprogramming of BALB c mouse liver cells. *Biomaterials,* 35(29), 8312-8320., Doi: 10.1016/j.biomaterials.2014.05.086

19. DE LAZARO I, **YILMAZER A**, KOSTARELOS K (2014). Induced pluripotent stem iPS cells A new source for cell based therapeutics. Journal of Controlled Release, 185, 37-44., Doi: 10.1016/j.jconrel.2014.04.011
20. **YILMAZER A**, DE LAZARO I, BUSSY C, KOSTARELOS K (2013). In vivo Reprogramming of Adult Somatic Cells to Pluripotency by Overexpression of Yamanaka Factors. Journal of Visualized Experiments (82), Doi: 10.3791/50837
21. **YILMAZER A**, DE LAZARO I, BUSSY C, KOSTARELOS K (2013). In Vivo Cell Reprogramming towards Pluripotency by Virus Free Overexpression of Defined Factors. PLoS ONE, 8(1), 54754, Doi: 10.1371/journal.pone.0054
22. **YILMAZER A**, AL-JAMAL W T, VAN DEN BOSSCHE J, KOSTARELOS K (2013). The effect of artificial lipid envelopment of Adenovirus 5 (Ad5) on liver de targeting and hepatotoxicity. Biomaterials, 34(4), 1354-1363., Doi: 0.1016/j.biomaterials.2012.10.05
23. VAN DEN BOSSCHE J, AL-JAMAL WT, **YILMAZER A**, BIZZARRI E, BOWEN T, KOSTARELOS K (2011). Intracellular trafficking and gene expression of pH sensitive artificially enveloped adenoviruses in vitro and in vivo. Biomaterials, 32(11), 3085-3093., Doi: 10.1016/j.biomaterials.2010.12.043
24. AL-JAMAL K T, TOMA F M, **YILMAZER A**, ALIBOUCKETTA H, NUNES A, HERRERO MA, TIAN B, EDDAOUDI A, ALJAMAL W T, BIANCO A, PRATO M, KOSTARELOS K (2010). Enhanced cellular internalization and gene silencing with a series of cationic dendron multiwalled carbon nanotube siRNA complexes. The FASEB Journal, 24(11), 4354-4365., Doi: 10.1096/fj.09-141036
25. AL-JAMAL K T, ALJAMAL W T, AKERMAN S, PODESTA J E, **YILMAZER A**, TURTON J A, BIANCO A, VARGESSON N, KANTHOU C, FLORENCE A T, TOZER G M, KOSTARELOS K (2010). Systemic antiangiogenic activity of cationic poly L lysine dendrimer delays tumor growth. Proceedings of the National Academy of Sciences, 107(9), 3966-3971., Doi: 10.1073/pnas.0908401107
26. ZHU X, MULCAHY L, MOHAMMED R AA, LEE A HS, FRANKS H A, KILPATRICK L, **YILMAZER A**, PAISH E C, ELLIS I O, PATEL P M, JACKSON A M (2008). IL 17 expression by breast cancer associated macrophages IL 17 promotes invasiveness of breast cancer cell lines. Breast Cancer Research, 10(6), 95, Doi: 10.1186/bcr2195

## KONFERANS BİLDİRİLERİ

1. **YILMAZER A** (2019). *Invited-* Photodynamic therapy with graphitic carbon nitride. Graphene Week 2019, Challenges and Solutions in Support of Human Space Exploration Workshop, Helsinki, Finland.
2. **YILMAZER A** (2019). Applications of graphene based materials in biomedical research. BIOMED2019, Izmir, Turkey.
3. **YILMAZER A** (2018). *Invited-* Graphene Based Nanomaterials for Cancer Therapy. 7th International Conference and Exhibition on Cell and Gene Therapy, London, UK.
4. **YILMAZER A** (2018). *Invited-* Applications of induced pluripotent stem cells. 10th National Bone Marrow Transplantation and Cellular Therapies Conference, Antalya, Turkey.
5. **YILMAZER A** (2018). *Invited-* Graphene-based nanotechnological approaches for cancer therapy 6<sup>th</sup> International Drug Chemistry Conference. Antalya, Turkey.
6. TAHERI H, KUTLU K, **YILMAZER A** (2017) Transfection of human melanoma cells with reprogramming factors (OKSM) alters cancer-related pathways and tumorigenicity. 6th International Conference and Exhibition on Cell and Gene Therapy, 2017, Madrid, Spain.
7. **YILMAZER A** (2017). *Invited-* The Use of Graphene Based Materials in Cancer Research. 1st Workshop NanoBioMed Sardinia, Italy.
8. **YILMAZER A**, DE LAZARO I, NAM Y, QUBISI S, RAZAK A, MAIZATUL F, COSSU G, KOSTARELOS K (2017). Non-Viral Induction Of Transient Cell Reprogramming In Mouse Skeletal Muscle To Enhance Tissue Regeneration. ISSCR 2017, Boston, USA.
9. TAHERI H, KUTLU K, **YILMAZER A** (2017). Forced Expression Of Reprogramming Factors (OKSM) In Human Melanoma Cells Alters Cancer-Related Pathways And Tumorigenicity. ISSCR 2017, Boston, USA.
10. GURCAN C, TAHERI H, DE LAZARO I, KOSTARELOS K, **YILMAZER A** (2017). Treatment of tumor spheroids with graphene oxide. BIOMED2017, Ankara, Turkey.

