

BÖLÜM 10

İZMİR KÖRFEZİ'NDE AŞIRI ÇOĞALMALAR YAPAN DİNOFLAGELLAT TÜRÜ POLYKRİKOS HARTMANNİİ W.M.ZIMMERMANN 1930 VE BLIXAEA QUINQUECORNİS (T.H.ABÉ) GOTTSCHLING, 2017 TÜRLERİ İLE İLGİLİ DÜNYADA YAPILMIŞ ÇALIŞMALAR VE İZMİR KÖRFEZİ'NDEKİ DAĞILIMLARI

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Denizlerde ve tatlı sularda dağılım gösteren bir hücreli fitoplanktonik organizmaların besin zincirindeki rolü ne kadar önemli ise, deniz ekosistemindeki değişiklikleri anlamamıza yardım eden besin zincirinin ikinci halkası olan dinoflagellatlar da önemlidir.^{1,2,3} Fototrofik özellikteki bu heterotrofik dinoflagellatlar, en küçük bakterilerden çürümekte olan canlıların doku parçacıklarına kadar geniş yelpazedeki besini tüketirler ve besin çemberinde önemli bir rolü üstlenirler.^{4,5,6}

Dinoflagellat türlerinin büyük çoğunluğu uygunsuz koşullar oluştuğunda hayatlarının bir evresinde kist oluşturmaktadır.^{7,8,9,10} Dinoflagellat kistleri ile ilgili olarak 1883-1878 yılları arası ilk çalışmalar yapan Stein'dir.¹¹ Dinocyst de denilen dinoflagellat kistleri, deniz tabanında oldukça zorlu şartlarda belki yüzlerce yıl¹² dayanacak yapıdadırlar.^{13,14,15,16,17,18,19} Bu kistler aynı zamanda bugüne kadar saptanıp kataloglanmış yaklaşık 4000²⁰ kadar fosil kaydın aracılığı ile geçmişteki yaşamla bugünkü arasında araştırmacılara bir bağ kurma imkanı da verir.^{21,22} Dinoflagellatların oluşturdukları çoğu zigot durumundaki bu kistler ve bazı diyatom türlerinin oluşturdukları sporlar, bunların uyku durumundaki yaşam evreleridir.²³ Dayanıklı yapıdaki kistler, deniz ve okyanuslarda yaşayan dinoflagellatların

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türünün aşırı çoğaldığı bilinmektedir¹⁷⁴. Bu bölgelerde deniz suyu rengini değişmesine ve balık ölümlerine sebep olduğu bildirilmiştir.^{175,176} Bazı dinoflagellatlar peridin pigmenti yerine dinoflagellatlarda bulunan fukoksantin içeren plastidlere sahiptir. Fukoksantin pigmenti içeren *B. quinquecornis* türü gibi dinoflagellat türlerine **dinotom** adı verilmektedir. Diğer dinotomik türler *Dinothrix*, *Durinskia*, *Kryptoperidinium* ve *Unruhdinium*'dur. *B. quinquecornis* türünün bilinen bir endosimbiyontu henüz keşfedilmemiştir¹³².

Toksininin tanımı henüz yapılmamış olsa da büyük ihtimalle ihtiyotoksik özellikte olan *P. hartmannii* türü Atlantik Okyanus'unda yapılan bir çalışmada *Cyprinodon variegatus* Lacepède, 1803) balık türü üzerinde akut ihtiyotoksik özellik gösterdiği saptanmıştır.⁷⁸ Kaliforniya Körfezi'nde meydana gelen büyük bir red-tide olayında aşırı çoğalma yapan iki dinoflagellat türünden birisi de *P. hartmannii* türüdür.⁹⁵ Meksiko Körfezi'nde Aransas Kanalına yakın Nueces bölgesinde tayfun sonrası aşırı çoğalan iki dinoflagellat türü *A. sanguinea* ve *P. hartmannii*'dir.⁹⁷ Karadeniz'deki toksik diyatom ve dinoflagellat türlerinin toksinlerinin ve kistlerinin ele alındığı çalışmalarda Romanya kıyısall bölgelerinde¹¹⁰ ve Ukrayna'da^{47,85} *P. hartmannii* türü ile ilgili bilgi verilmiştir.

Zırhsız yapıdaki *P. hartmannii* ve zırhlı yapıdaki *B. quinquecornis* dinoflagellat türleri büyük ihtimalle İzmir Körfezi'nde teknelerin ballast tankları ile taşınarak^{16,17,170,177,178} gelmiş iki dış kaynaklı türdür. Potansiyel olarak mevsimsel aşırı çoğalma özellikleri gösteren dinoflagellat türlerinin körfezde saptanmaları ve dağılımlarının izlenmeleri önemlidir. Ayrıca, klorofil-a başta olmak üzere nitrat ve diğer besleyici nütrient miktarlarının izleme projelerinde diğer fiziko-kimyasal parametrelerle birlikte sürekli izlenmesi, bu 2 dış kaynaklı dinoflagellat türü gibi gelecekte körfeze gelebilecek yeni türlerin saptanmasında büyük önem taşımaktadır.

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