

Common Side Effects of HIV Meds

FACE

Lipoatrophy

Loss of fat in cheeks, temples or extremities

BODY

Lipodystrophy

Increase in abdominal size, breast size, and/or dorsocervical fat pad (buffalo hump)

LIVER

Hepatotoxicity

Liver damage

NERVES

Neuropathy

Nerve damage causing strange sensations and pain, starting in the hands/feet

BONES

~~Osteoporosis, Osteopenia~~
Bone loss

SKIN

Rashes

HEART

Hyperlipidemia, High Cholesterol and High Glucose

Increase in the amount of fat, cholesterol, or sugar in the blood that can lead to heart disease

KIDNEYS

Nephrotoxicity, Kidney Stones

Kidney damage

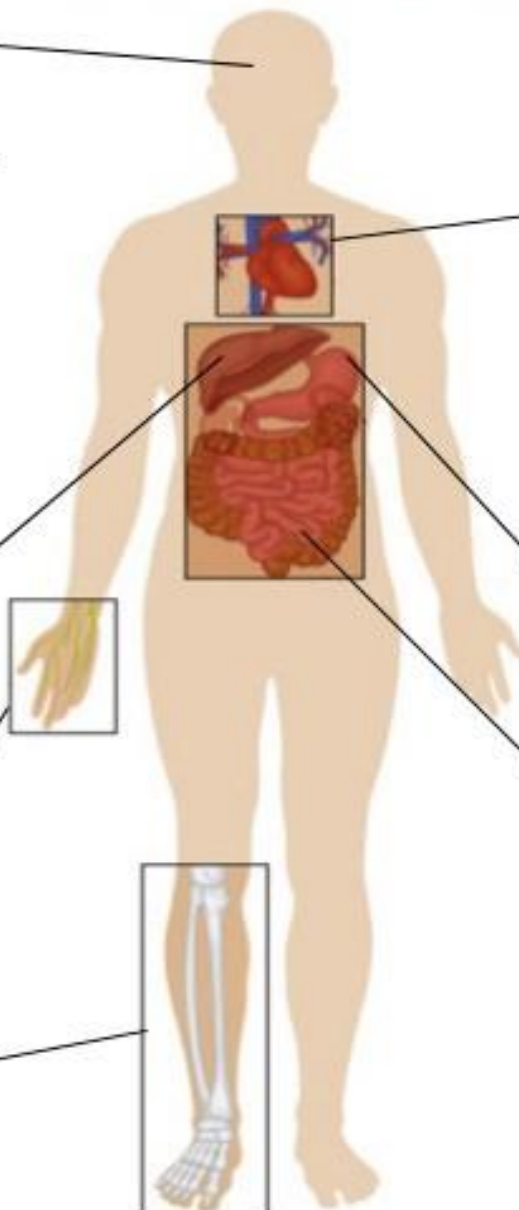
GUT


Nausea, Diarrhea and Vomiting

BLOOD

Anemia

Low number of blood cells; causes fatigue



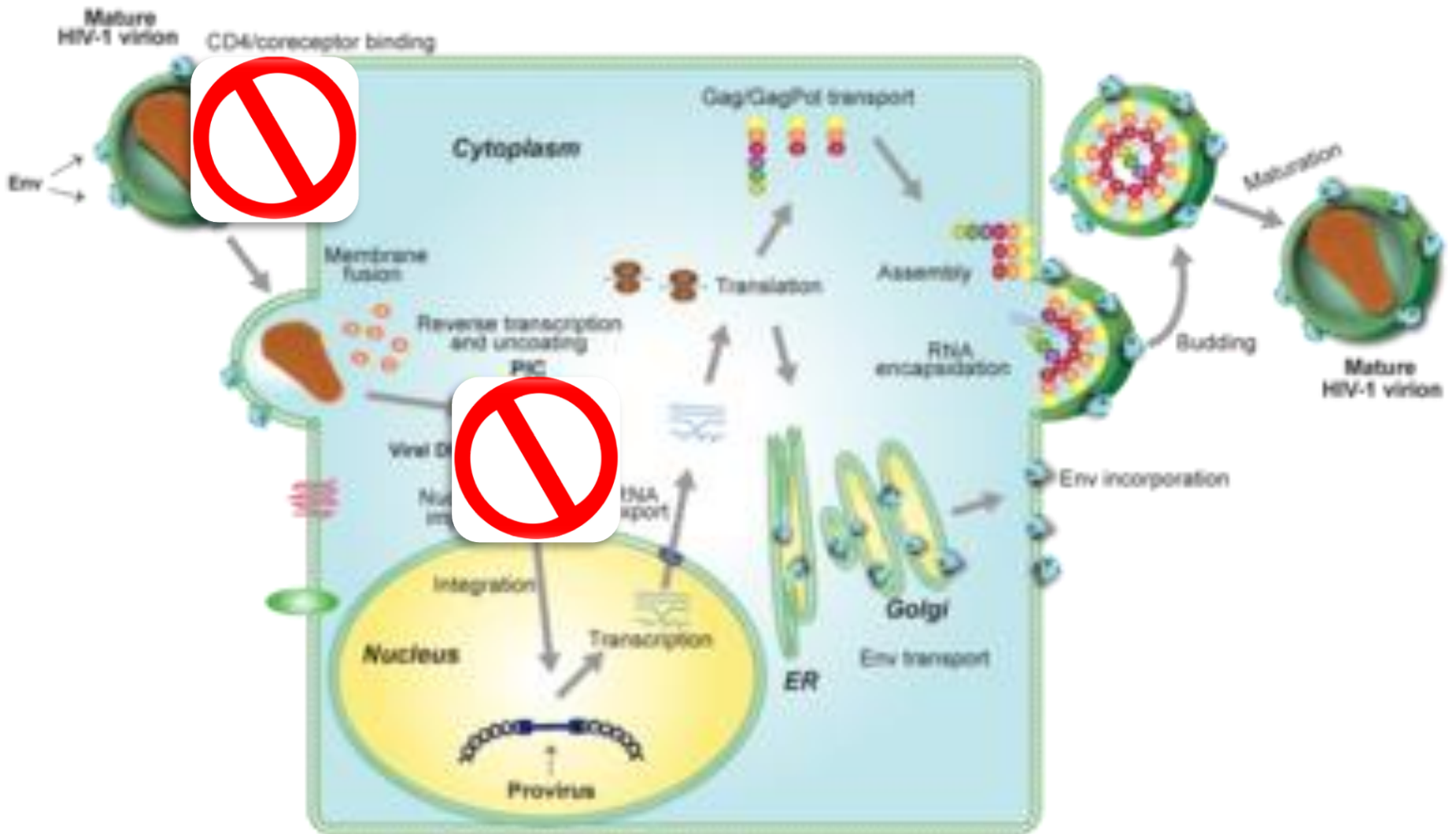


Investigation of Possible Inhibitory Action of Philippine crocodile (*Crocodylus mindorensis*) serum on Human Immunodeficiency Virus Type-1 Infectivity in vitro– Prior To and After Attachment to Human Peripheral Blood Mononuclear Cells

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Objectives



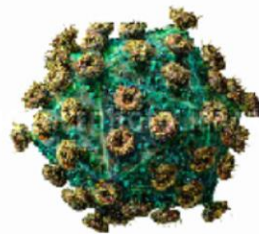
What we did?

