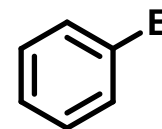
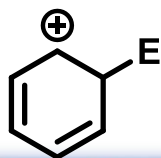


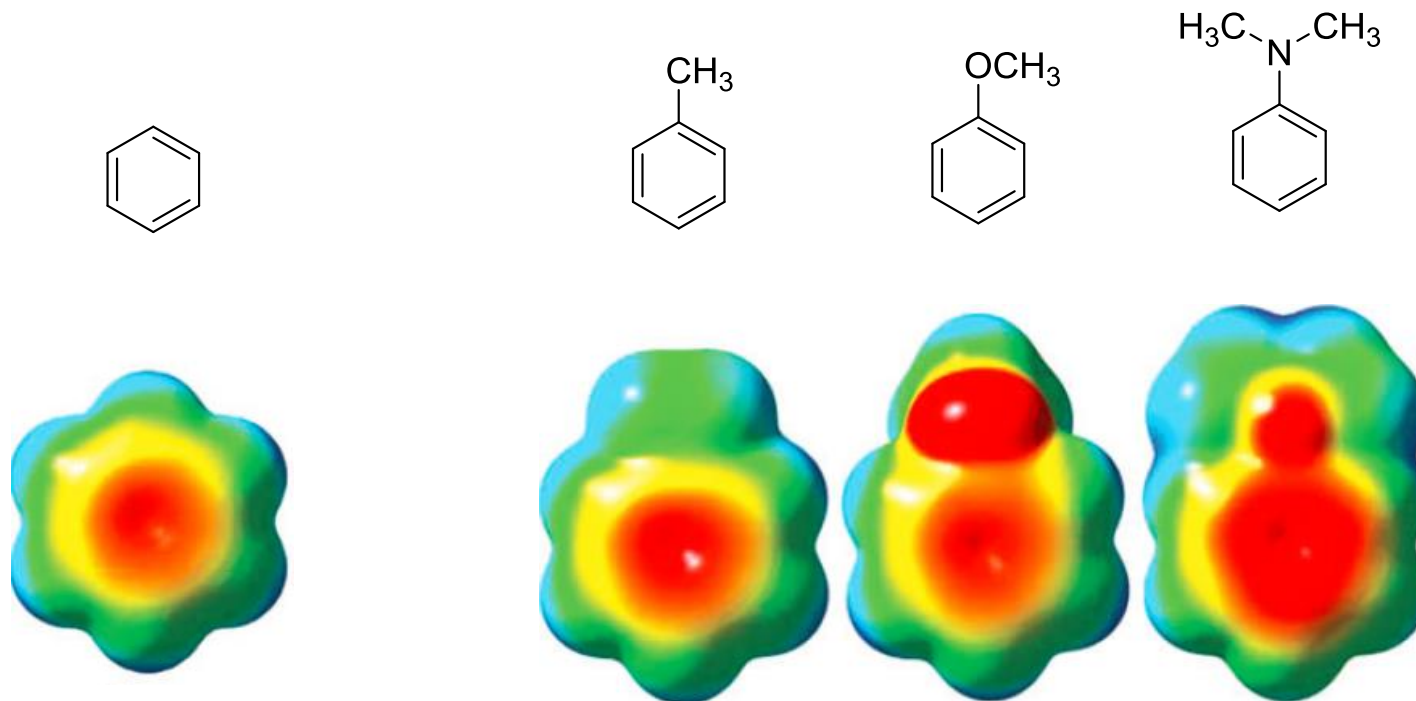


# 7. Areny



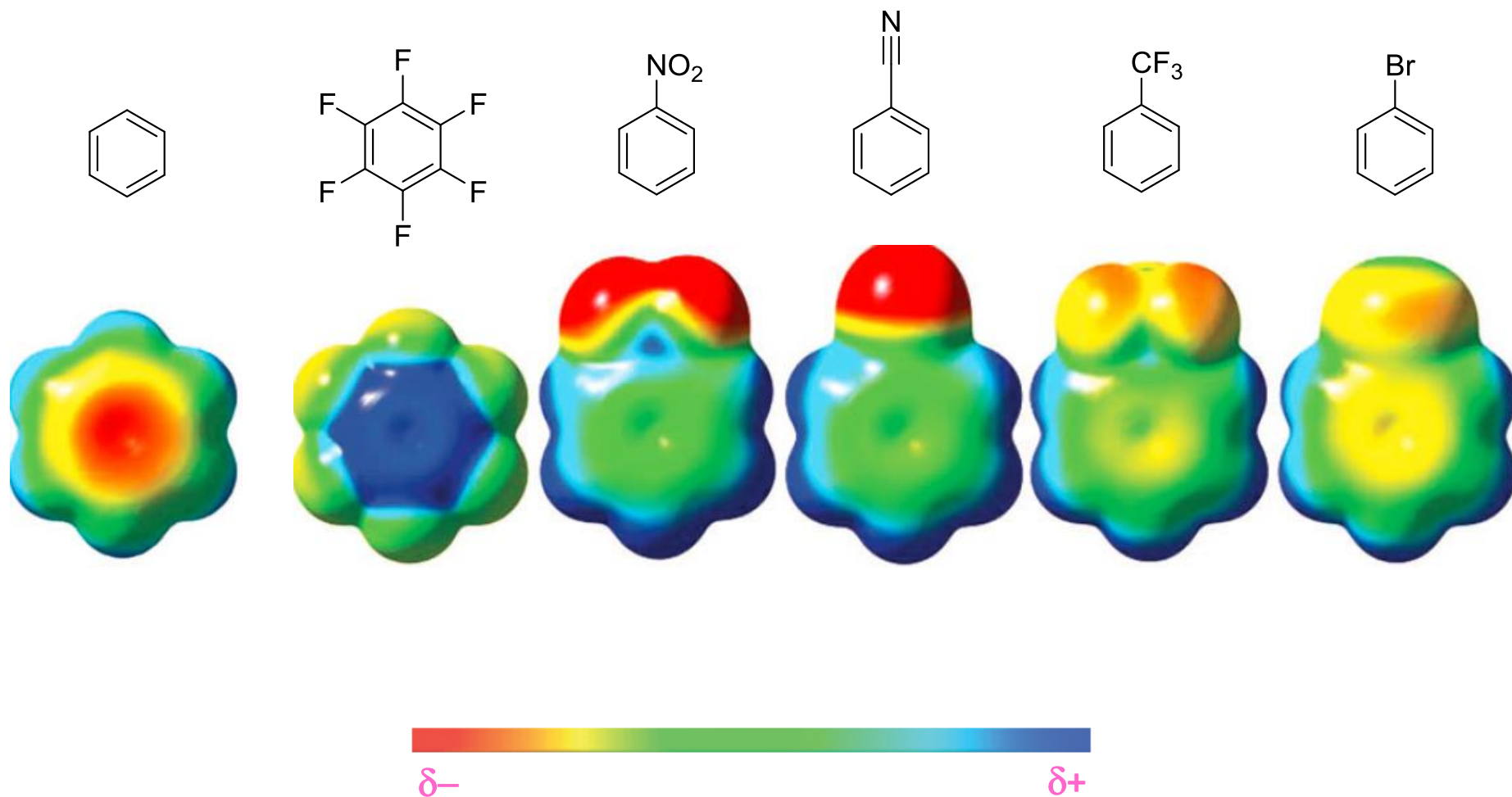


- Elektron-donorní substituenty zvyšují el. hustotu (nukleofilitu) benzenového jádra



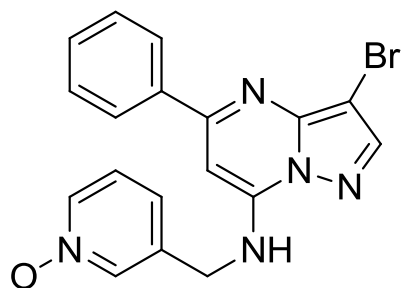
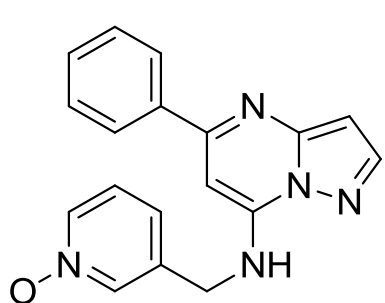


