

# **Promising helicase inhibitors for HCV Treatment**

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# Thank you!



# This Talk will cover...

**HCV** (epidemiology, pathogenesis, genome, treatment)

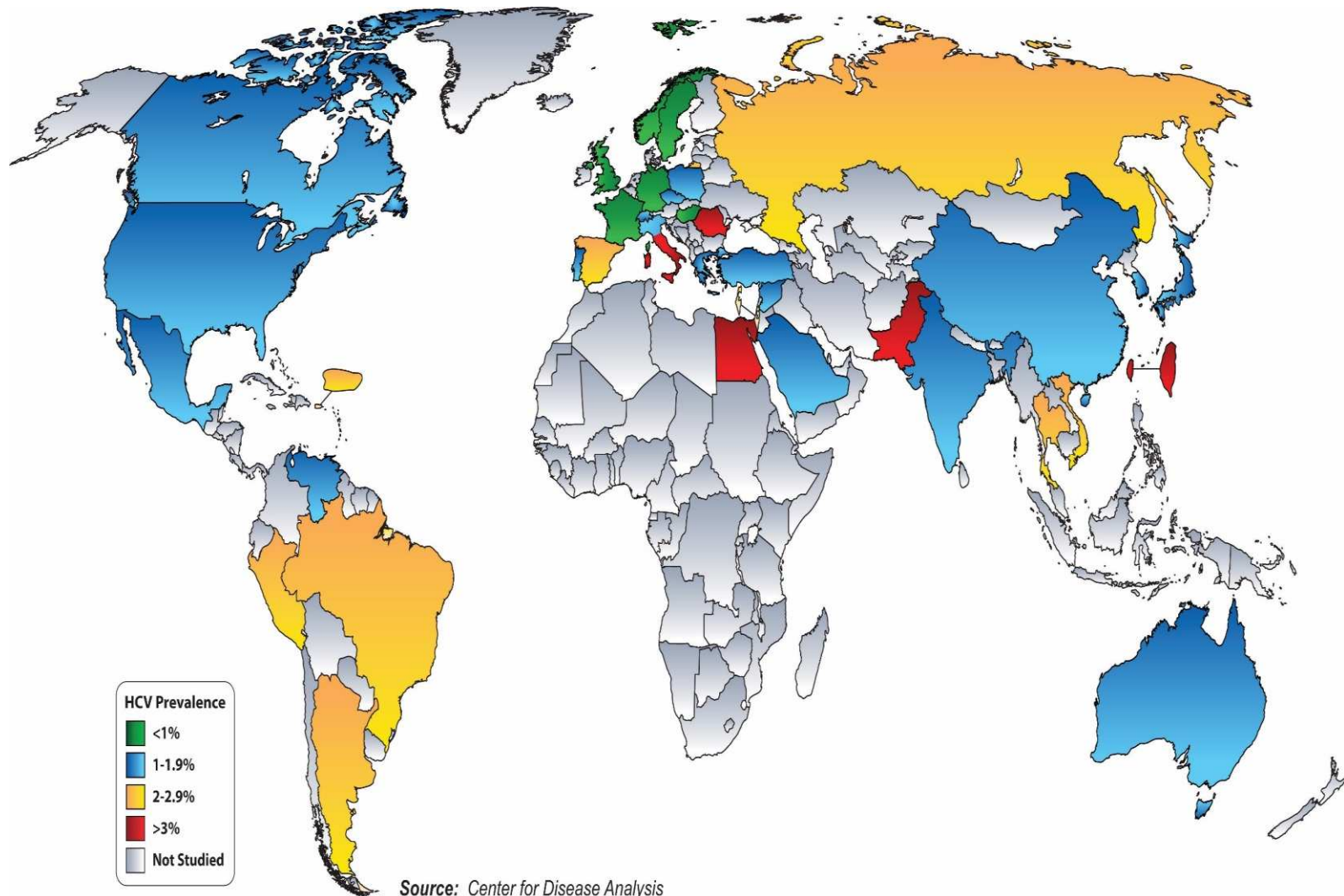


