

**SUMATRAN RHINO CONSERVATION CENTRE
DEPARTMENT OF WILDLIFE AND NATIONAL PARKS
SUNGAI DUSUN, SELANGOR
MALAYSIA**

MONTHLY REPORT

NOVEMBER 2002

BY

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&

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INTRODUCTION

There was only one breeding occurred this month and Ara bred Seputeh for thirty minutes. Rima's progesterone level was high throughout the month and she was suspected to be pregnant. The other three females showed no positive behaviour although they were mixed with the male on regular basis.

Blood sample were collected as usual, twice weekly and the samples were sent to UPM for hormonal analysis. Blood was also sent to Veterinary Research Institute, Ipoh for routine checking.

As for Minah, she was weighed weekly and her weight improved a lot after giving her the 'Equine Senior' pellet. Her weight has been up and she looked more active and alert. The other rhinos are also in a good health and they were weighed once a month.

RHINO MANAGEMENT

A) Daily Management

i) Night stall

Daily work

Starting this month, Mohd Noor will manage the night stalls together with Shariff and Umor. Shariff and Umor will clean the night stalls daily while Mohd. Noor inspected the food supply when it arrived around 9.30 a.m. The browse and fruits were weighed and cleaned before giving to the rhinos. About 40 to 50 kg of browses and 7kg of fruits including papaya, banana and sweet potatoes were given daily. The rhinos were also given horse pellet about 2.0kg every morning. Every Monday and Thursday morning, blood samples will be collected from all rhinos.

The rhinos

The rhinos were let out first before cleaning the night stalls. After cleaning, the browses were put in the feed trough and the rhinos were let in for their morning meal. The drinking water was changed daily and stress vet (multi-mineral powder) was mixed inside it. Daily observation was made and recorded in the workbook for each rhino. The rhinos were fed twice daily: 9.00 a.m. and 3.00 p.m.

ii) Ten acres enclosure

Daily Work

Adam will inspect the electric fencing every morning. The fencing will be cleaned from any foreign objects such as spider web, dried leaves or creepers to avoid short circuit. Voltmeter was used to ensure that the voltage of the fencing is about 7.0 kV. They will also inspect the fencing for any damages.

During the inspection, the ranger will look for the rhino inside the enclosure and call the rhino for their morning meal. The rhino was confined in the quarter acre first before putting their browse in the feeding trough. The amount given was about 100kg for each rhino per day.

B) Breeding Program

i) Breeding Introduction

a) Rima

Rima was mixed with Ara twenty-one days after the last breeding, starting from November 12 to 14 but no positive behaviour observed. She wanted to fight with Ara and sprayed her urine a lot. Blood was taken and the result showed that her P4 level was high, between 1.54ng/ml to 2.02ng/ml. Based on this, she was suspected pregnant.

b) Seputeh

Seputeh was mixed with Ara on Sunday morning (Nov. 10) and positive behaviour was observed. Ara followed Seputeh and a few mountings were observed without successful intromission. Later, the two rhinos were mixed again in the afternoon and Ara bred Seputeh for 30 minutes. Her P4 level is around 0.14ng/ml when she was bred. Ara chased Seputeh after the breeding and the rhinos were separated without any injury to the female.

c) Panjang

Panjang was mixed on a daily basis to stimulate to cycle. No positive behaviour observed and her P4 level is low between 0.07ng/ml to 0.37ng/ml throughout the month.

d) Mas Merah

Mas Merah progesterone profile is irregular. Her hormone level fluctuated between 0.32ng/ml to 0.81ng/ml. She was mixed with Ara daily but she blowing and vocalizing during the mixing.

e) Minah

Minah was also mixed on a regular basis but no breeding occurred. Her progesterone level is also low between 0.03ng/ml to 0.12ng/ml.

ii) Bleeding Program

a) Blood Collection

The blood collection was carried out twice weekly, every Monday and Thursday. The bleeding procedure was summarized in Table 1.

b) Progesterone Hormone Profile

Blood samples were sent to UPM for hormonal analysis and the latest blood result was attached below.