- Elektron-akceptorní substituenty snižují el. hustotu (nukleofilitu) benzenového jádra

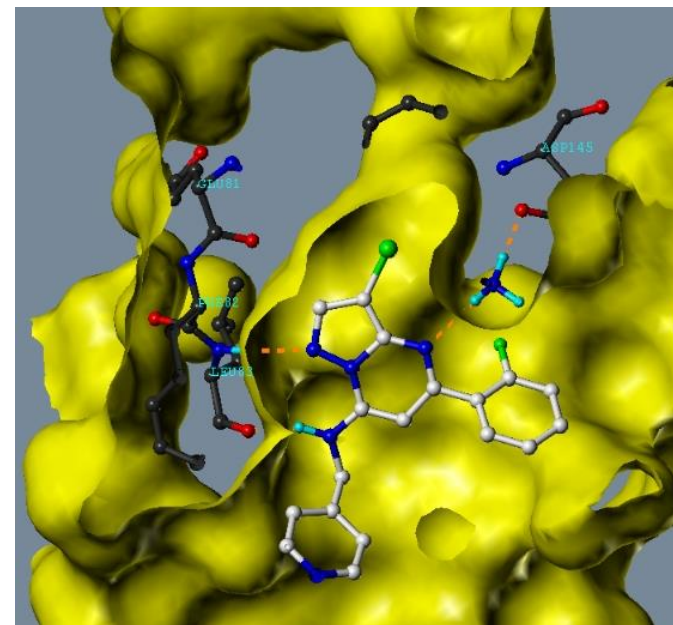
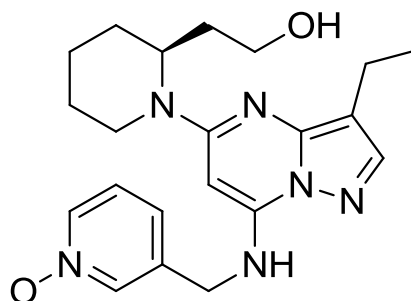




- Dramatický efekt hydrofobního substituentu na biologickou aktivitu molekul

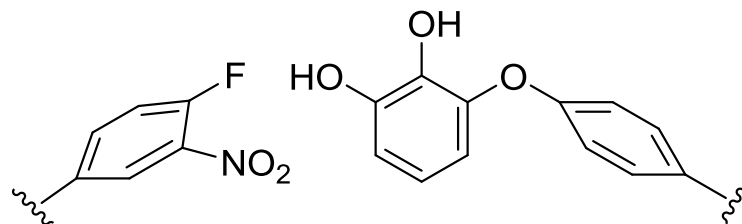


cca 100 x aktivnější molekula  
(inhibice kinázy CDK2)



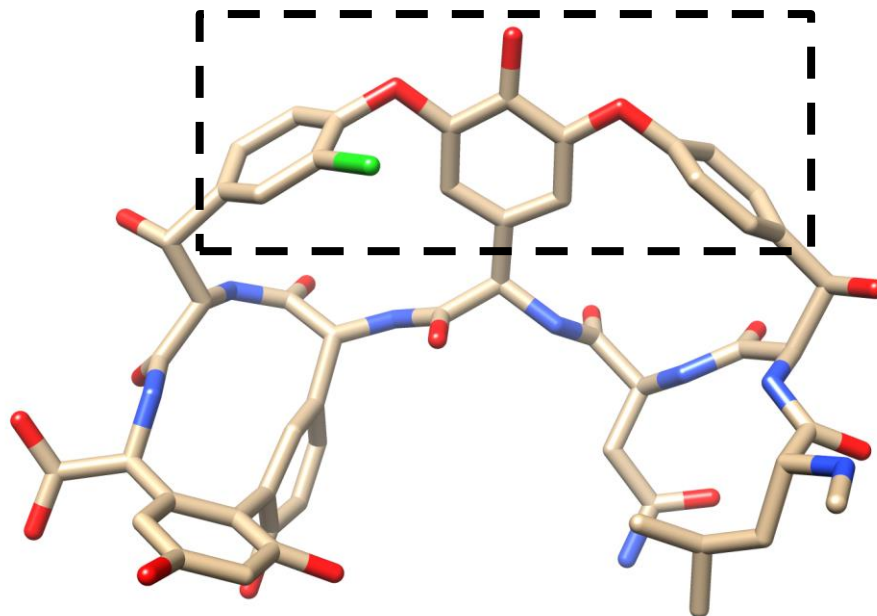
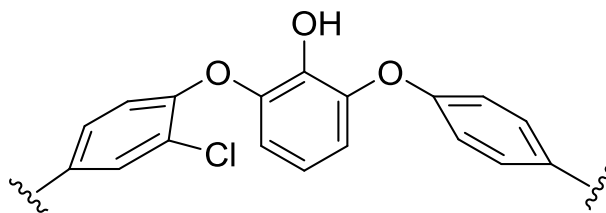
*dinaciclib*