**Drug Screening** (in vitro, bioinformatics)

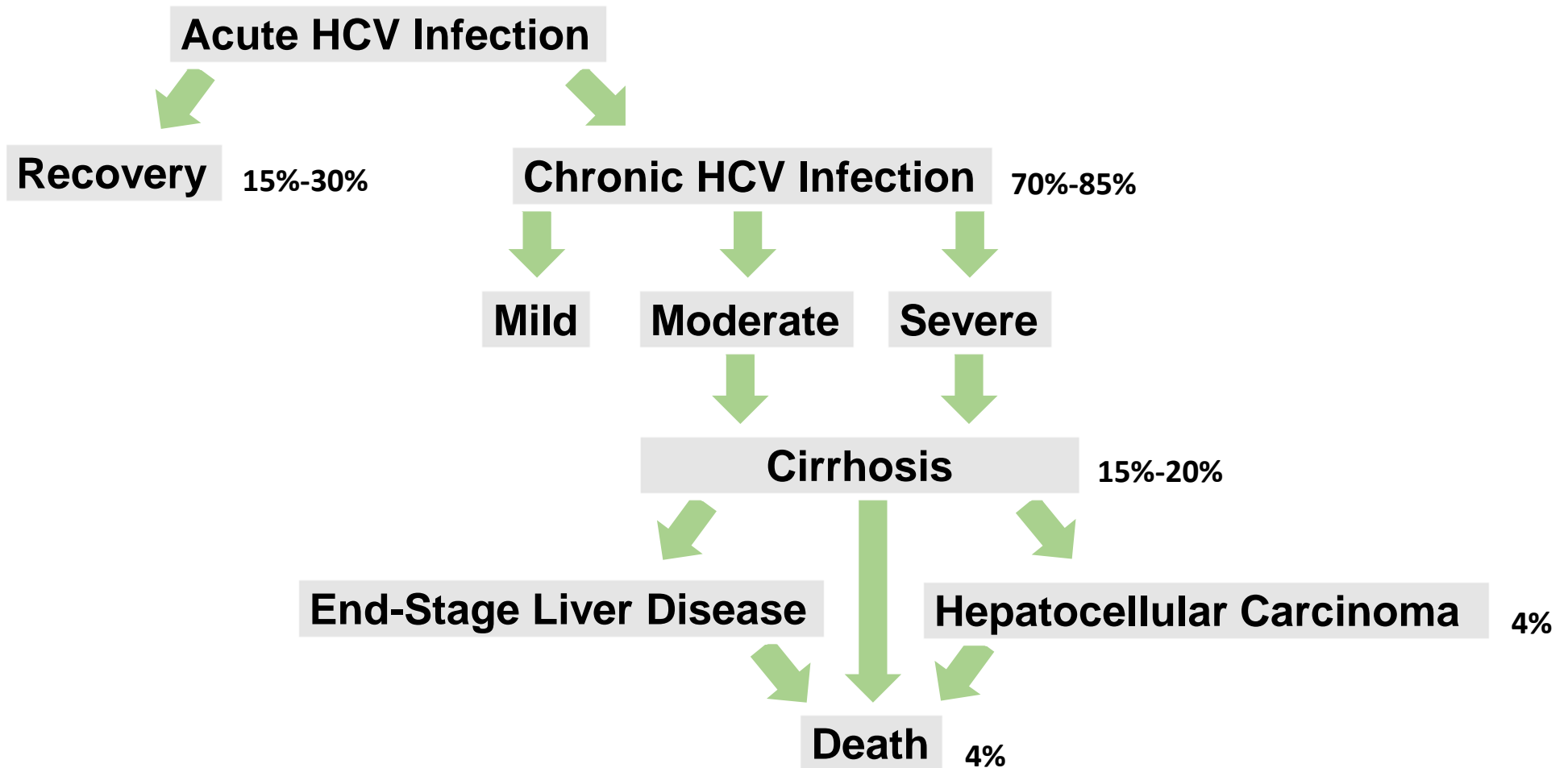


**Clinical trial**

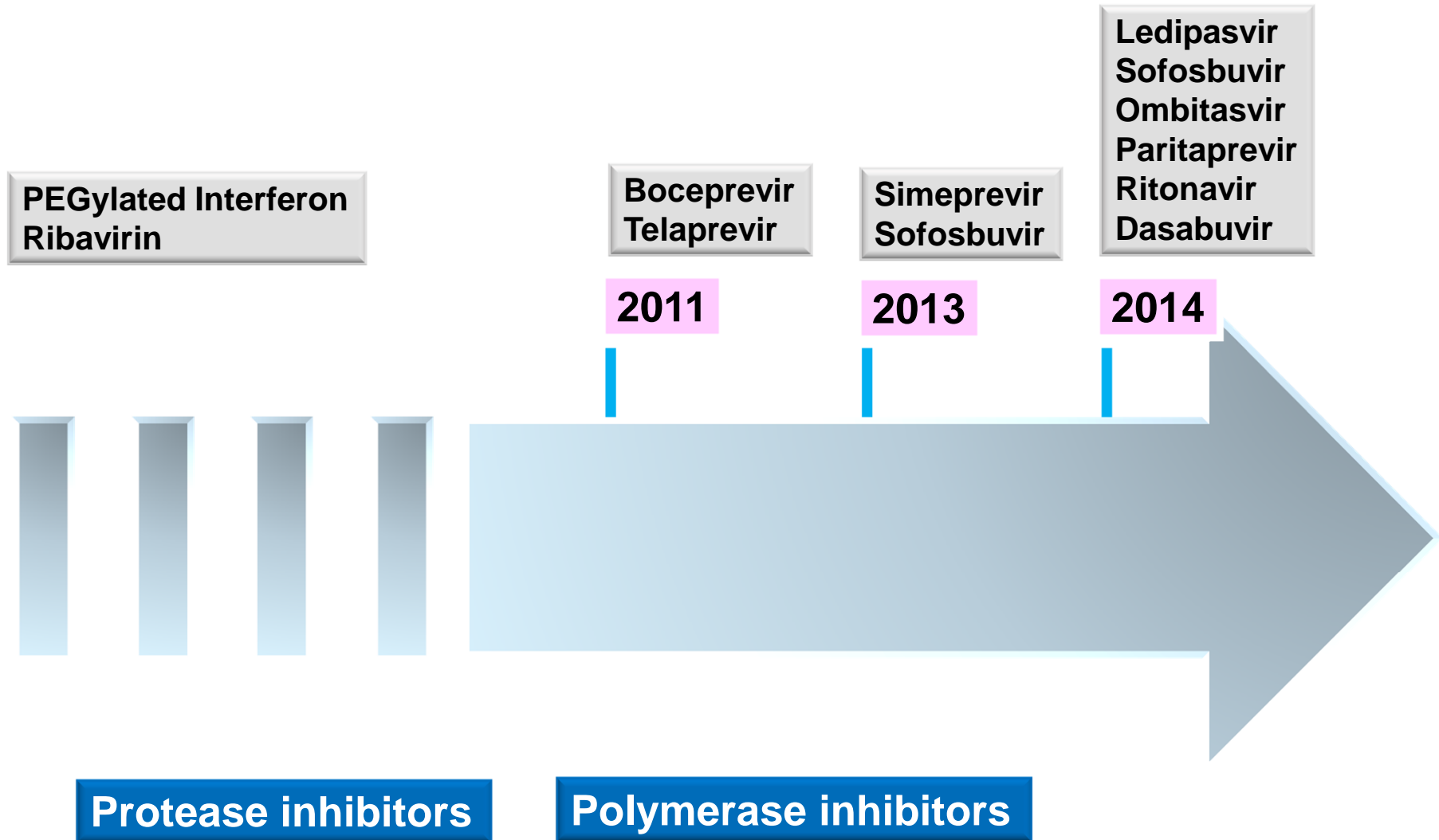
# HCV Prevalence



# HCV Pathogenesis



# Treatment for HCV



# Limitations