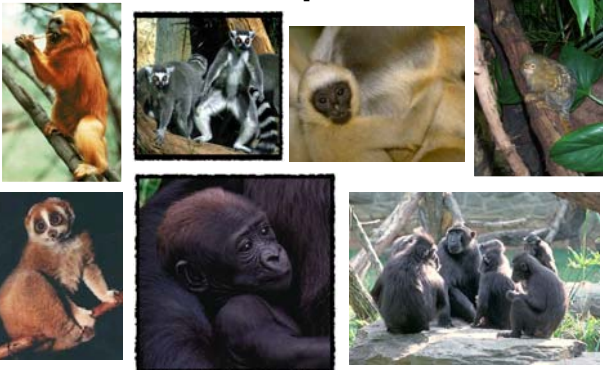


Is there such a thing as The Milk of a primate?



Primate reproduction

- Long gestations – few, large infants
- Longer lactations
- Slow growth rates
- Frequent nursing
- Low nutrient transfer per day over a long time
- Extensive investment of maternal time

Implications for milk

- Large volumes
- Dilute milks
- High sugar – low fat
- Low protein?
- Little change over lactation?

Variability and stability in primate milk composition

Stability



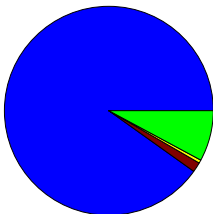
Eulemur rufus



Lemur catta

Days 39 – 137 post partum

Eulemur rufus

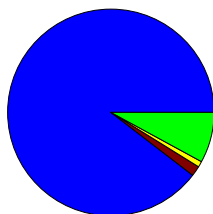


Water = 89.5%
Crude protein = 1.5%
Fat = 0.5%
