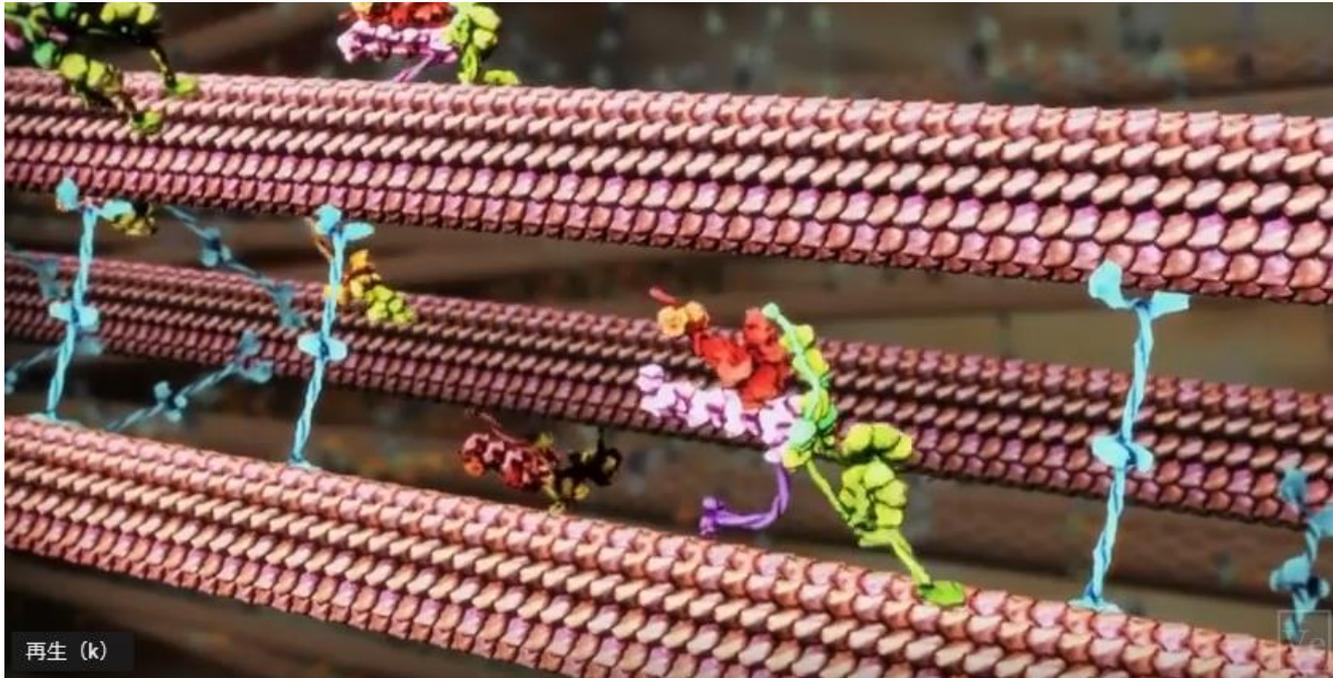


# 移動するタンパク質

出典: [https://www.youtube.com/watch?v=X\\_tYrnv\\_o6A](https://www.youtube.com/watch?v=X_tYrnv_o6A)