of treatment

**PEGylated Interferon  
Ribavirin**

**Long duration**

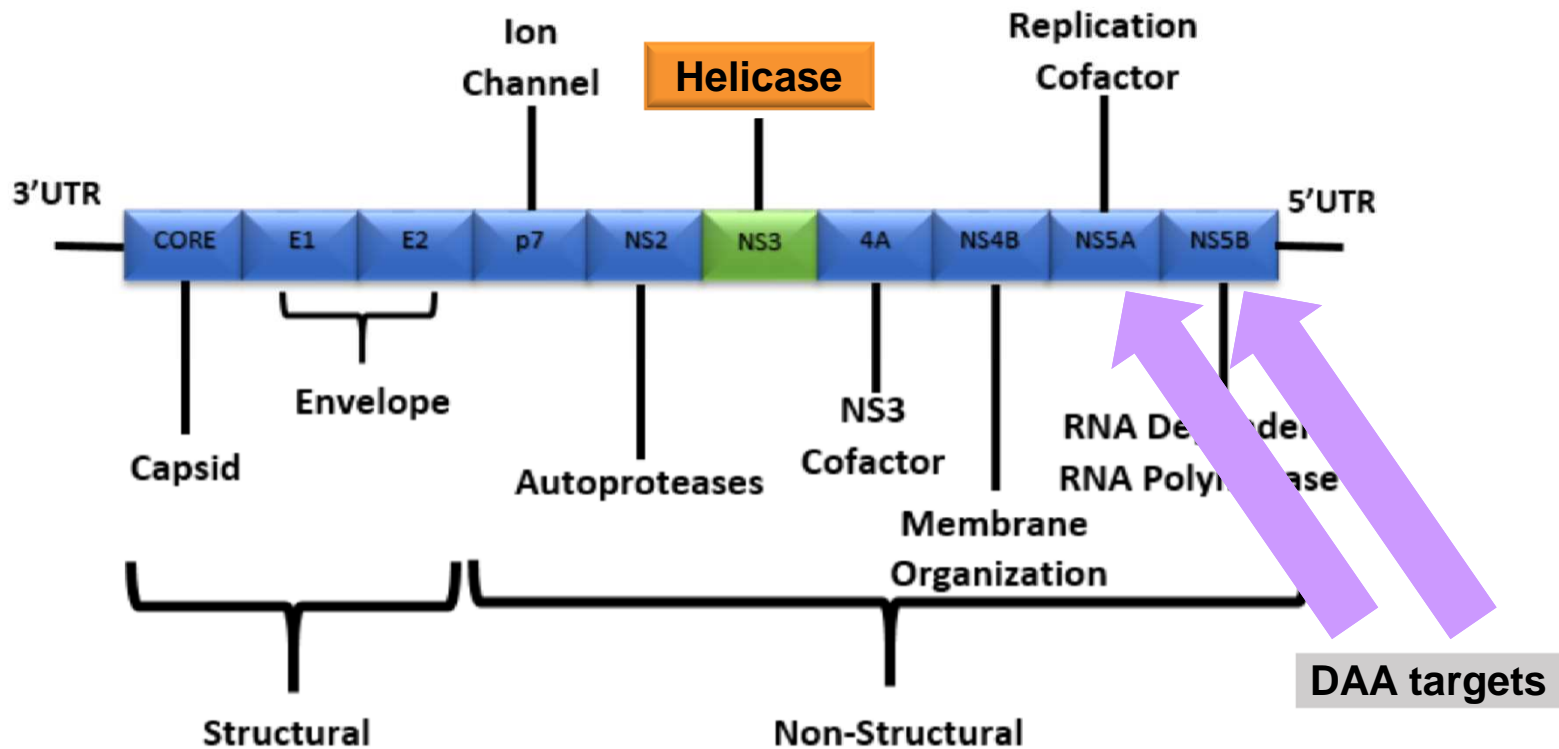
**Adverse effects**

**Affordability**

**Resistance to treatment**

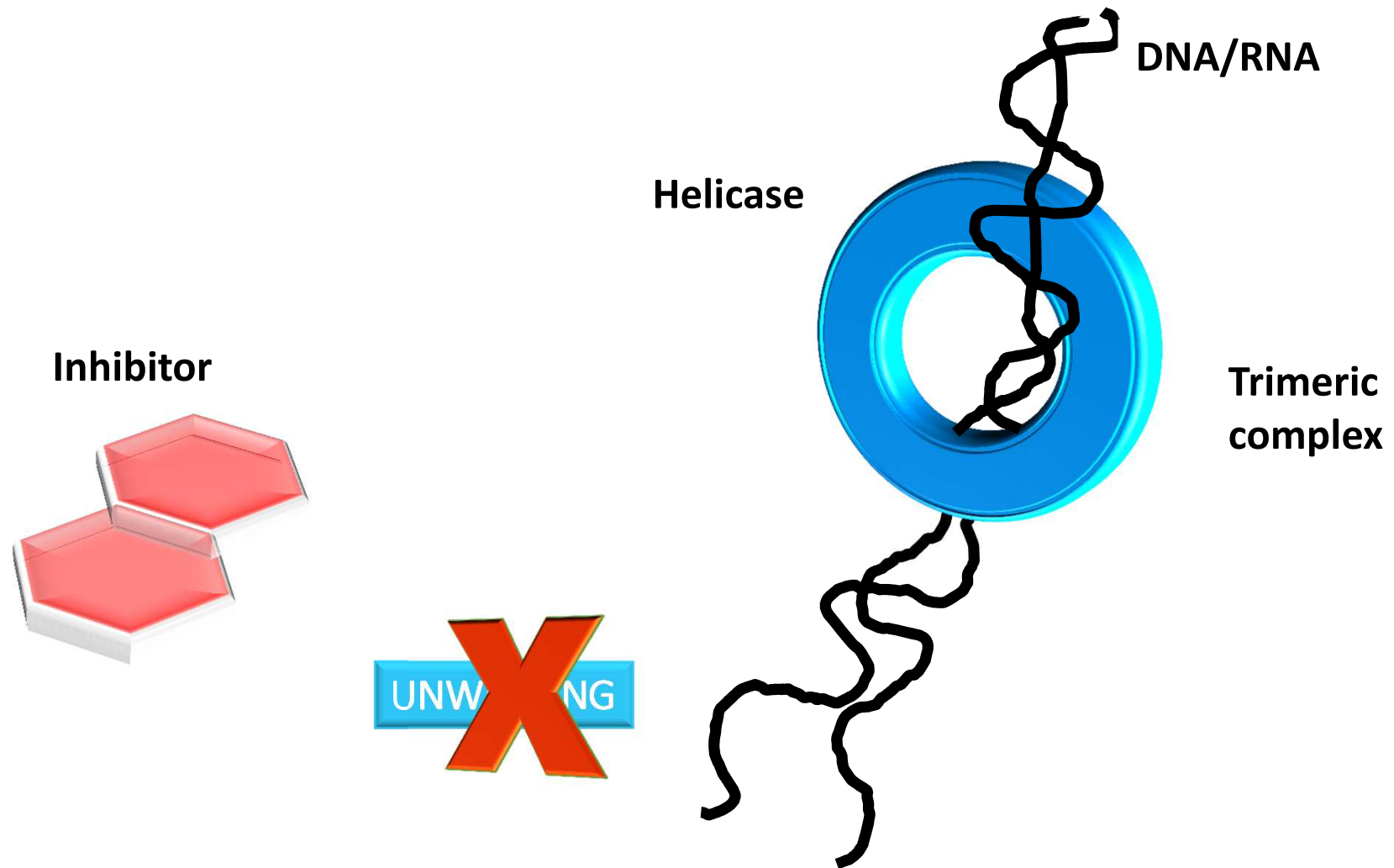