11. TAHERI H, YILMAZER A (2017). The effect of cellular reprogramming on the tumorigenicity of melanoma cells. BIOMED 2017, Ankara, Turkey.
12. KUTLU K, TAHERI H, YILMAZER A (2017). Upregulation of MicroRNA-1182 activates the apoptotic pathway p38/MAPK in MDA-MB-435 melanoma cells following reprogramming with transcription factors Oct3/4, Klf-4, Sox-2, c-Myc. ECCO 2017, European Cancer Congress, Amsterdam, Holland.
13. YILMAZER A (2016). *Invited-* The current state of the art around the toxicity and genotoxicity of graphene materials. 3rd Emerging 2D Materials Graphene Conference from Laboratory to Industry 2016, Istanbul, Turkey.
14. DE LAZARO I, YILMAZER A, NAM Y, KOSTARELOS K (2015). In vivo reprogramming to pluripotency enhances regeneration and functional rehabilitation of injured skeletal muscle. EMBO Conference Cell Therapy today: Achievements, Hope and Hype.
15. DE LAZARO I, BUSSY C, YILMAZER A, KOSTARELOS K (2015). Teratoma free in vivo reprogramming to pluripotency in the mouse liver and generation of i2PS cells. Wellcome Trust Conference. The Biology of Regenerative Medicines
16. YILMAZER A., DE LAZARO I., BUSSY C., KOSTARELOS, K. (2013) In vivo somatic cell reprogramming towards pluripotency within the mouse tissue. BIOMED 2013
17. YILMAZER A (2013) Fare dokusu içerisindeki erişkin hücrelerin yeniden programlanarak pluripotent kök hücrelere dönüştürülmesi . Tıbbi Biyoloji ve Genetik Konferansı 2013
18. BUSSY C., YILMAZER A., AL-JAMAL W., KOSTARELOS, K. (2011) Generation and characterization of iPS like cell colonies extracted from tissue after in vivo cell reprogramming i2PS. Stem Cell Programming & Reprogramming Cell Symposium
19. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K. (2010) Envelopment of Adenovirus Dramatically Alters Viral Liver Tropism and Tissue Distribution. European Society of Gene and Cell Therapy (ESGCT) Conference
20. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K (2010) Artificial Envelopment of Adenovirus and Its Effect on Viral Liver Tropism. PhD Research Day
21. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K. (2010) Engineering pH Sensitive Artificial Envelopes around Adenovirus for Efficient Gene Transfer. British Society of Gene Therapy (BSGT) Conference
22. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K. (2011) The Fate of Artificially Enveloped Ad5 in vivo Liver De Targeting with Reduced Hepatotoxicity. PhD Bilim Günü 2011
23. YILMAZER A., BUSSY C., AL-JAMAL W., KOSTARELOS, K. (2011) Virus free direct in vivo reprogramming towards pluripotency in mice is rapid and does not lead to teratoma formation in situ. Stem Cell Programming & Reprogramming Cell Symposium.
24. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K. (2010) The Interaction between Artificially Enveloped Adenovirus and Blood Components. European Society of Gene and Cell Therapy (ESGCT) Konferansı 2010
25. VAN DEN BOSSCHE J., AL-JAMAL W., YILMAZER A., KOSTARELOS, K. Efficient gene delivery using acid responsive lipid envelopes for adenovirus. International Cellular Delivery of Therapeutic Macromolecules (CDTM) Symposium 2010)
26. VAN DEN BOSSCHE, J.; AL-JAMAL, W.; YILMAZER, A.; KOSTARELOS, K. Efficient gene delivery using acid responsive lipid envelopes for adenovirus. ACS Meeting 2010
27. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K. Engineering Acid Responsive Artificial Envelopes around Adenovirus for Efficient Gene Transfer. European Society of Gene and Cell Therapy (ESGCT) Conference 2010 (Yayın No:1126012)
28. YILMAZER A., AL-JAMAL W., VAN DEN BOSSCHE J., KOSTARELOS, K. (2010) Engineering acid responsive artificial envelopes around adenovirus for efficient gene transfer. European

## Workshop of Particulate Systems (EWPS) 2010

29. AL-JAMAL W., VAN DEN BOSSCHE J., YILMAZER A., KOSTARELOS, K. (2009) Engineering acid responsive artificial envelopes around adenovirus for efficient gene transfer. Bioengineering 2009 Conference
30. AL-JAMAL W., VAN DEN BOSSCHE J., YILMAZER A., KOSTARELOS, K. (2009) Enhanced cellular internalization and gene silencing with a series of cationic dendron multiwalled carbon nanotube siRNA complexes. Bioengineering 2009 Conference