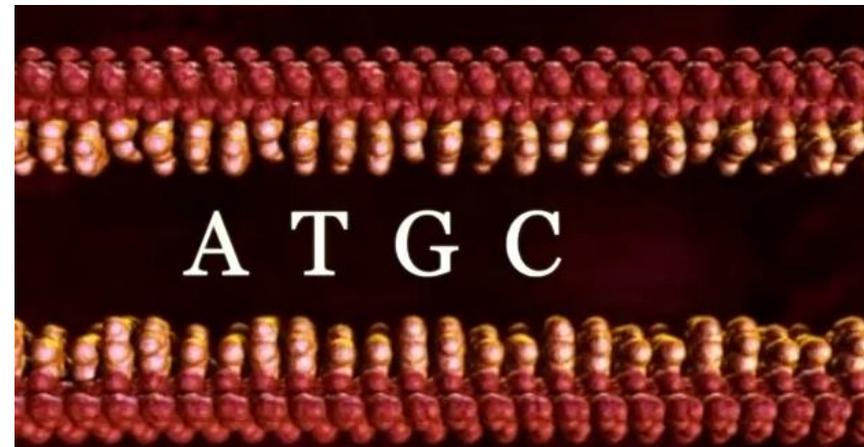
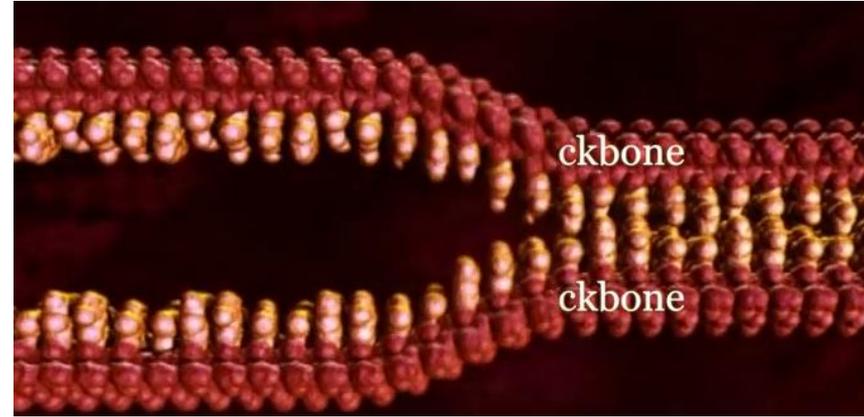
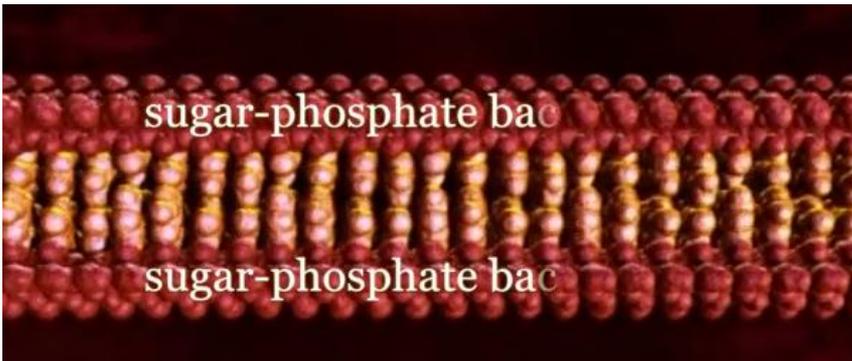
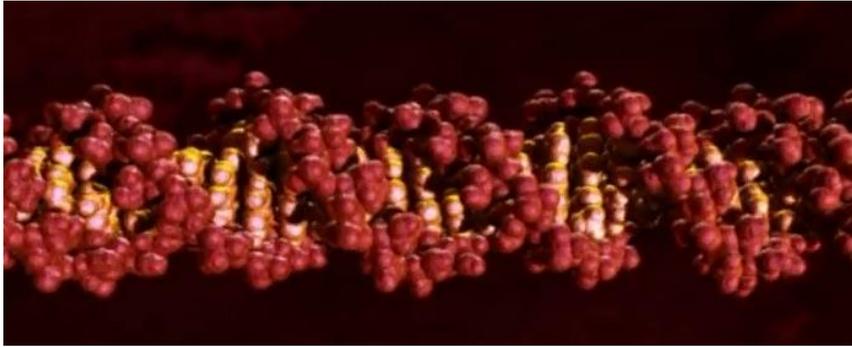