**Genotype variation**

# HCV Drug Targets





# Helicase Action



# Drug Screening for HCV

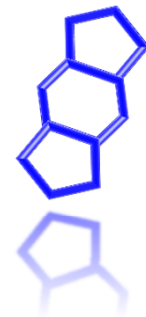


**Cell Culture models**



**Enzyme assays**

**Bioinformatics**



# Drug Screening for HCV

**Huh8 cells**

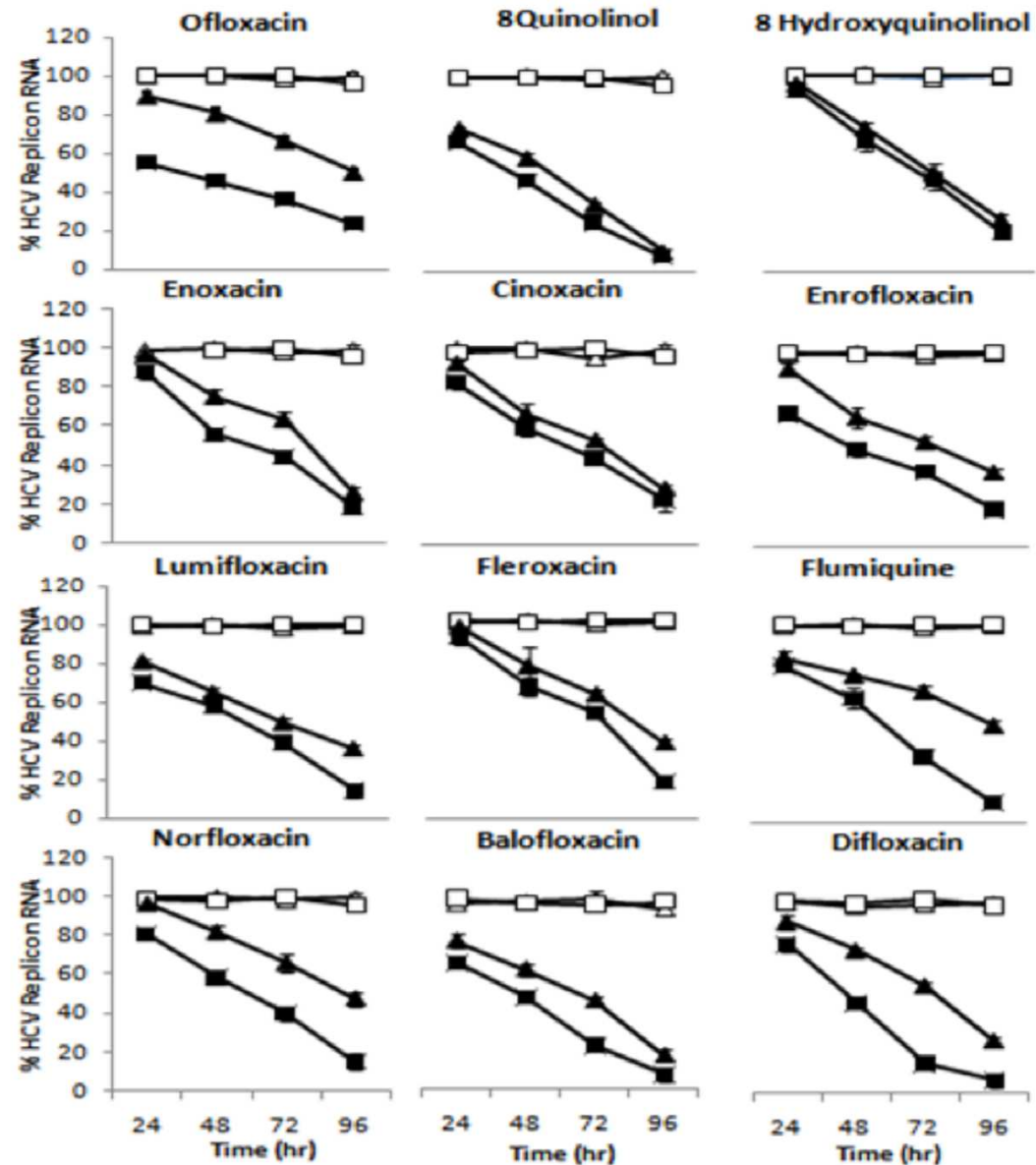