Sugar = 7.8%

0.44 kcal/g

Days 54 – 122 post partum

Lemur catta

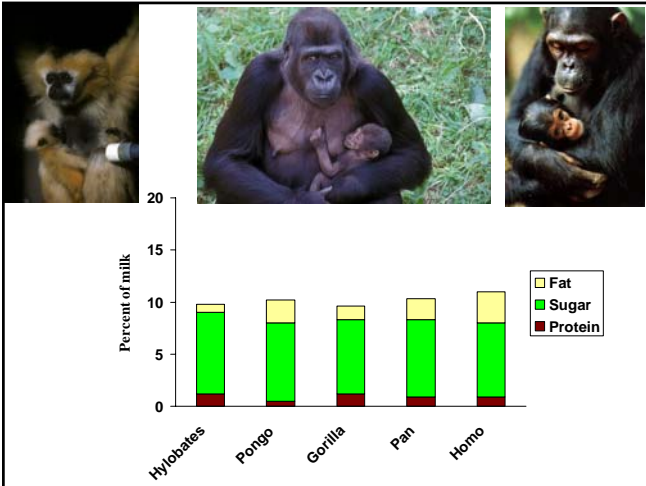


Water = 89.3%
Crude protein = 1.6%
Fat = 0.9%
Sugar = 7.9%

0.49 kcal/g

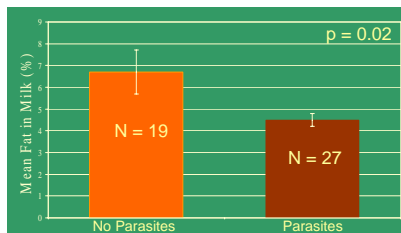


Lauren A. Milligan



Variability in rhesus macaque milk

Katherine Hinde, MA, UCLA

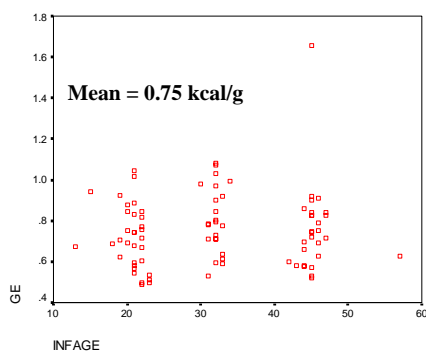


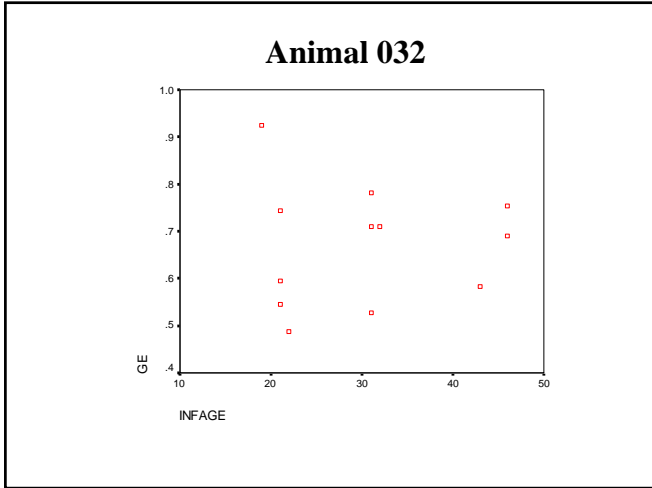
Hinde, K. Am J Primatology 2007;69:625-634

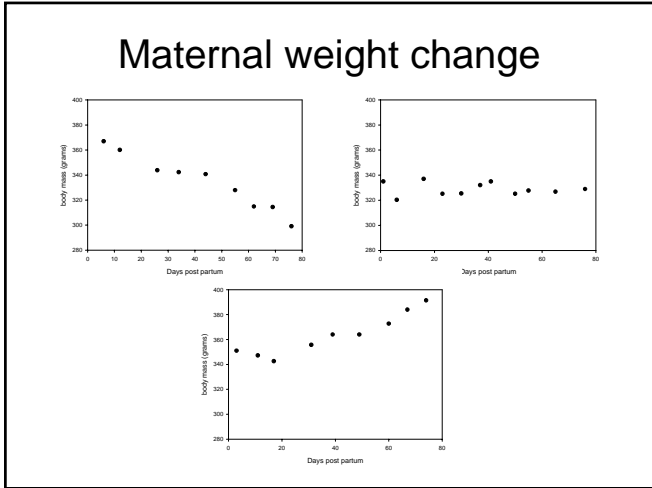
Fat content ranges from under 3% to over 15% in rhesus macaque milk

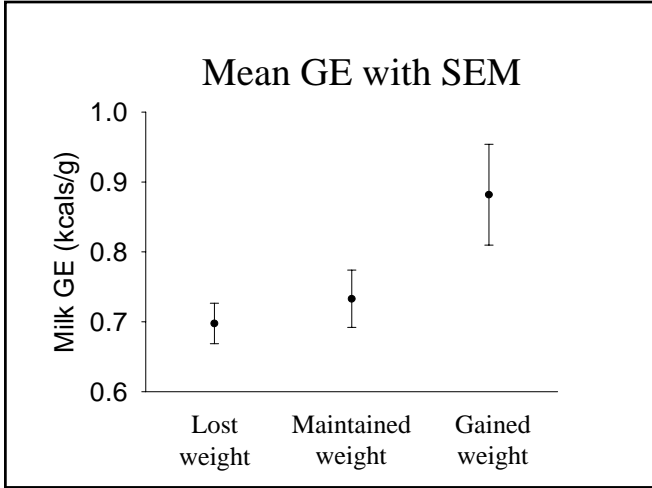
Callithrix jacchus
The common marmoset – variability in milk composition and maternal energy balance