種々の物質が移動

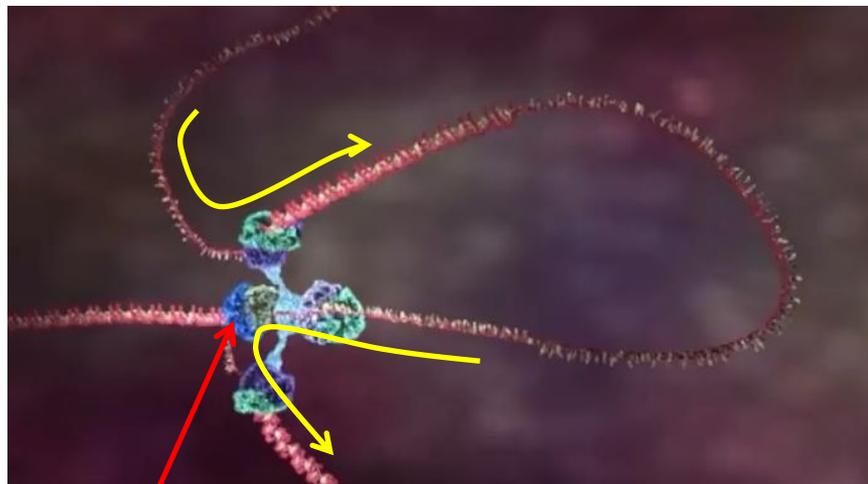


飛脚みたい

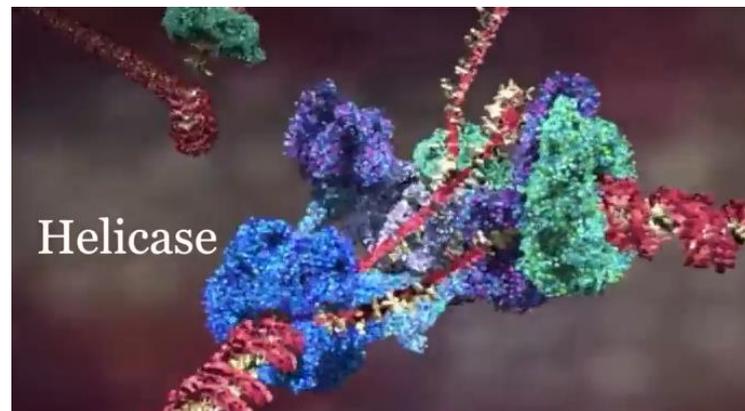
0:45 DNAの2重螺旋をほどいていく



1:18 2つのDNAが巻き戻され分離



Helicase



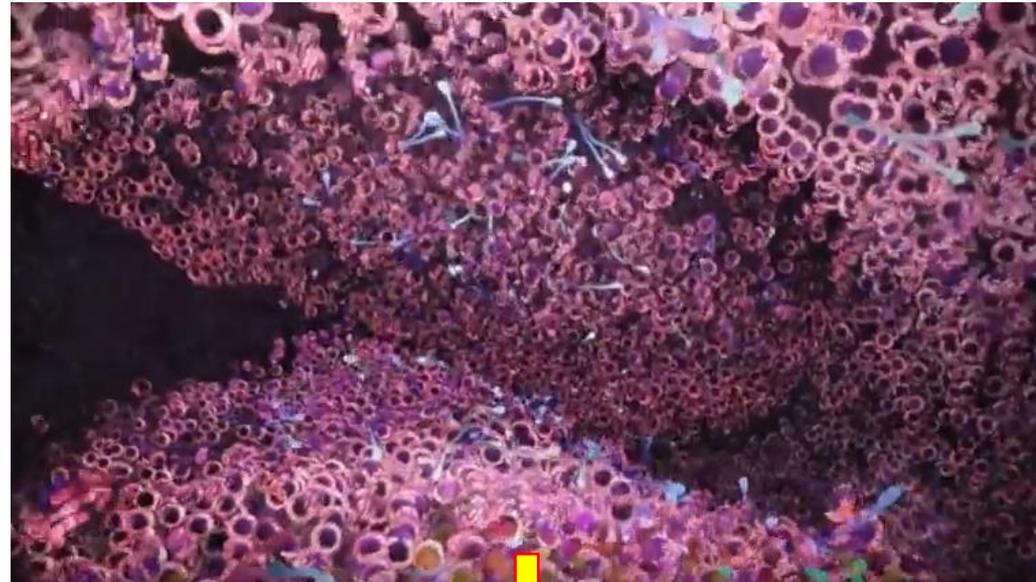
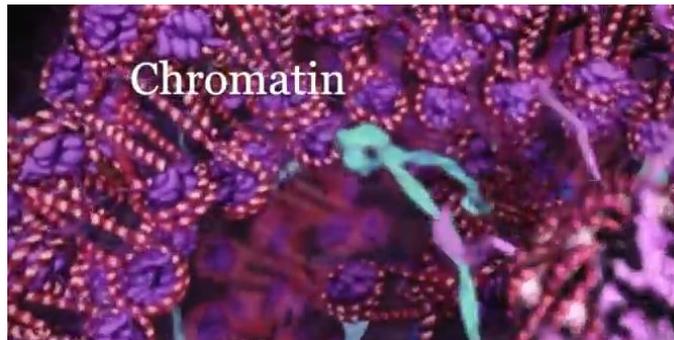
高速回転