HCV Replicon



Incubate cells  
with drug



Quantify  
HCV RNA



# Drug Screening for HCV

**Huh7 cells**

HCV virion



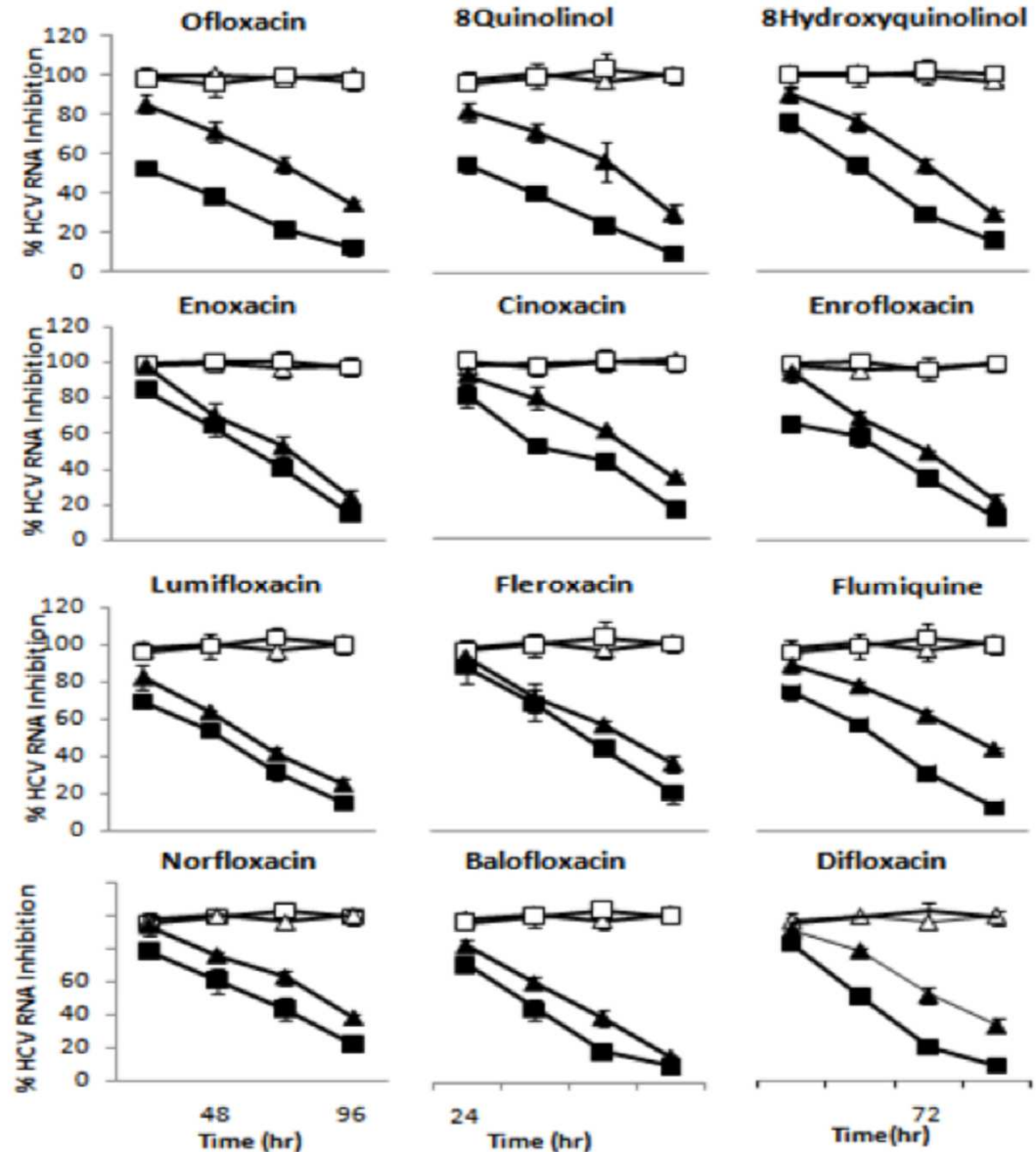
**Infect cells with HCV**



**Incubate cells