Blood
Collection

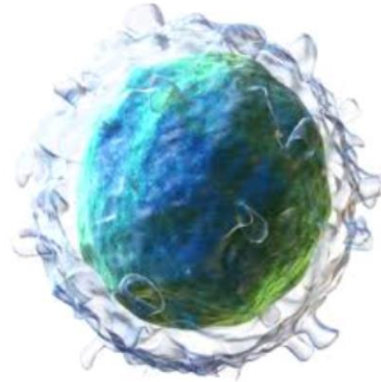
Cell
Culture

Pre-
Infection
Assay

Post-
Infection
Assay



HIV-1

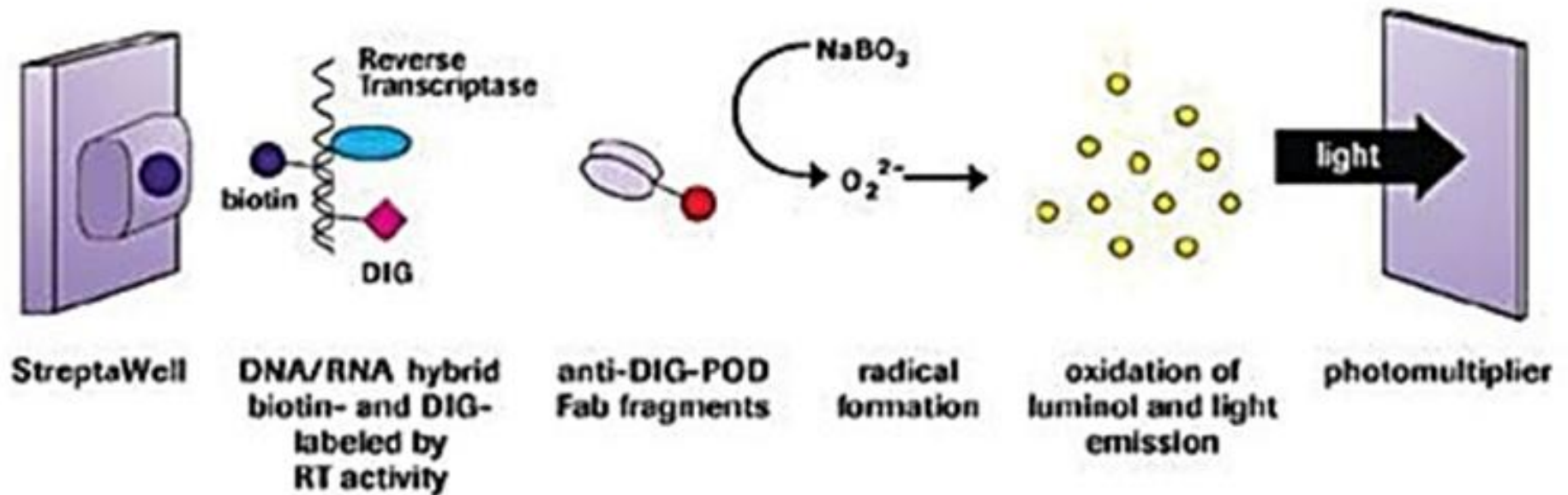


Lymphocytes



Crocodile Serum

Principle of the Reverse Transcriptase Kit



$$\% \text{ inhibition} = \frac{\text{Absorbance of Negative control}^* - \text{Absorbance of test sample}^{**}}{\text{Absorbance of Negative Control} \times 100}$$

Absorbance of Negative Control X 100

*Negative control –without crocodile serum

**Test sample – with Crocodile Serum

Post-infection Interaction

Table 1. Inhibitory Activity of the Philippine Crocodile Serum in Post-infection interaction (cell-associated HIV)

Concentration % vol/vol	Replicates	Absorbance	Inhibition (%)	Mean±SD
0.50	1	0.1010	68.05%	65.68±2.93
	2	0.1010	68.05%	
	3	0.1200	62.05%	
	4	0.1120	64.58%	
0.25	1	0.0990	68.68%	69.32±0.45
	2	0.0970	69.32%	
	3	0.0960	69.63%	
	4	0.0960	69.63%	

This indicates that the inhibition occurs either direct interaction to viral enzymes reverse transcriptase and or protease which are key viral enzymes of HIV-1 replication.

