

BÖLÜM 18

Hücre İçi Sinyal İletimi

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| Giriş

*“Alea iacta est”
Julius Caesar*

Hücre içi sinyal iletim mekanizmaları, belirli bir uyarana karşı özgün bir biyolojik yanıtın verilmesini sağlayan oldukça karmaşık ve dinamik sistemlerdir. Hücrelerin, çevrelerinde meydana gelen fiziksel/kimyasal değişikliklere karşı yanıt oluşturabilmeleri için sınırlarının dışından gelen farklı sinyalleri almalı ve işlemelidir. Hücreler bir haberci olarak aldıkları sinyal ile birlikte yanıt planı oluştururlar. Çok hücreli organizmalarda hücrelerin birbirleriyle iletişim kurması evrimsel süreçle korunmuş sinyal iletim elemanlarına bağlıdır. Bu bölümde hücre içi sinyal iletim mekanizmalarında sinyalin nasıl algılandığı, aşağı akış sürecinde hangi proteinlerin rol üstlendiği ve yanıtın ne şekilde verildiği açıklanmıştır.

| Sinyal iletim stratejileri

Tüm çok hücreli organizmalarda hücrelerin birbirleri arasında kurdukları iletişim, gelişim ve homeostazın devamlılığının sağlanmasında vazgeçilmez bir unsurdur. Canlı bir organizmanın değişen çevre koşullarına karşı tepki vermesine benzer bir biçimde, yaşamın en temel fonksiyonel birimi

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tedavilerinde; birçok sinyal yolağında görev alan bir proteinin hedeflendiği veya bu proteinle birlikte diğer sinyal yollarında görev üstlenen proteinlerin birlikte değerlendirildiği çalışmalar kanser tedavisinin geliştirilmesine katkı sunacaktır.

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