with drug**



**Quantify HCV RNA**



# Drug Screening for HCV

**HCV NS3**

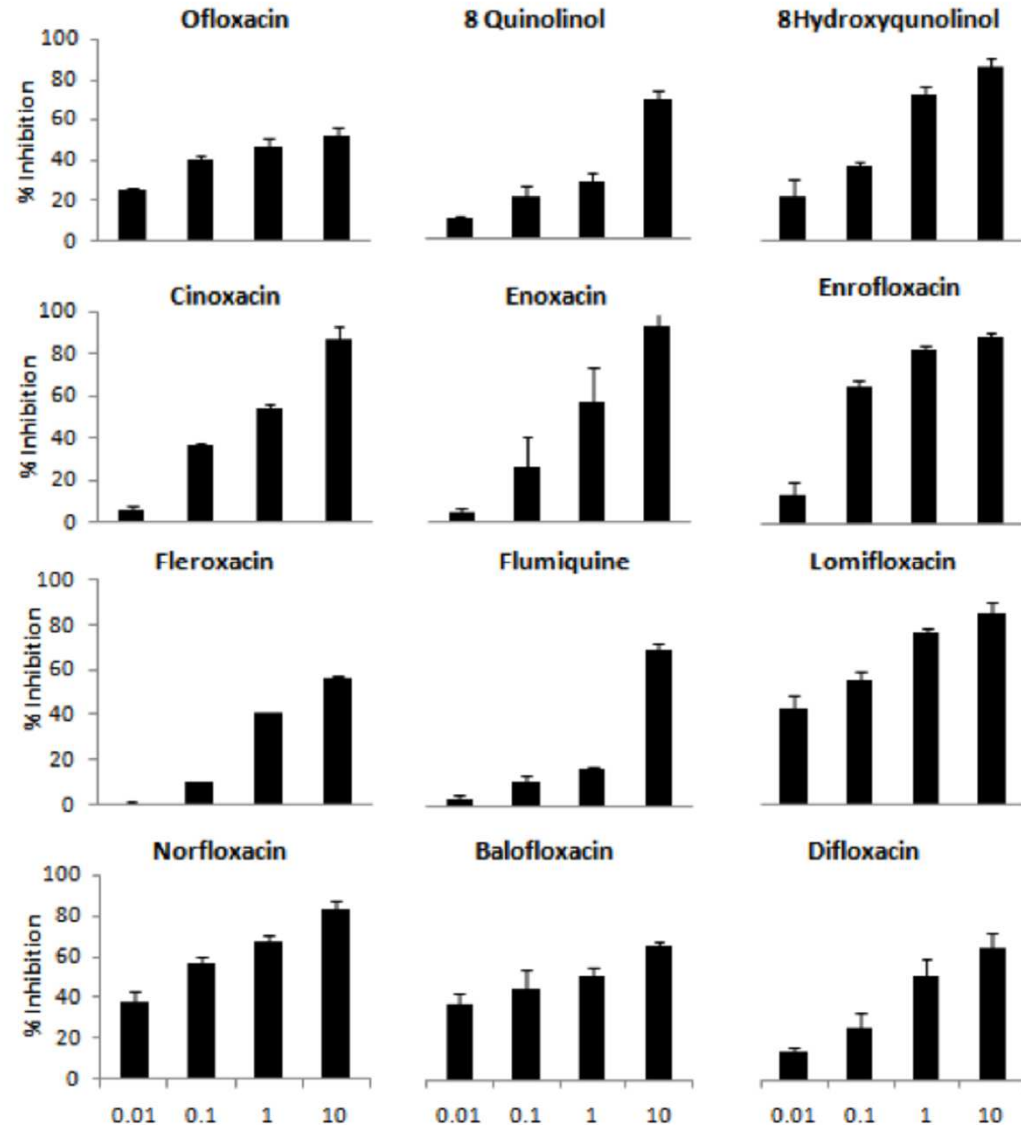
Helicase



**Purify viral helicase**

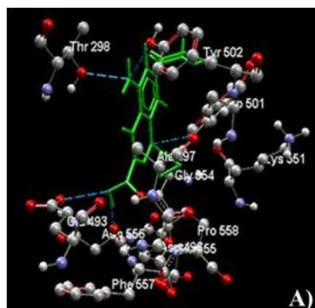


**Measure activity  
With and without drug**