C) HEALTH STATUS

Minah showed an improvement and her weight is being monitored on weekly basis. The result is tabulated in Table 4. The other rhinos were weighed once a month.

Table 3: Rhinos' Body Weight (Kg), November 2002

Month/ Rhino ID	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
RIMA	552	542	542	554	580	576	562		558	580	606	
MAS MERAH	612	590	578	586	595	594	584		602	600	630	
MINAH	462	450	476	476	480	450	458		442	466	492	
SEPUTIH	738	752	742	736	*	724	764		776	*	758	
PANJANG	532	*	523	512	538	514	528		526	526	534	
ARA	610	588	574	574	613	592	634		630	626	644	

REMARKS:

* In the 10 acres enclosure

Table 4: Minah's Weekly Body Weight (Kg), Nov. to Dec. 2002

Rhino ID / Date	6/11	14/11	20/11	27/11	4/12	13/12	18/12
Minah	488	487	492	492	495	490	498

Table 1: Blood Collection from the Rhinos, November 2002

Date	Rhino ID	Area taken	Remarks
Nov 6	Mas Merah Rima Minah Panjang Seputeh	Tail Tail Tail Tail Tail	Samples were taken from two females for P4 analysis.
Nov 11	Panjang Seputeh Minah Mas Merah Rima	Tail Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Nov 13	Rima Minah Mas Merah Panjang	Tail Tail Tail Tail	Blood was taken for P4 analysis
Nov 18	Minah Seputeh Panjang Mas Merah Rima	Tail Tail Tail Tail Tail	Samples were taken from all rhinos for P4 analysis.
Nov 20	Rima	Tail	Blood was taken for the P4 analysis
Nov 21	Mas Merah Minah Seputeh Panjang	Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Nov 26	Minah Panjang Mas Merah Rima Seputeh	Tail Tail Tail Tail Tail	Samples were taken from the females for P4 analysis.
