

# **RICERCA E SVILUPPO DI FARMACI E PICCOLE MOLECOLE**

*(CI Ricerca e sviluppo di farmaci e biologici; Prof Brigidi)*

**5 CFU (secondo semestre)**

**CHIM 08**

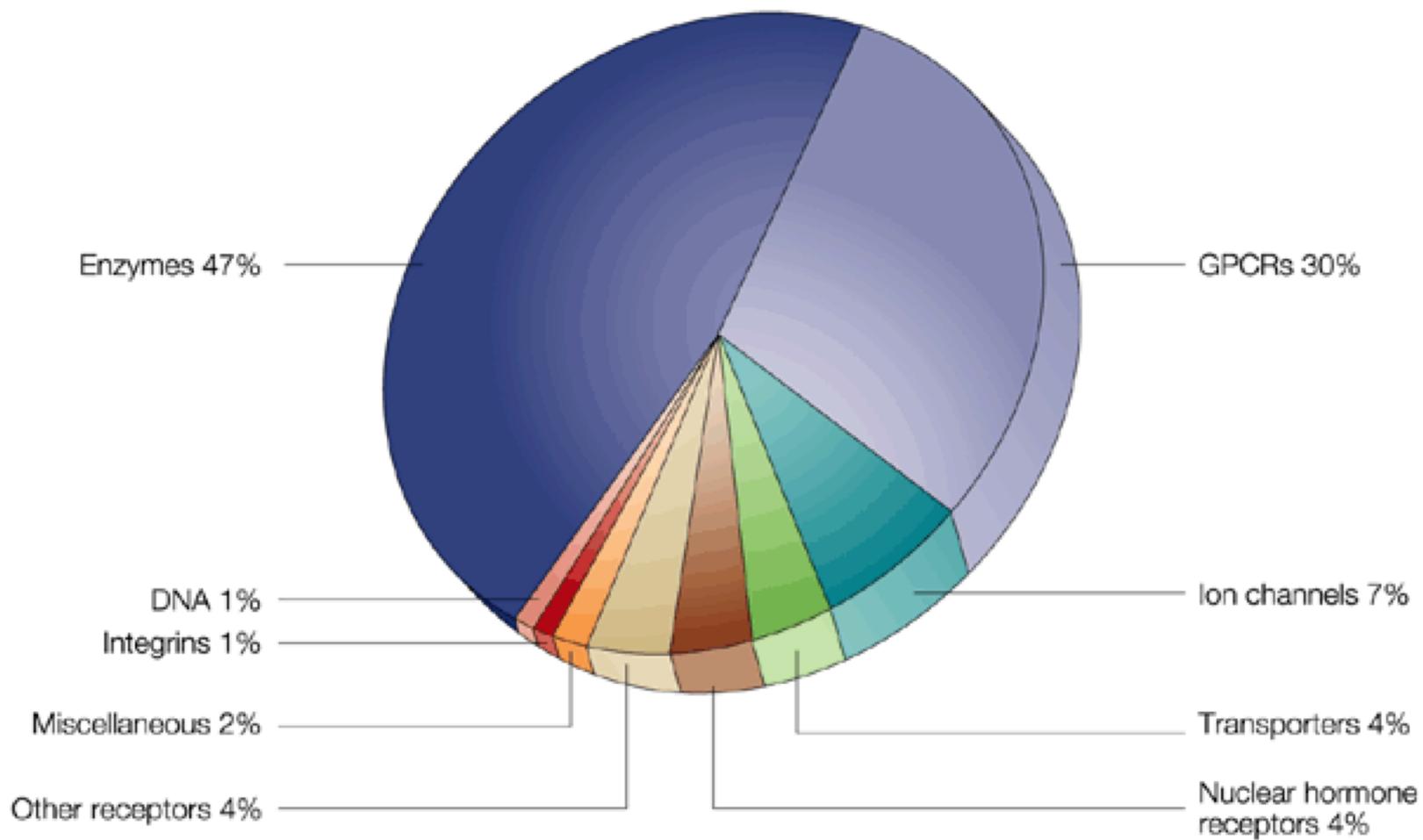
**M. L. Bolognesi**

**(disponibile