

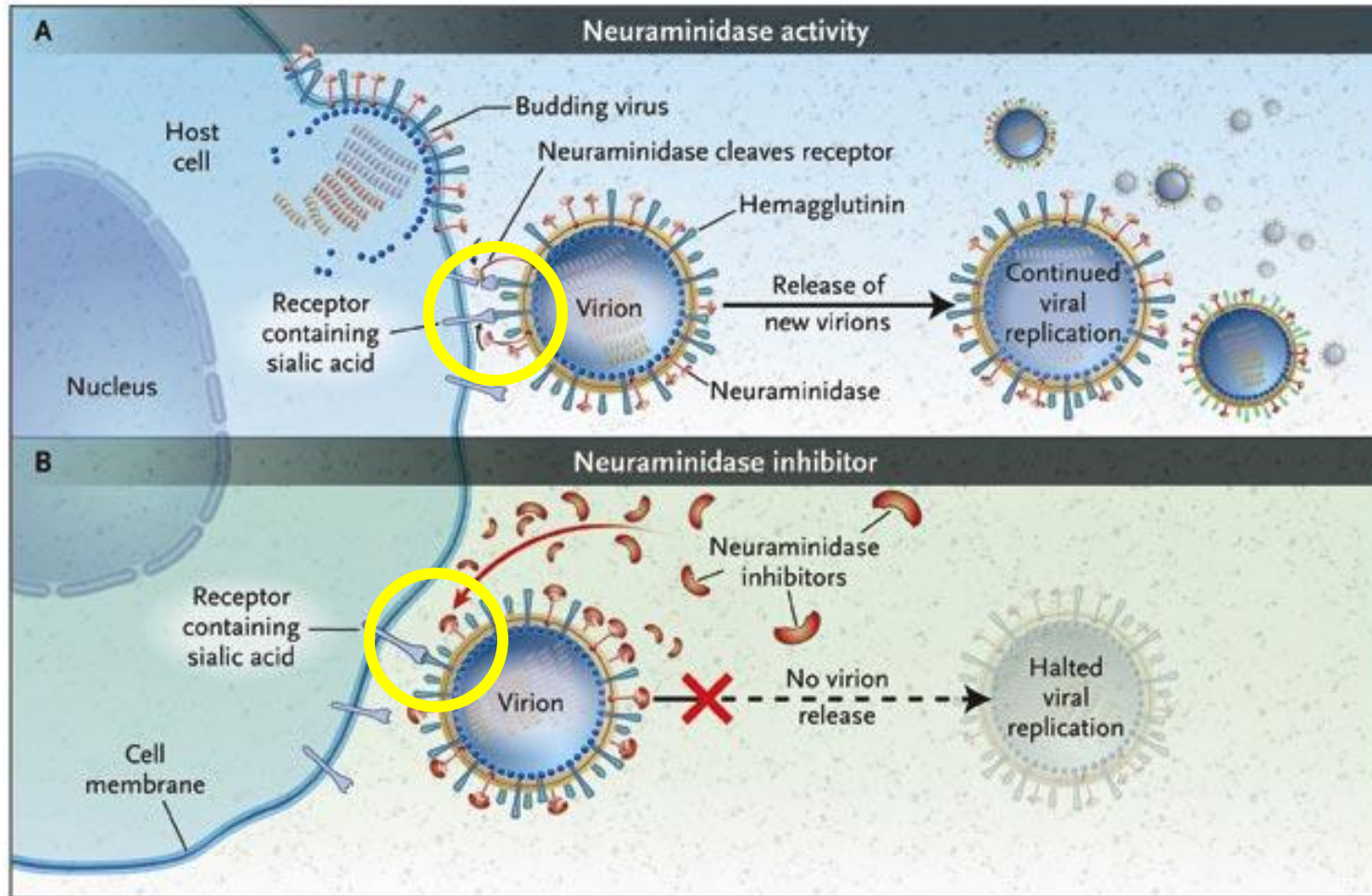
OSELTAMIVIR PHOSPHATE



ITAI GUETA

OSELTAMIVIR

Mechanism of Action



OSELTAMIVIR USES

- Influenza A or B
- For the symptomatic treatment of uncomplicated acute illness
- Adults, adolescents and children > 1 y/o
- Symptomatic for < 2 days
- For the prophylaxis of Influenza A or B virus Infections

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EFFICACY

Treatment Efficacy*

Adults (A) – decreased by 1.3 days

Geriatric (A) – decreased by 1 day

- lower incidence of respiratory complications

Children (A/B) – decreased by 1.5 days

- lower incidence of otitis media

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EFFICACY

Prophylaxis Efficacy

Adults – 82% effectiveness (37.2°C + Respiratory + Systemic)

(a) 1.2% oseltamivir - 4.8% placebo

(b) 1% oseltamivir - 12% placebo

almost all ***seasonal*** influenza A (H1N1) viruses circulating in the US in late 2008 and early 2009 were resistant to oseltamivir;

➔ Zanamivir, Amantadine, Rimatadine

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H1N1 – Novel 2009 Influenza A

- Triple reassortant swine influenza containing genes from

 - (1) Human Inf. A

 - (2) Swine Inf. A

 - (3) Avian Inf. A

- 12 Jun '09: > 29,000 cases

- Susceptible to Oseltamivir and Zanamivir**

- Resistance to Amantadine and Rimatidine

OSELTAMIVIR ADMINISTRATION

- Oral capsules: 30mg, 40mg, 75mg
- Oral Suspension: 12 mg/ml

*Treatment***

- Adults 75 mg X2 / 5 days
- Children 30 mg X2/ 5 days (<15kg)
 45 mg X2/5 days (15-23kg)
 60 mg X2/5 days (23-40kg)
 75 mg X2/5 days (> 40kg)

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PHARMACOKINETICS

- Peak P_{conc} . 3-4 hours
- 80% bioavailability
- Systemic exposure in geriatrics - $\uparrow$ 25-35%
- Mild-moderate hepatic impairment is sufficient
- Unknown regarding placental crossing
- 42%/ 3% plasma protein binding
- $T_{1/2}$: 1-3 hours/ 6-10 hours

OSELTAMIVIR ADVERSE EFFECTS

<u>GI:</u>	Nausea, Vomiting	10-15%
	Diarrhea or Abdominal pain	7%/12% (pediatrics)

Nervous System:

Headache	Treatment 2%	Prophylaxis 18%
Dizziness (2%), Insomnia (1%), Vertigo (1%), Fatigue (8%)		
Neuropsychiatric events*		

Dermatologic and Sensitivity – Toxic epidermal necrosis, SJS,
(rarely) Erythema multiforme

Respiratory: Bronchitis (2%), Cough (5%)

Other*: Hepatitis/ Abnormal LF, Arrhythmia, DM~ <1%
Unstable angina, Anemia, Humeral Fracture < 1%

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DRUG INTERACTIONS

1. Not metabolized by CYP

2. Probenecid – unlikely - Thrombocytopenia

Pharmacotherapy, 2009; 29: 988-992.

3. Acute Pancreatitis with KD 5 days after Oseltamivir*

Eur J Pediatr, 2005; 164: 180-181.

1. Raisch dw, Straight TM, Holodny M. Thrombocytopenia from combination treatment with oseltamivir and probenecid. *Pharmacotherapy*, 2009; 29: 988-992.
2. American Society of Health-System Pharmacists, Inc. Oseltamivir, Selected Revision, June 18, 2009.
3. Takeshi A, Nobuko S, Kentaroh Y & al. Acute pancreatitis with Kawasaki disease. *Eur J pediatr*, 2005; 164: 180-181.

Thanks you,