Nov 28	Minah Seputeh	Tail Tail	Blood was taken for the P4 analysis

Table 3: Observation on the Rhinos During Introduction, November 2002

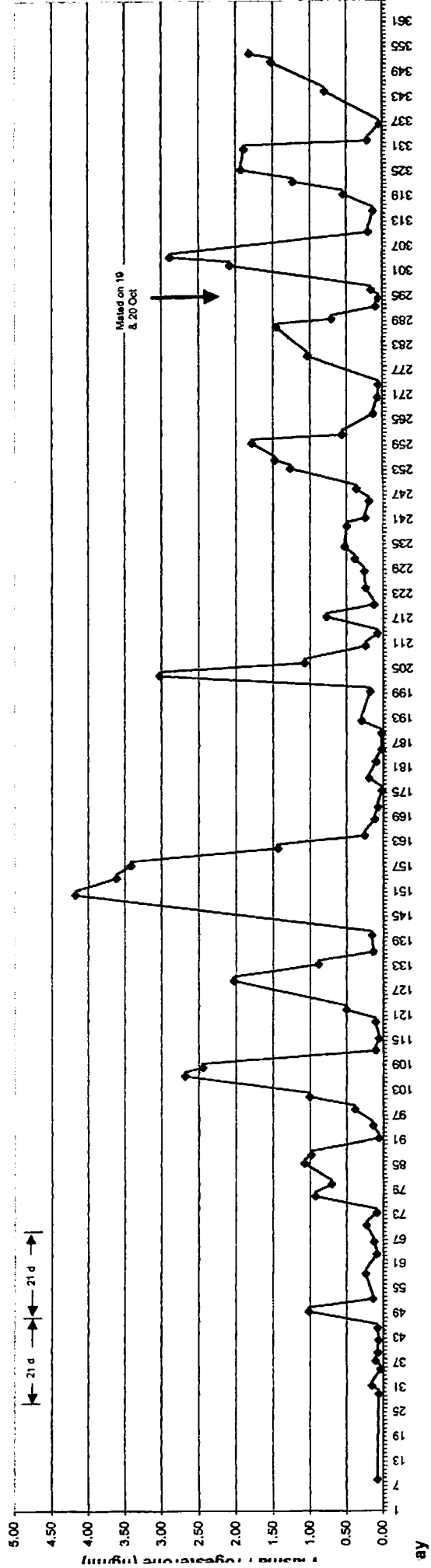
Date	Rhino ID	Observation
Nov 1	Panjang & Ara	No interest observed.
	Minah & Ara	No interest observed.
	Mas Merah & Ara	Mas blowing and vocalizing when approached the feeding area.
Nov 6	Minah & Ara	No interest observed between the two rhinos.
	Mas Merah & Ara	Mas Merah blows and want to fight with Ara.
	Panjang & Ara	No interest observed.
Nov 7	Minah & Ara	No interest observed between the two rhinos.
	Mas Merah & Ara	Mas Merah blows and want to fight with Ara.
	Panjang & Ara	No interest observed.
Nov 9	Minah & Ara	Head butting was observed without any positive response.
	Mas Merah & Ara	Mas Merah blows and want to fight with Ara.
	Panjang & Ara	No interest observed between the two rhinos.
Nov 10	Minah & Ara	No interest showed by the female.
	Seputeh & Ara	Positive behaviour observed in the morning with mounting but no intromission. The rhinos were mixed in the afternoon and Ara bred Seputeh for 30 minutes. Fighting occurred after breeding.
Nov 11	Minah & Ara	No interest observed.
Nov 12	Minah & Ara	No interest observed.
	Mas Merah & Ara	Mas started to blow when approaching the feeding area. No response from Ara and the rhinos were separate to avoid fighting.
	Panjang & Ara	No interest observed.
	Rima & Ara	Ara followed Rima but Rima turned around and try to fight. Head butting a lot. Separated to avoid fighting.