**ULUSLARARASI KİTAP BÖLÜMLERİ**

1. In Vivo Reprogramming in Regenerative Medicine, (Chapter 7: Challenges and future perspectives for in vivo reprogramming technology) (2017). TAHERI HADISEH, GURCAN CANSU, **YILMAZER AÇELYA\***, Springer, Editor: Açelya Yilmazer Aktuna, Issue:1 ISBN: 978-3-319-65720-2
2. In Vivo Reprogramming in Regenerative Medicine, (Chapter 1: Introduction to in vivo cell reprogramming technology) (2017)., GURCAN CANSU, TAHERI HADISEH, **YILMAZER AÇELYA\***, Springer, Editor: Açelya Yilmazer Aktuna, Issue:1, ISBN: 978-3-319-65720-2
3. Telomere A Complex End of a Chromosome, (On the Far Side of Telomeres: The Many Roles of Telomerase in the Acquisition and Retention of Cancer Stemness) (2016)., TERALI KEREM, **YILMAZER AÇELYA\***, Intech, Editor: Larramendy, Marcelo L. , Issue:1, ISBN: 978-953-51-2753-6
4. Encyclopedia of Cancer (iPS Cells) (2016)., **YILMAZER AÇELYA\***, Springer, Editor:Manfred Schwab, Issue:4, ISBN:978-3-642-27841-9.

**ÜNİVERSİTELERDEKİ DAVETLİ KONUŞMALAR**

1. In Vivo Reprogramming in Regenerative Medicine, Bölüm adı:(Chapter 7: Challenges and future perspectives for in vivo reprogramming technology) (2017)., TAHERI HADISEH, GURCAN CANSU, YILMAZER AKTUNA AÇELYA, Springer, Editör:Açelya Yilmazer Aktuna, Basım sayısı:1, İngilizce(Bilimsel Kitap),
2. In Vivo Reprogramming in Regenerative Medicine, Bölüm adı:(Chapter 1: Introduction to in vivo cell reprogramming technology) (2017)., GURCAN CANSU, TAHERI HADISEH, YILMAZER AKTUNA AÇELYA, Springer, Editör:Açelya Yilmazer Aktuna, Basım sayısı:1, İngilizce(Bilimsel Kitap)
3. Telomere A Complex End of a Chromosome, Bölüm adı:(On the Far Side of Telomeres: The Many Roles of Telomerase in the Acquisition and Retention of Cancer Stemness) (2016)., TERALI KEREM, YILMAZER AKTUNA AÇELYA, Intech, Editör:Larramendy, Marcelo L. , Basım sayısı:1, İngilizce(Bilimsel Kitap)
4. Encyclopedia of Cancer, Bölüm adı:(iPS Cells) (2016)., YILMAZER AKTUNA AÇELYA, Springer, Editör:Manfred Schwab, Basım sayısı:4, ISBN:978-3-642-27841-9, İngilizce(Bilimsel Kitap)

**KİTAP EDİTÖRLÜĞÜ**

In Vivo Reprogramming in Regenerative Medicine, (2017). Springer, Editor:Açelya Yilmazer Aktuna, Basım sayısı:1, İngilizce(Bilimsel Kitap),

**ÖDÜLLER ve BURSLAR**

- Ankara Üniversitesi 2019 Teşvik Ödülü
- TÜBA-GEBİP 2018 Ödülü
- Ulusal Genç Araştırmacı Kariyer Geliştirme Programı Projesi-3501, Tübitak, 2013-2016.
- En Başarılı Genç Araştırmacı Ödülü, Tıbbi Biyoloji ve Genetik Derneği Konferansı, 2013
- Doktora Bursu, Milli Eğitim Bakanlığı, 2008 - 2012
- Doktora Bilim Günü, En iyi poster ödülü, Londra Üniversitesi, 2010.
- Yüksek Lisans Bursu, Nottingham Üniversitesi, 2008
- Lisans Bursu, TUBITAK, 2004 – 2007.

**YABANCI DİLLER**

İngilizce: ileri düzey- TOEFL iBT-100, 2013 ÜDS- 92.5 %

Fransızca: Orta düzey

## İLGİ ALANLARI

Rejeneratif tıp, indüklenmiş pluripotent kök hücreler, lipozomlar, viral vektörler, gen ve ilaç salımı, nanotıp, biyoteknoloji

## DERNEK ÜYELİKLERİ

- Türkiye Biyomateryal ve Doku Mühendisliği Derneği
- Türk Tıbbi Biyoloji ve Genetik Derneği
- International Society for Stem Cells (ISSCR)
- British Society of Gene Therapy (BSGT)
- European Society of Gene and Cell Therapy (ESGCT)

## HOBİLER

Piyano çalmak, sanat ve sanat tarihi.

güncelleme: Aralık 2019