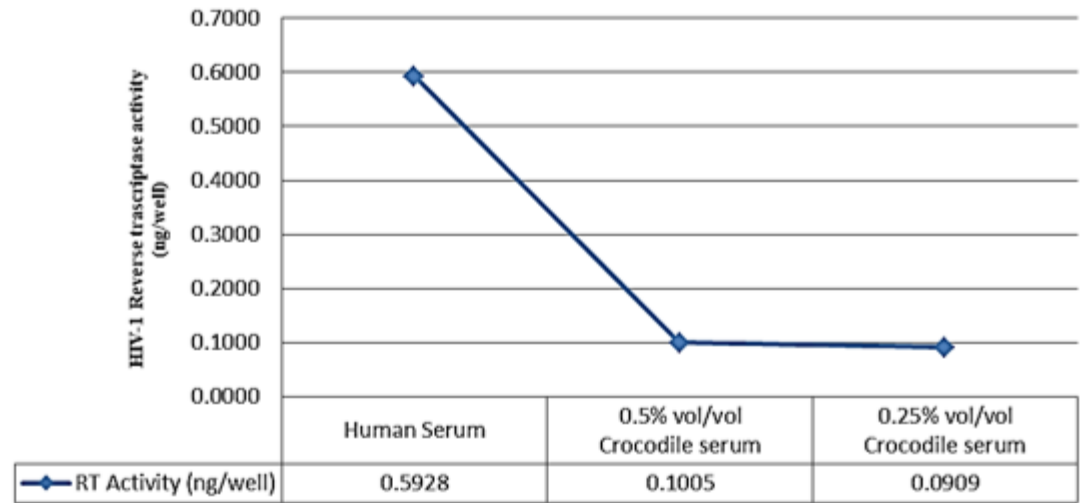


Figure 2. Reverse Transcriptase Activity in Pre-infection interaction (cell-free HIV)

Pre-Infection Interaction

Table 2. Inhibitory Activity of the Philippine Crocodile Serum in Pre-infection interaction (cell-free HIV)

Concentration % <u>vol/vol</u>	Replicates	Absorbance	Inhibition (%)	<u>Mean±SD</u>
0.50	1	0.0940	68.92%	68.61±1.67
	2	0.1000	67.66%	
	3	0.1020	67.03%	
	4	0.1010	70.82%	
0.25	1	0.1000	68.37%	69.95±2.24
	2	0.1000	68.37%	
	3	0.0900	71.53%	
	4	0.0900	71.53%	

Putative action of the Philippine crocodile serum targets the:

- *HIV-1 interaction of gp120 spike and CD4 receptor*
- *Direct virucidal effects*

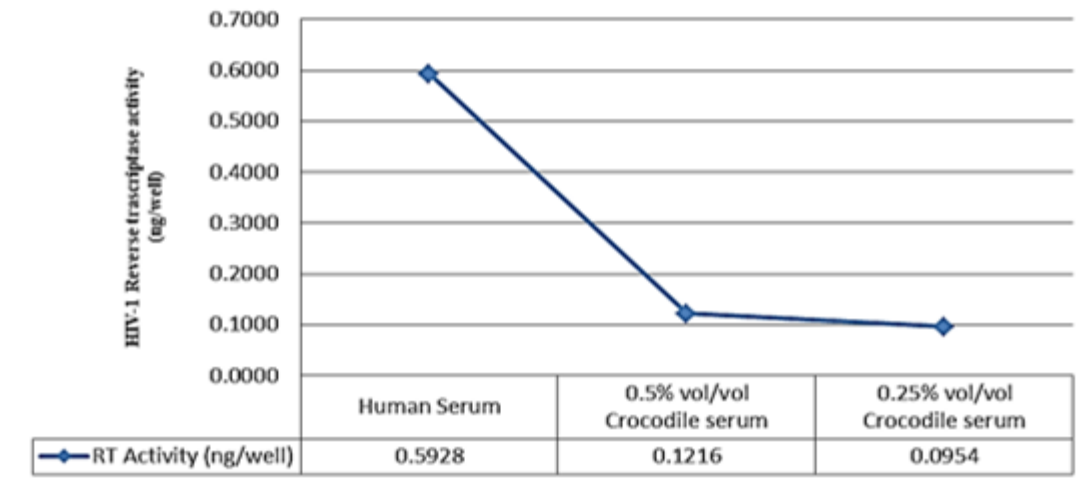


Figure 1. Reverse Transcriptase Activity in Post-infection interaction (cell-associated HIV)

Conclusion

The inhibitory action of the Philippine crocodile serum **effectively regulates the HIV-1 replication in both pre- and post-infection interactions.** With this, the Philippine crocodile serum could be a novel source of HIV-1 replication inhibitors.



Recommendations



Conduct further studies that would elucidate the safety and mechanism of inhibition of the crocodile serum

If we neglect this creature we might end up one day regretting that we missed the chance to save some lives.