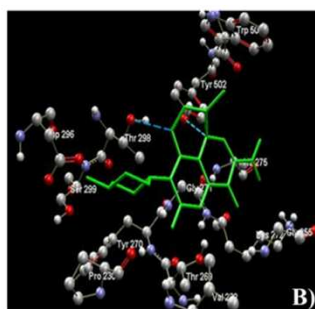


# Drug-Target interactions

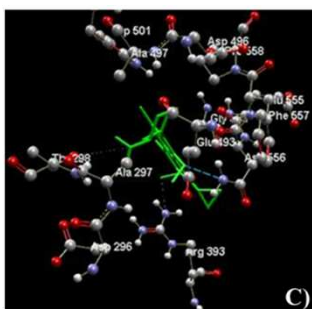
**Sparfloxacin**



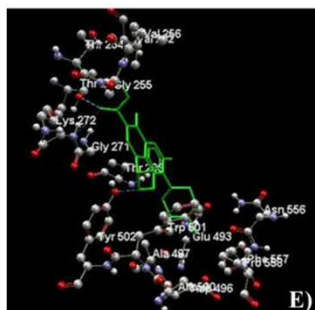
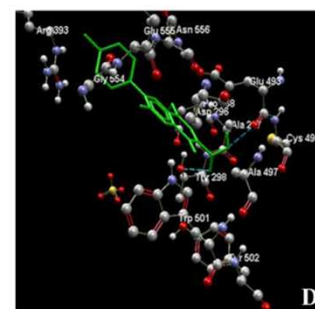
**Ofloxacin**