per un colloquio informativo)**

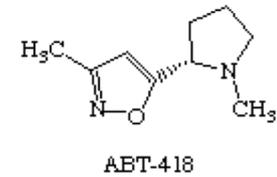
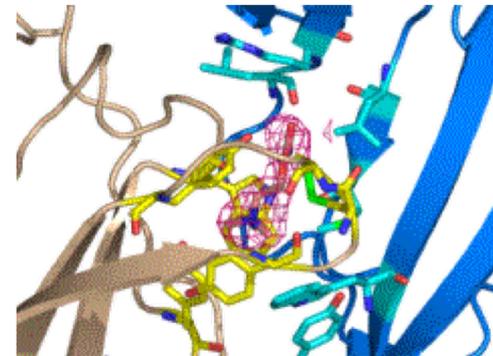
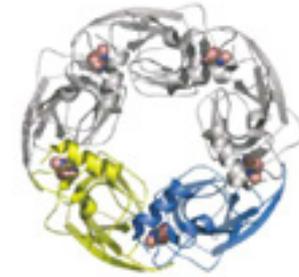
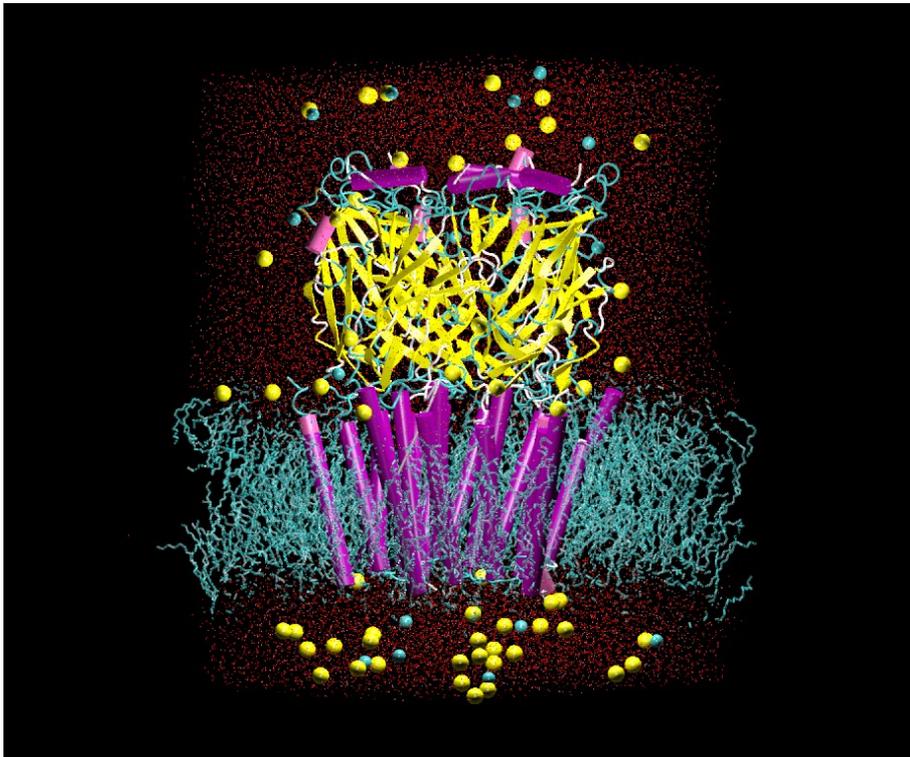
Nel cuore della chimica  
farmaceutica ...