fáze III klinického testování  
protinádorové účinky

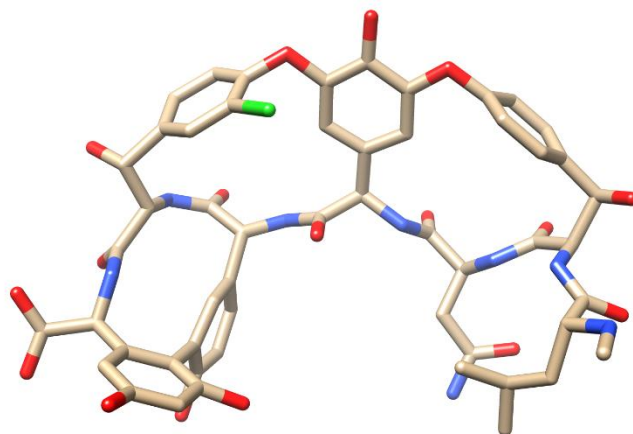


1. CsF (baze)
2. Zn, AcOH
3. NaNO<sub>2</sub>, H<sup>+</sup>
4. CuCl

1. Aromatická nukleofilní substituce
2. Redukce NO<sub>2</sub> na NH<sub>2</sub>
3. Tvorba diazoniové soli
4. Substituce diazoniové skupiny

