

26. BÖLÜM

Hücre Kültürü ve Toksikolojide Kullanımı

Yusuf KURTULMUŞ¹
Caner GEYİK²
Nurdan ERKMEN SAKALLI³

Tanım ve Tarihçe

19. yüzyılda bakterilerin kültür ortamında üretilerek tanımlanmaları ile elde edilen tecrübe, sonraki asırda doku ve hücrelerin de çoğaltılabilmesi için çabaları artırmıştır. Doku kültürünün tarihi, 1906'da Ross Granville Harrison (1870-1959) tarafından yayınlanan makaleye uzanır. Harrison bu çalışmasında kurbağa embriyolarının nöral krestinden disseke edilen ve bir cam kapak üzerine bir lenf pıhtısına sabitlenen ve çoğaldığı izlenen küçük doku parçalarını içeren deneyleri tarif etmiştir (1). 1914 yılında osmotik basınçtaki değişimlerin bağ dokusuna etkilerini kültür ortamında inceleyen bir makale yayınlanmıştır (2). 1930'lu yıllarda uygun besin maddelerini içeren destek ortamlarında kanser hücrelerinin üremeye devam ettikleri izlenmiştir (3). Daha sonra embriyonik hücreler, karaciğer ve böbrek gibi organların hücreleri kültür ortamında üretilmişlerdir. Elektron mikroskopunun icat edilmesiyle birlikte, hücre kültürlerinden başka metotlarla elde edilemeyen yeni bilgilere ulaşılmıştır (4).

in vivo ortamda kolayca incelenemeyecek olan metabolik ve fizyolojik olaylara yakından bakabilmek için insan hücrelerinin kültüre edilmesi fikri yaygın bir ilgi meydana getirmiştir. Hücre kültürüne alternatif olarak doku

¹ Doç. Dr., Ege Üniversitesi, Madde Bağımlılığı, Toksikoloji ve İlaç Bilimleri Enstitüsü, yusuf.kurtulmus@ege.edu.tr

² Dr. Öğr. Üyesi, İstinye Üniversitesi, Tıp Fakültesi, Tıbbi Biyokimya AD, caner.geyik@istinye.edu.tr

³ Uzm. Dr., Balıkesir Atatürk Şehir Hastanesi, Tıbbi Biyokimya Laboratuvarı, nurdan2244@yahoo.com

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