# I farmaci presenti sul mercato suddivisi per famiglie di target

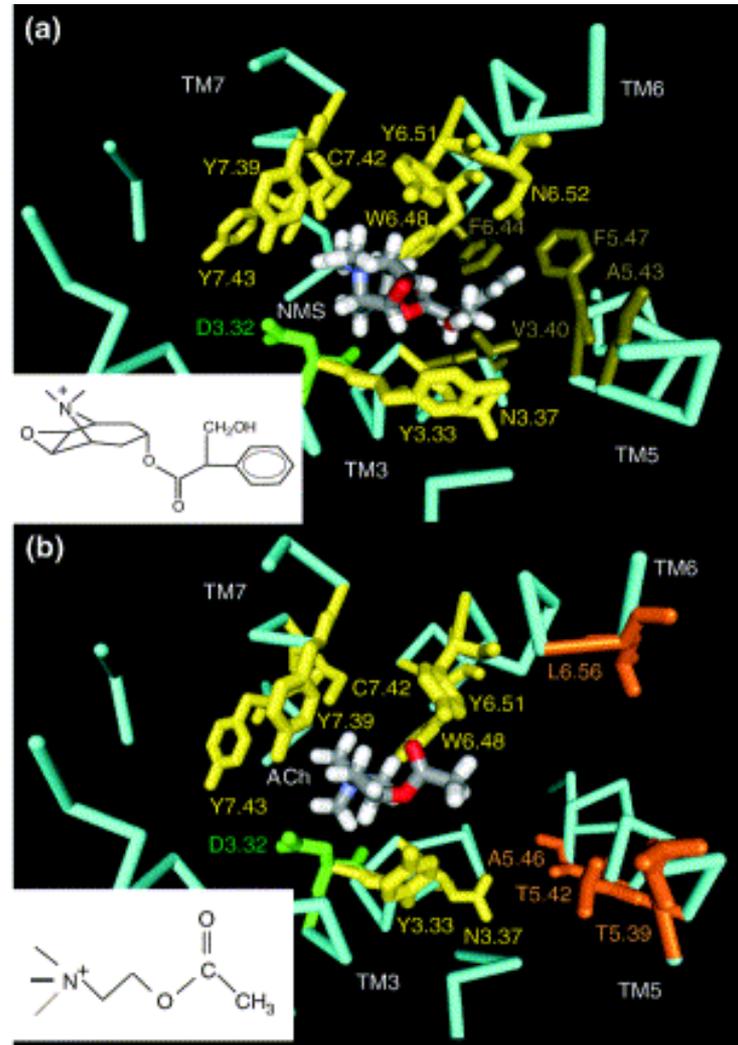
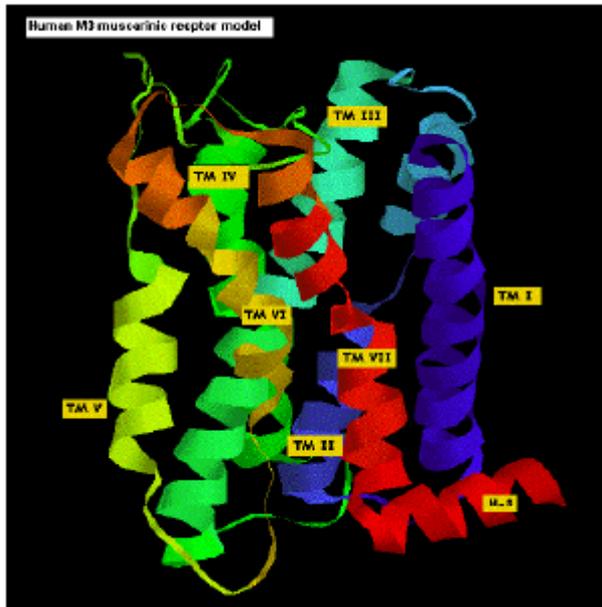
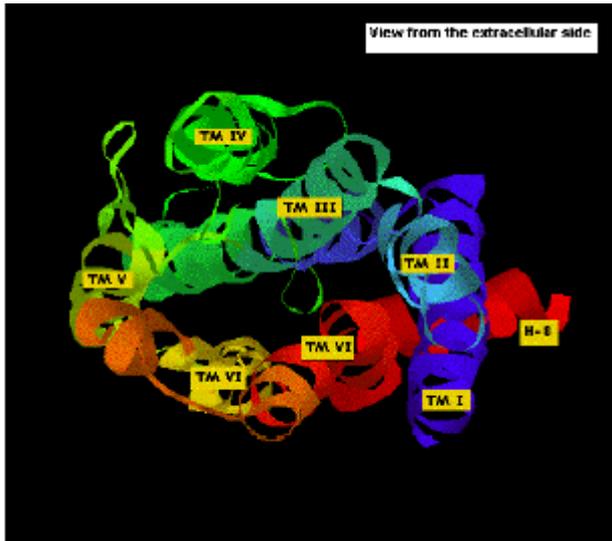


# Recettore nicotinic



**Nuove indicazioni terapeutiche**

# Recettore muscarinico



Nuove modalità di modulazione

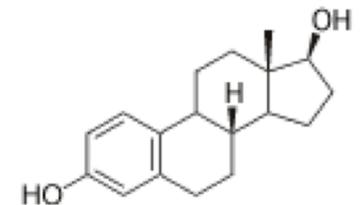
# Recettore degli estrogeni: basi molecolari dell'azione di agonisti, antagonisti e SERMs