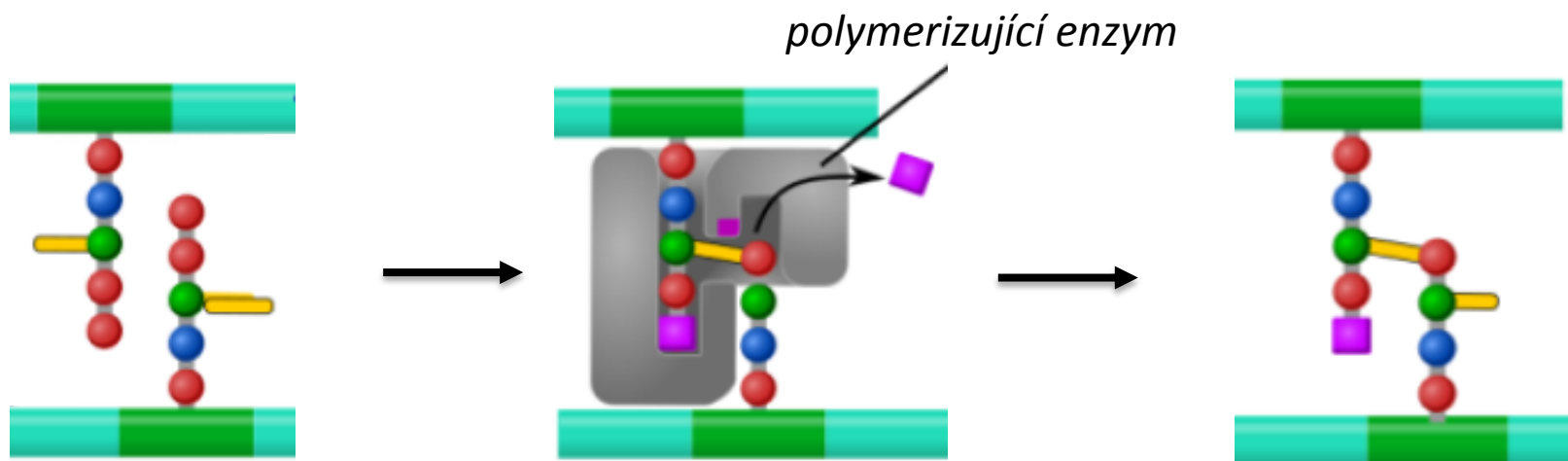


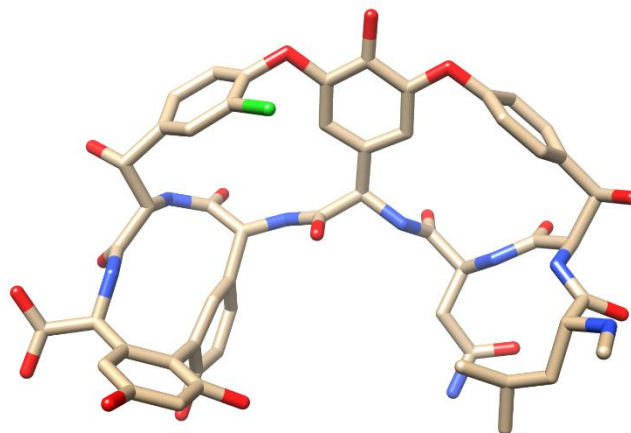
Vancomycin (aglycon)  
antibiotikum



Vancomycin (aglycon)

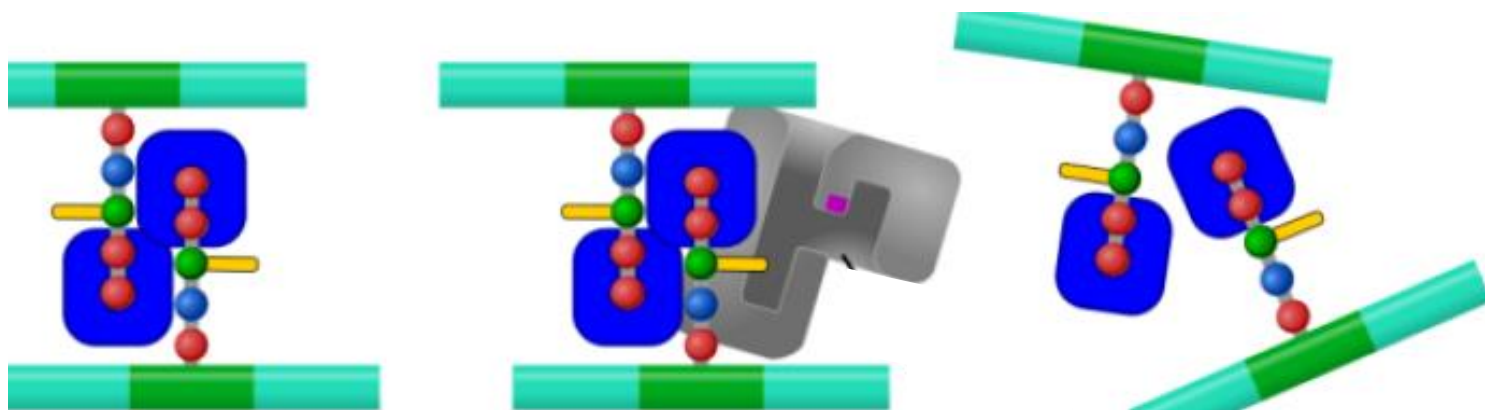
- Syntéza buněčné stěny bakterií

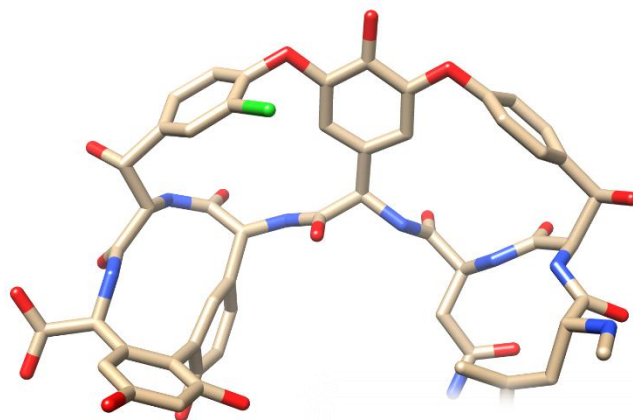




Vancomycin (aglycon)