Date	Rhino ID	Observation
Nov 13	Minah & Ara	Eating together, Ara sniffed Minah but ignored her when she walked away.
	Rima & Ara	Rima walked away when Ara approached her. She sprayed a lot and wanted to fight.
Nov 14	Minah & Ara	No interest observed.
	Panjang & Ara	No interest observed
	Mas Merah & Ara	Mas vocalized and blowing a lot. Separate to avoid fighting.
	Rima & Ara	Rima sprayed a lot looked aggressive. Separated the rhinos to avoid fighting.
Nov 18	Panjang & Ara	No interest observed.
	Minah & Ara	No interest observed.
	Mas Merah & Ara	Mas vocalized and blowing a lot. Separate to avoid fighting.
Nov 19	Panjang & Ara	Ara showed no interest.
	Minah & Ara	No interest observed.
	Mas Merah	Mas vocalized and blowing a lot. Separate to avoid fighting.
Nov 20	Panjang & Ara	Ara showed no interest.
	Minah & Ara	No interest observed.
	Mas Merah	Mas vocalized and blowing a lot. Separate to avoid fighting.

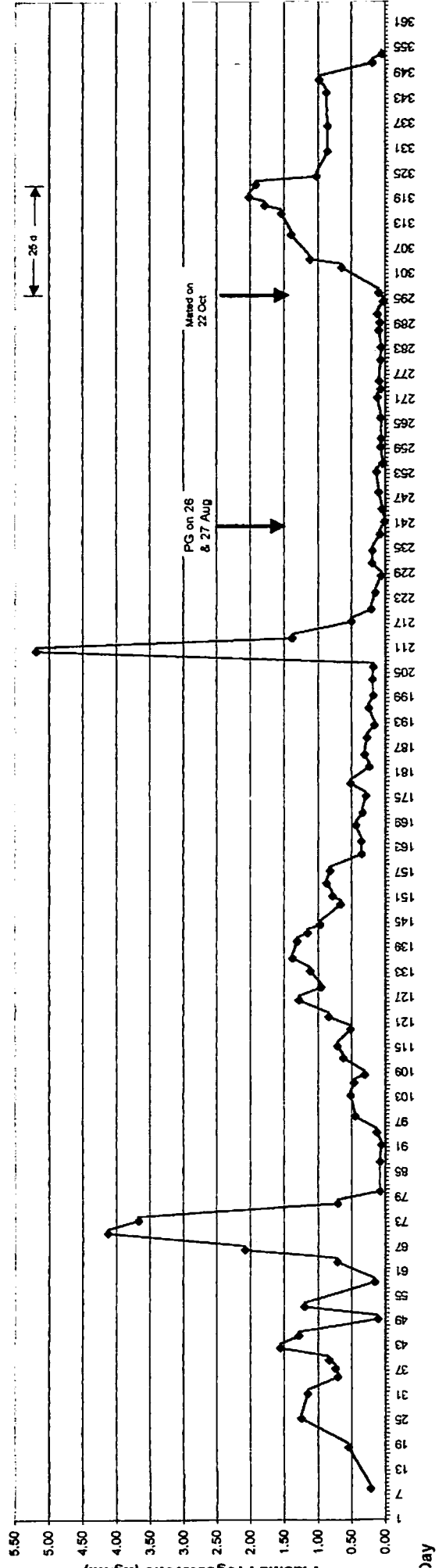
Date	Rhino ID	Observation
Nov 21	Mas Merah & Ara	Mas blowing and vocalized a lot. No interest observed.
	Panjang & Ara	No interest observed on both rhinos.
Nov 22	Panjang & Ara	Ara showed no interest.
	Minah & Ara	No interest observed.
	Mas Merah	Mas vocalized and blowing a lot. Separate to avoid fighting.
Nov 23	Panjang & Ara	Ara showed no interest.
	Minah & Ara	No interest observed.
	Mas Merah	Mas vocalized and blowing a lot. Separate to avoid fighting.
Nov 24	Panjang & Ara	Ara showed no interest.
	Minah & Ara	No interest observed.
	Mas Merah	Mas vocalized and blowing a lot. Separate to avoid fighting.
Nov 25	Mas Merah & Ara	Mas approached the feeding area and eat for a while. She walked away but turned back and blowing at Ara.
	Minah & Ara	Ara sniffed her but no futher response. Minah walked away and Ara ignored her.
	Panjang & Ara	Ara followed Panjang for a while and come back to eat. Panjang approached him but Ara ignored her.
Nov 26	Minah & Ara	Eating together for a while. Min ah walked away and Ara ignored her.
	Mas Merah & Ara	Mas blowing and vocalized a lot. No interest observed.
	Panjang & Ara	Both rhinos eating side by side. Panjang walked away and waited for Ara but no response from Ara.

Date	Rhino ID	Observation
Nov 27	Minah & Ara	Eating together, side by side. Ara sniffed, Minah walked away and Ara ignored her.
	Mas Merah & Ara	Mas Merah blows and then come to the feeding area, eating beside Ara. Mas Merah walked away and Ara ignored her.
	Panjang & Ara	Both rhinos eating side by side. Panjang walked away and waited for Ara but no response from Ara.
Nov 28	Minah & Ara	Ara sniffed Minah but no further response.
	Mas Merah & Ara	Mas Merah blows and vocalized a lot. No interest observed.
	Panjang & Ara	Ara sniffed Panjang and followed her for a while. No further response.
Nov 29	Minah & Ara	Ara followed Minah but she turned around and head butting occurred. She walked away and Ara chased her. Head butting occurred again.
	Mas Merah & Ara	No interest observed. Mas vocalized and blowing.
	Panjang & Ara	Ara trailed Panjang half way but he turned back begging for fruits.