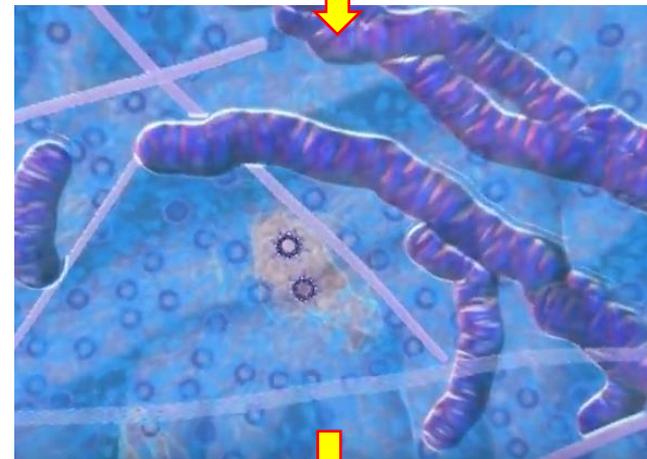
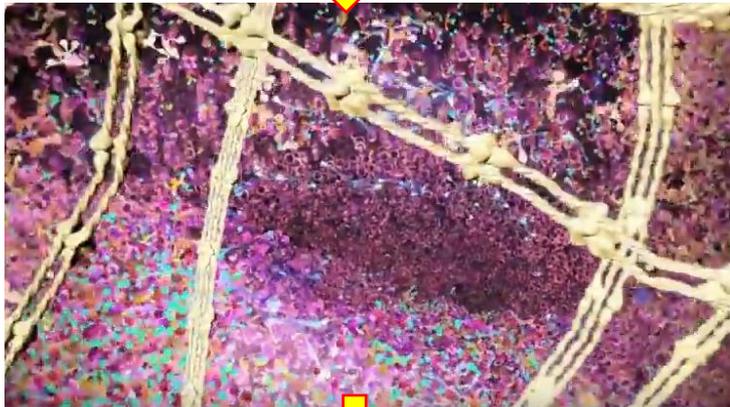
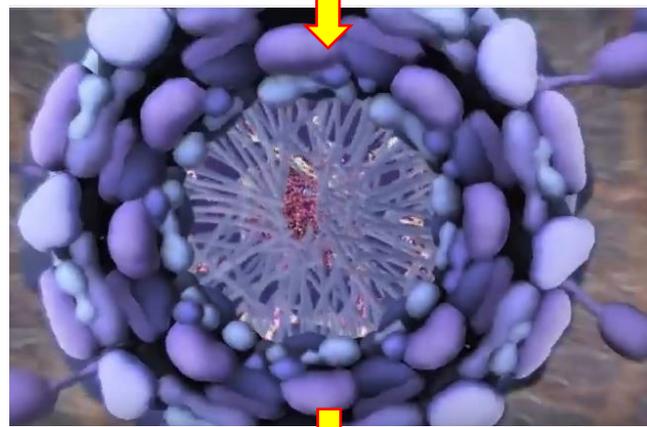
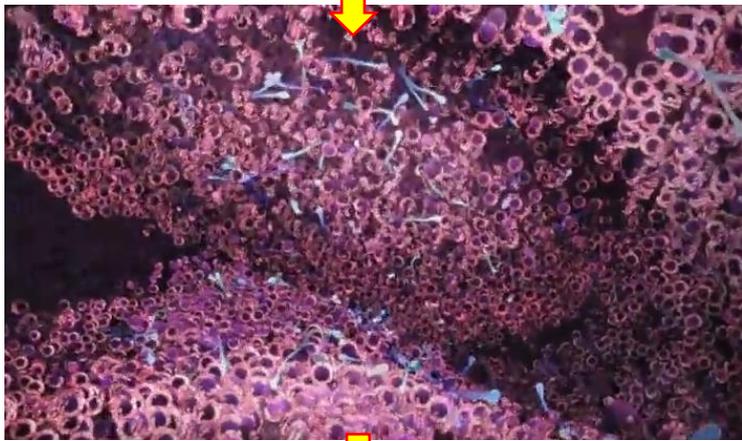
1:59 **Histones**によりDNAの混乱を防止する**Nucleosome**を形成