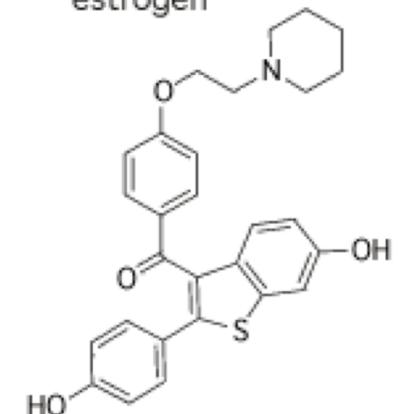
ER $\alpha$ -EST



ER $\alpha$ -RAL

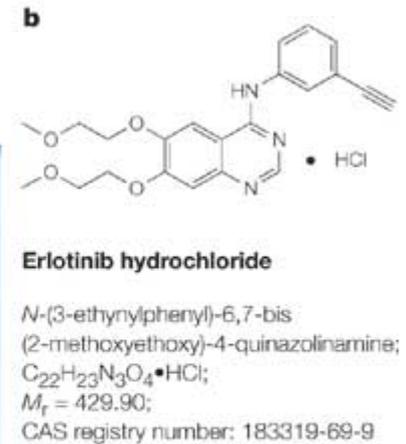
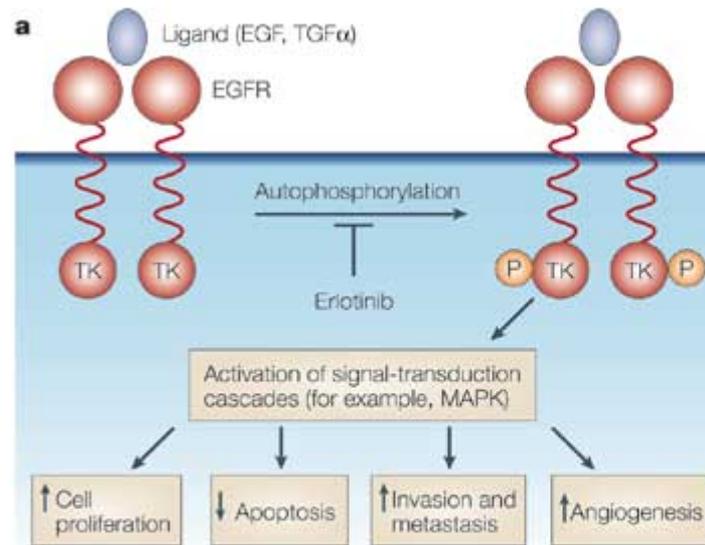
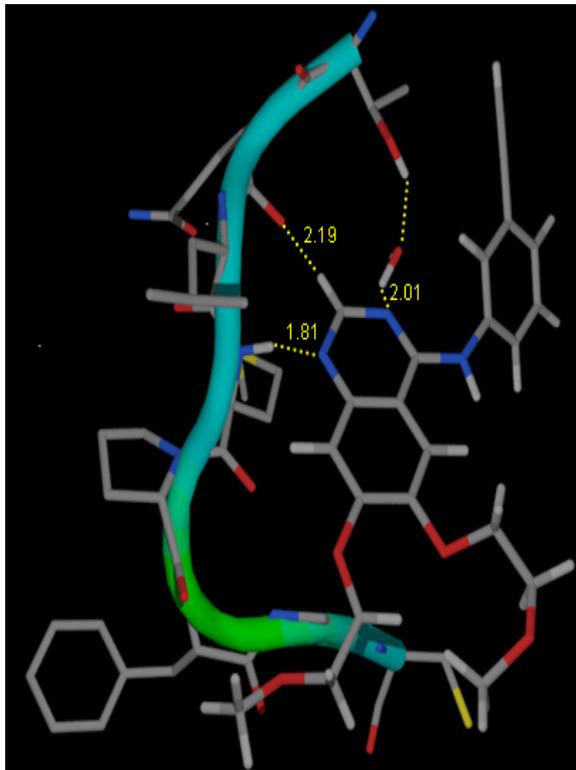