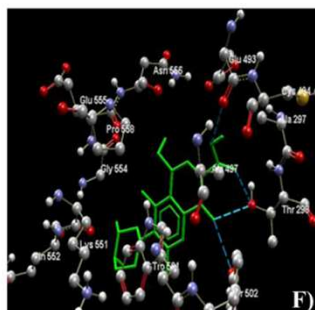
**Balofloxacin**



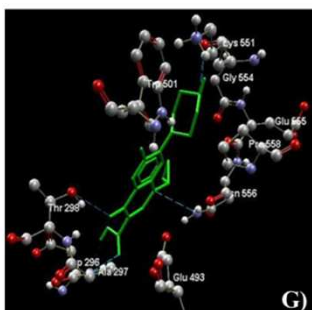
**Pefloxacin**



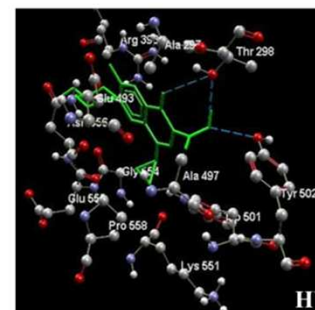
**Levofloxacin**



**Lomefloxacin**



**Ciprofloxacin**



**Enrofloxacin**

# Summary

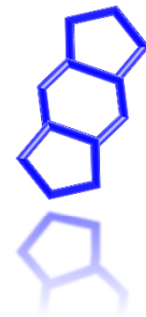


**Cell Culture models**

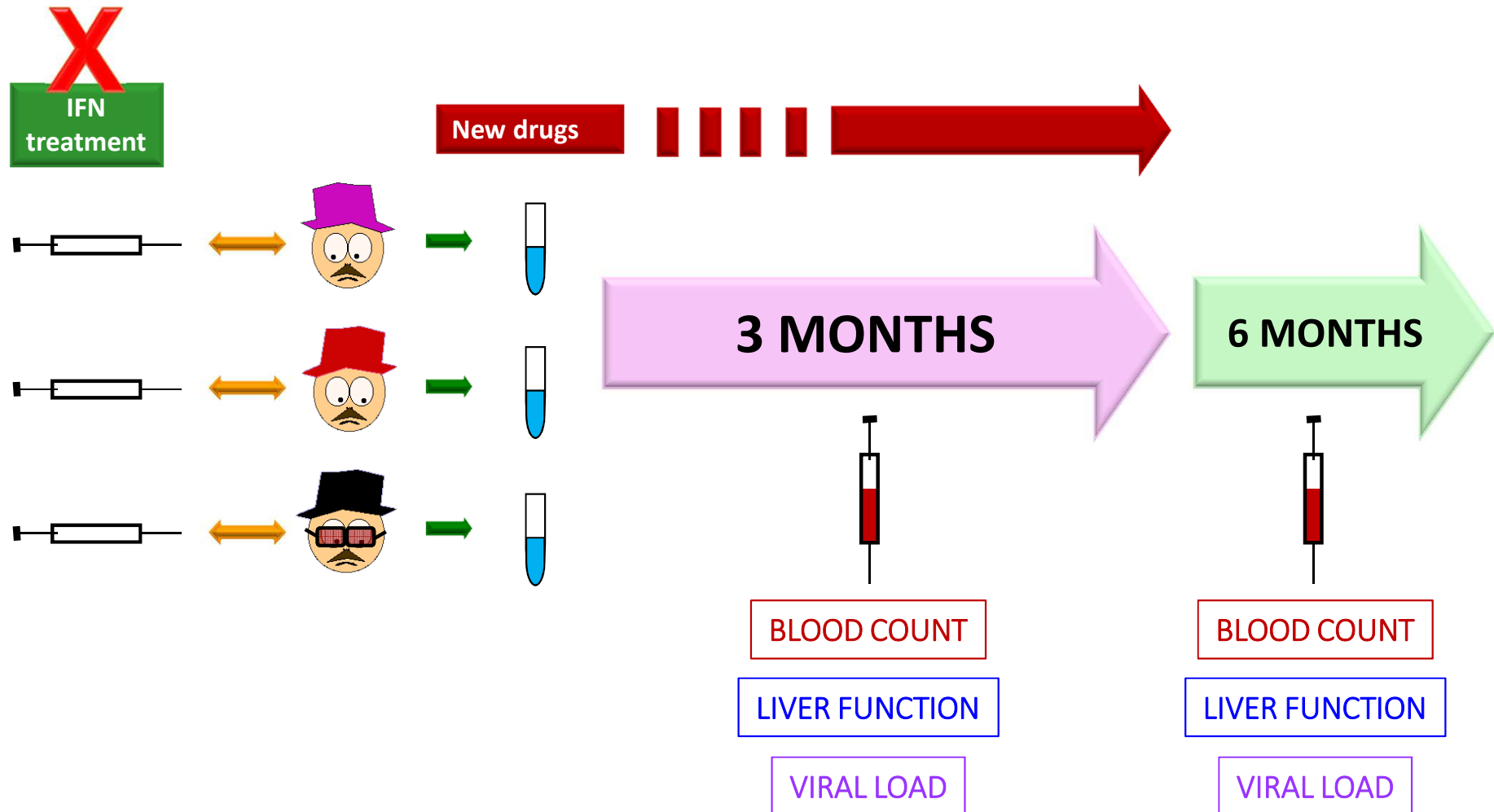


**Enzyme assays**

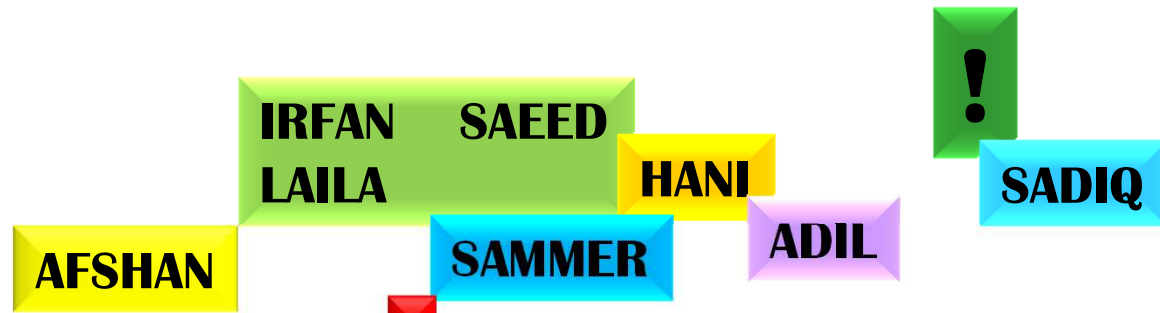
**Bioinformatics**



# Clinical Trial







**CANCER & VIRUS LAB**