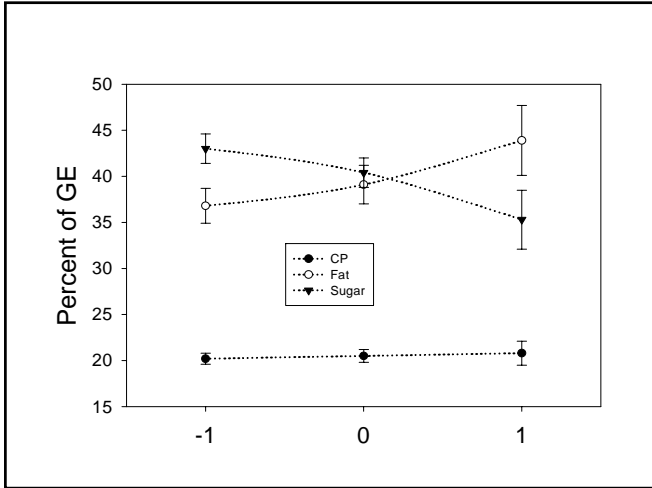


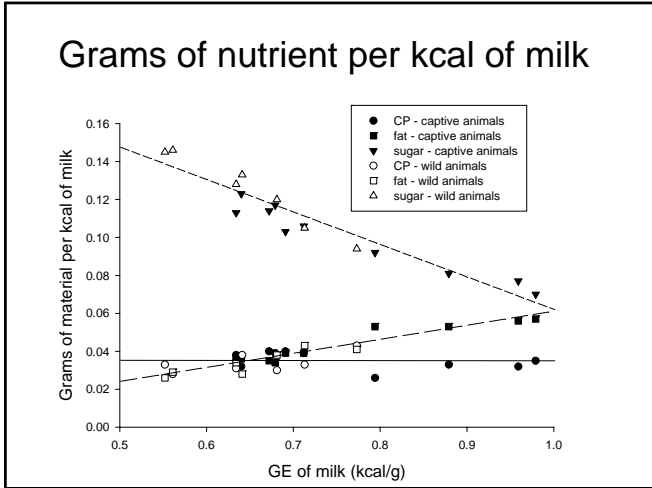


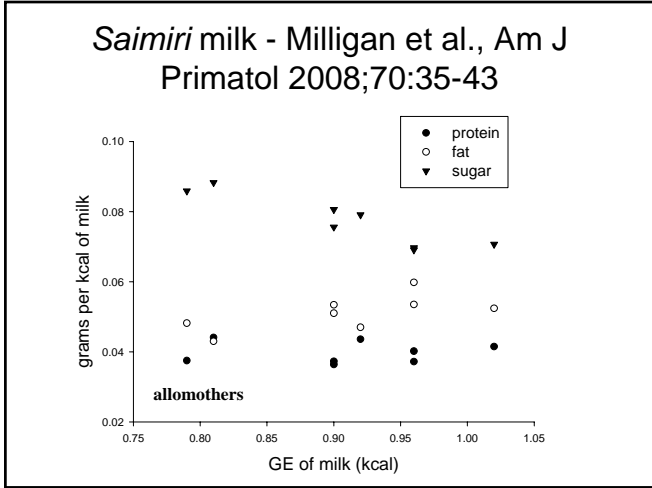




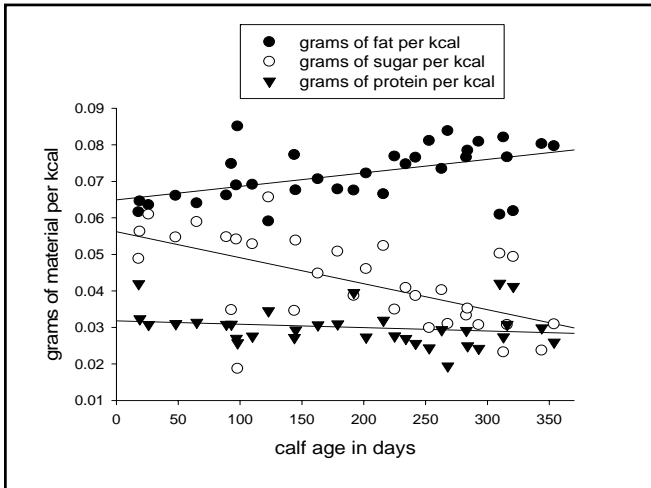












Percent of GE from protein

Lorises	Lemurs	New World Monkeys	Old World Monkeys	Humans (and apes)
22%	18%	20%	12%	8%
	29%			

Lactation is expensive!



Comparison of Survival Curves for Common Marmoset Males and Females