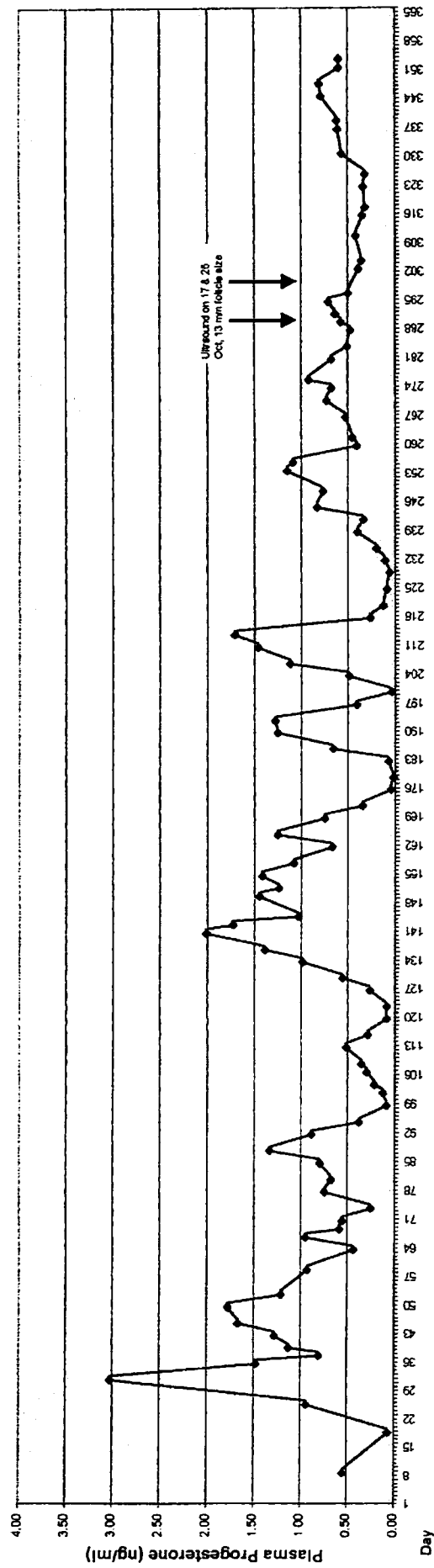
SUMATRAN RHINO - SEPUTIH Plasma Progesterone Profile - 2002



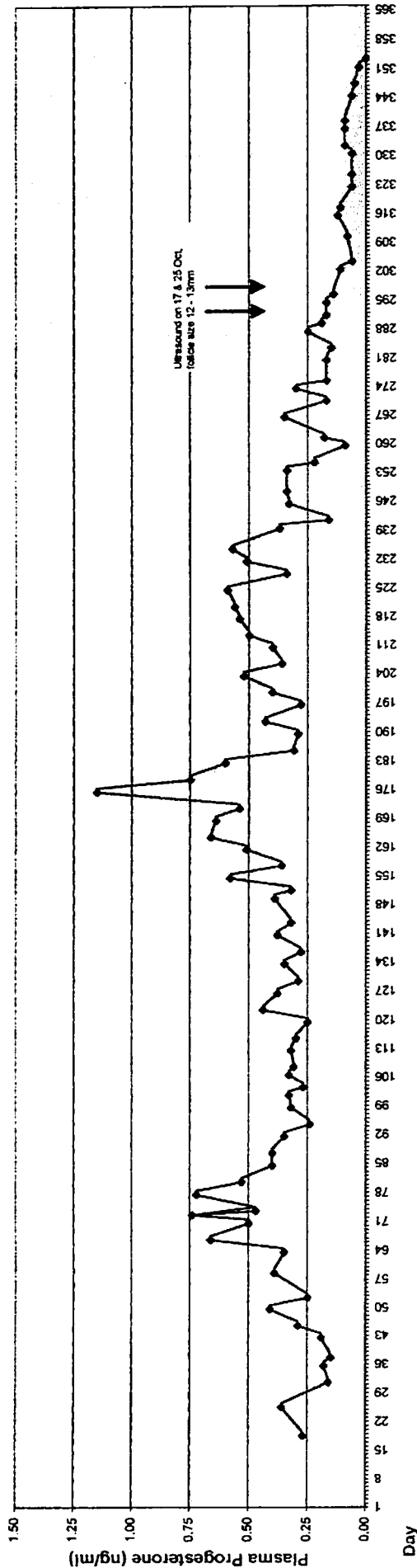
SUMATRAN RHINO - RIMA Plasma Progesterone Profile - 2002



SUMATRAN RHINO - MAS MERAH Plasma Progesterone Profile - 2002



SUMATRAN RHINO - MINAH Plasma Progesterone Profile - 2002



SUMATRAN RHINO - PANJANG Plasma Progesterone Profile - 2002