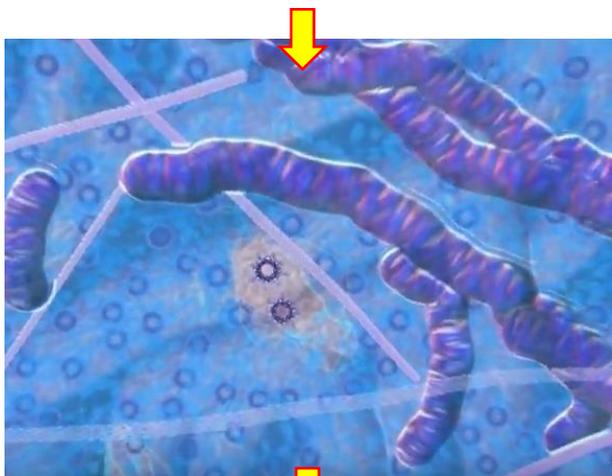


さらに**Chromatin**という繊維でループされ、**染色体**になっていく

**染色体**





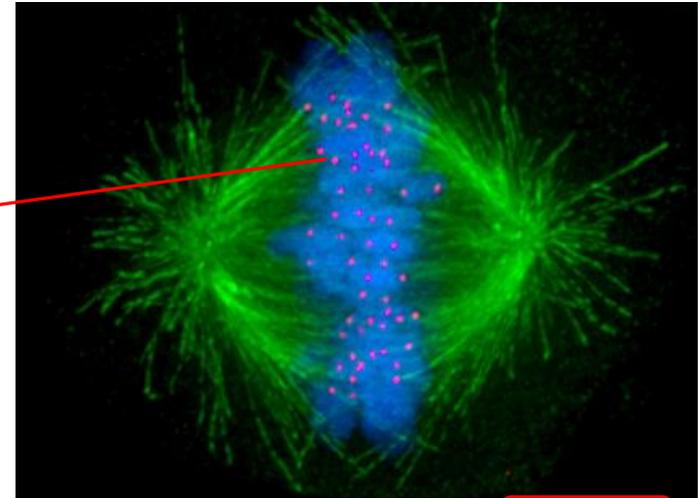
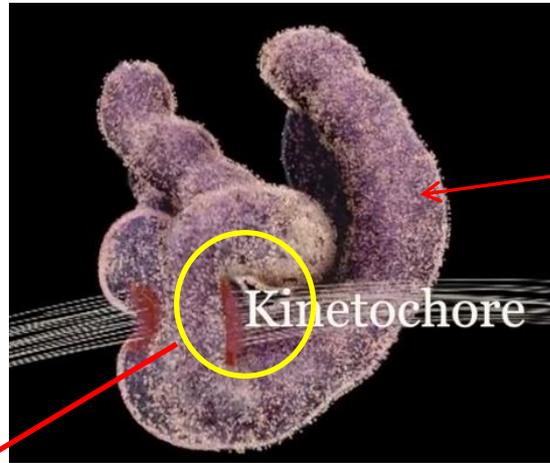
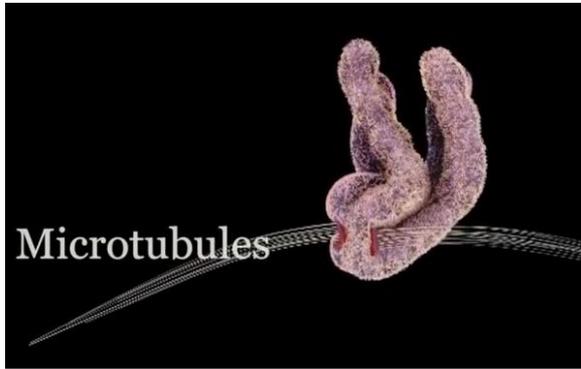