> 17 $\beta$ -Estradiol: natural estrogen

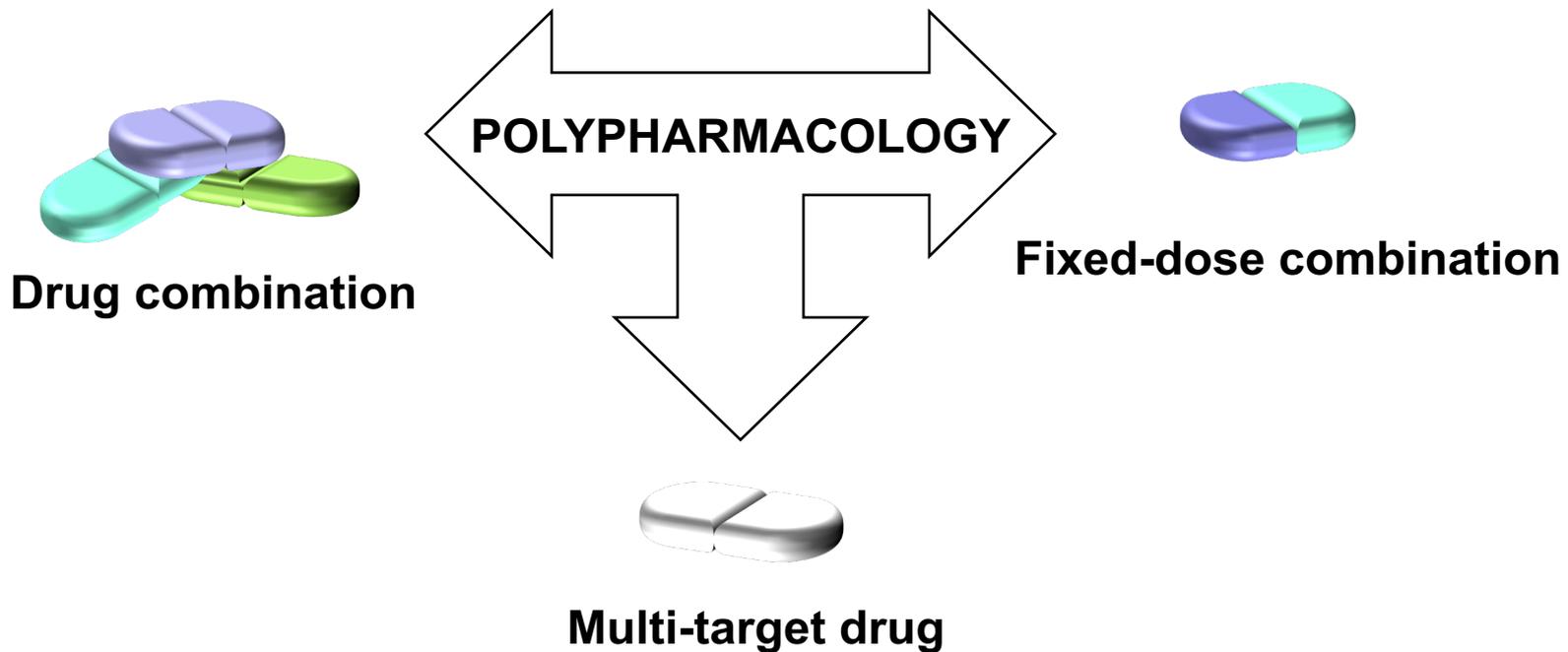


> Raloxifene: Selective estrogen receptor modulator

# Recettori ad attività tirosin-chinasica: gli inibitori dei recettori dei fattori di crescita come antitumorali "intelligenti" ...verso una terapia personalizzata

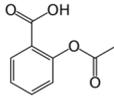


# La polifarmacologia come paradigma emergente: ricerca e sviluppo di farmaci multi-target per il trattamento di patologie neurodegenerative "complesse"

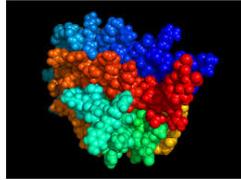


# Piccole molecole vs biologici

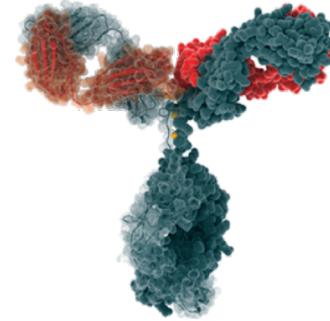
Small molecule  
drug:  
**ASPIRIN**



Large molecule  
drug:  
**EPO**



Biologic:  
**RAMUCIRUMAB**



————— increasing molecular size —————>



Pharmacokinetic matters...