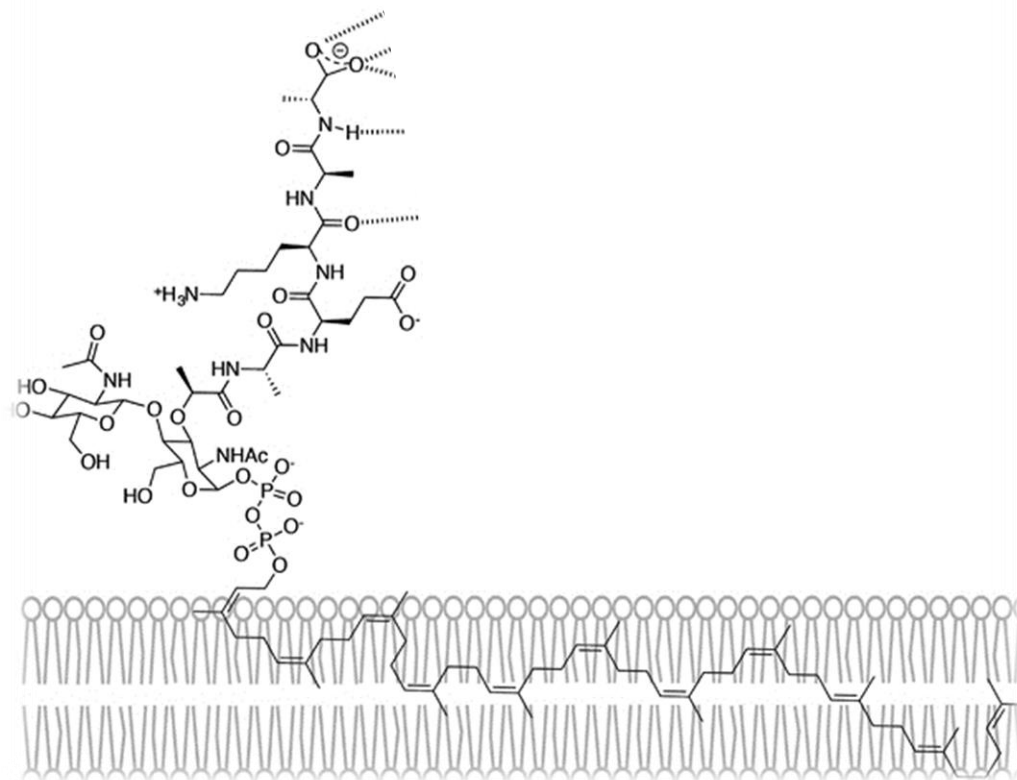
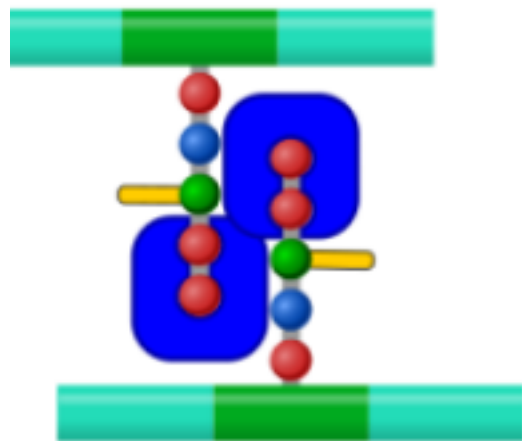
- Vancomycin blokuje přístup enzymu