3:06  
染色体が2つに

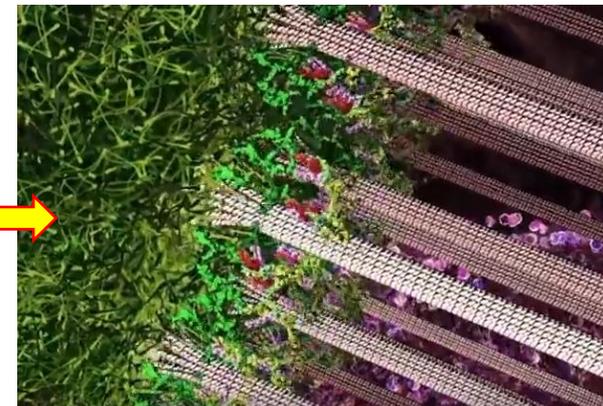
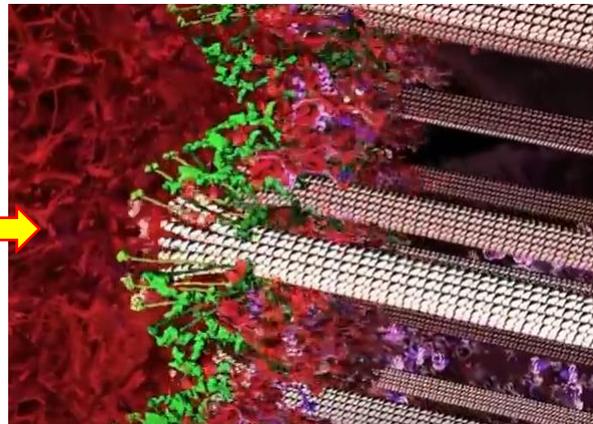
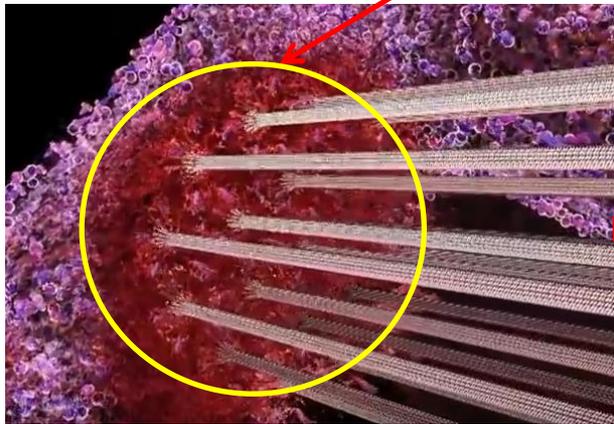
3:27

# Kinetochores: 動原体

出典:  
<https://ja.wikipedia.org/wiki/%E5%8B%95%E5%8E%9F%E4%BD%93>



ヒト細胞画像。微小管は緑、染色体 (DNA) は青、**動原体はピンク**で表される。



緑色の物質が生成

緑色の物質が右方向に  
移動開始