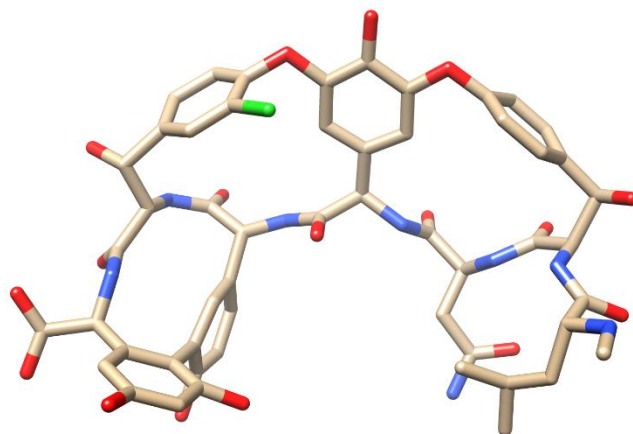


Vancomycin (aglycon)

- Interakce vancomycin – peptid

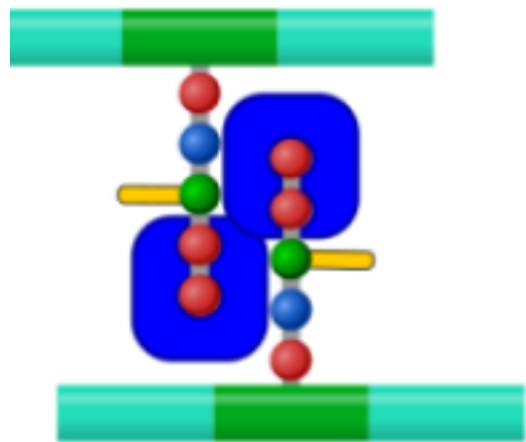




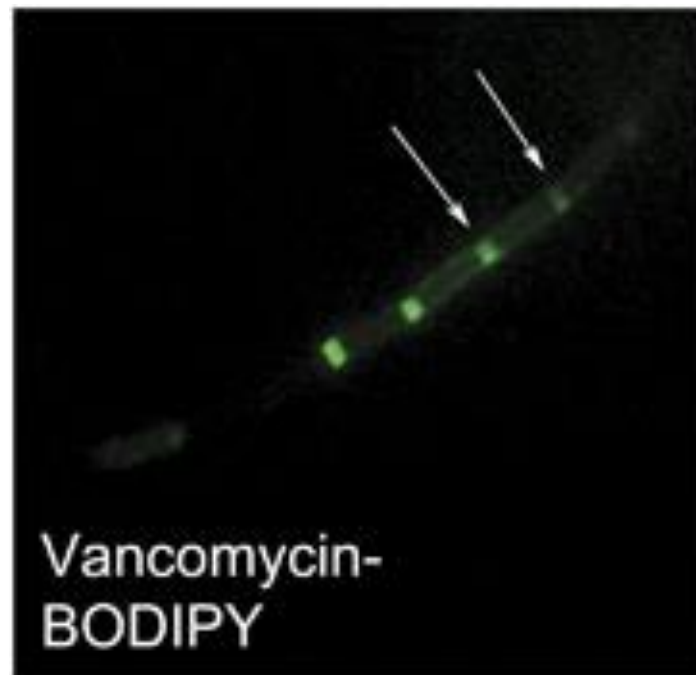


Vancomycin (aglycon)

- Interakce vancomycin – peptid



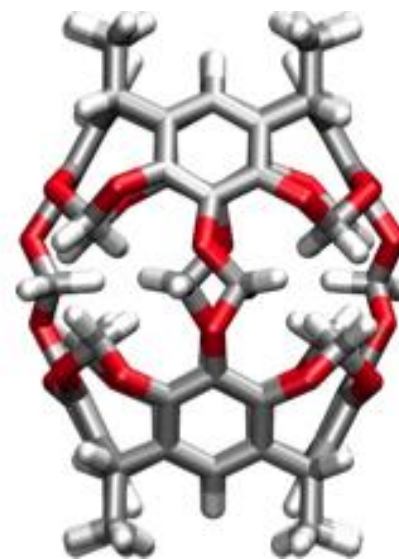
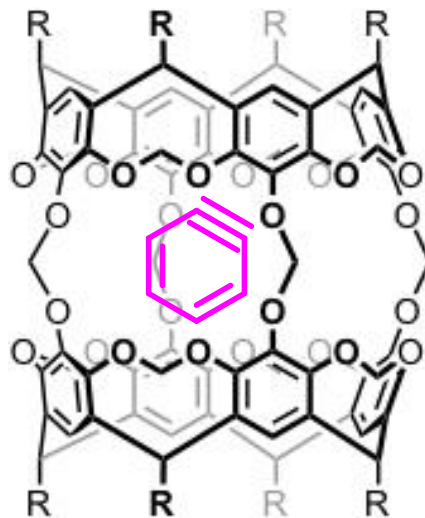
*vancomycin* v bakteriální membráně



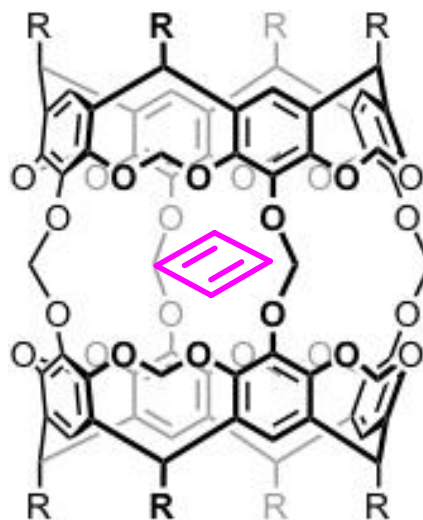


- Studium reaktivních intermediátů

benzyn

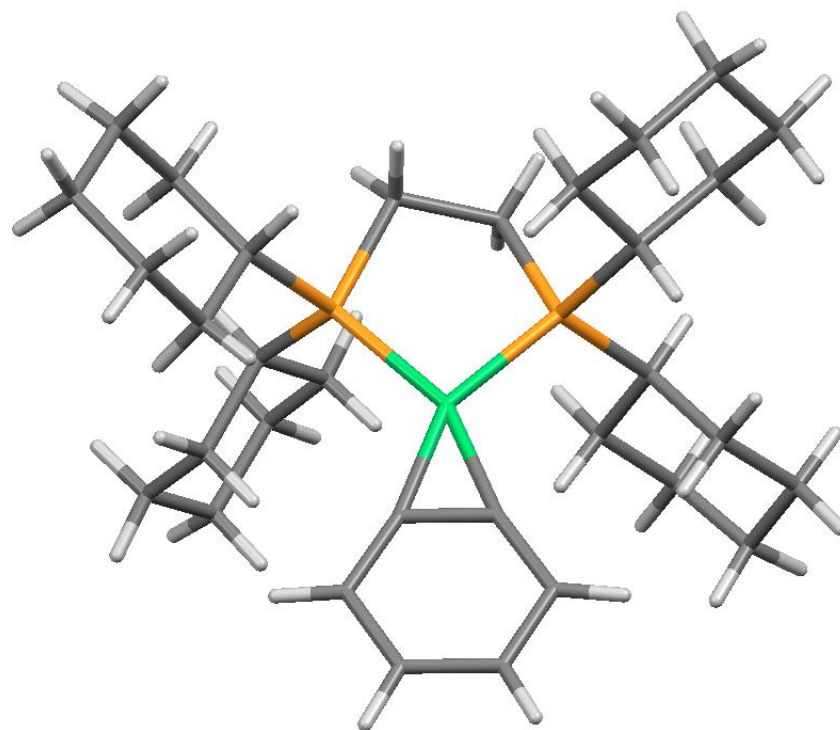
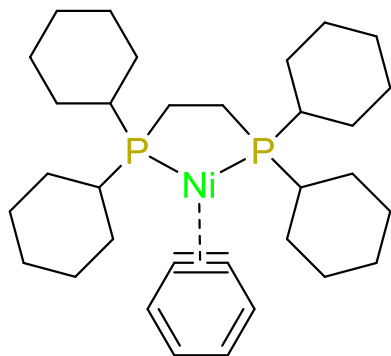
R. Wartmuth *Angew. Chem. Int. Ed. Engl.* 1997, 36, 1347.

cyklobutadien  
(4N => anti-aromaticita)

D. J. Cram et al. *Angew. Chem. Int. Ed. Engl.* 1991, 8, 1024.



- Krystalová struktura komplexu benzynu



Bennet, M. A. et al. *Organometallics*, 1985, 4, 1992

