# Gamma Bomb! 2.0 Blood Data Report

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# Participant Information

This section displays important demographic information about the participant and gives some generic information about the present study.

```
Participant #:.......MSTAT_001_01
Dose Info Sheet:.....D:\Scratch\Tom\MSTAT_001_01\PET\Dose_info.xls

TOI:.........................10:58:34
BAT Offset...................28 sec
Radioligand:.................C-11- MSTAT

Participant Weight...........117 lbs
Participant Height...........64 in
Participant Sex..............M
Participant Birth Year.......1983

    'Best TAC Model..............Feng'

    'Best Parent Fraction Fit.....LIN2EXP'
```

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# Time Activity Curve (TAC) Models

*Current analysis uses two kinetic models to interpolate the Time Activity Curve:*

1. Feng Fit
2. Linear to 3-Exponential (L3Exp) Fit

*During this analysis, outliers were removed prior to curve-fitting. Outliers are classified as any point after 5 minutes that increased greater than 5 percent OR as any point that prematurely approaches zero.*

```
Number of Outliers: 0
Total Number of Points: 32
```

**Goodness of Fit**

The table below summarizes the goodness of fit of the two TAC Models. The fit metric represents the space between the fitted curve and the raw data. It is calculated according to the equation:

$$M = \log(\int_0^t x dx - \int_0^t x' dx)$$

*where:*

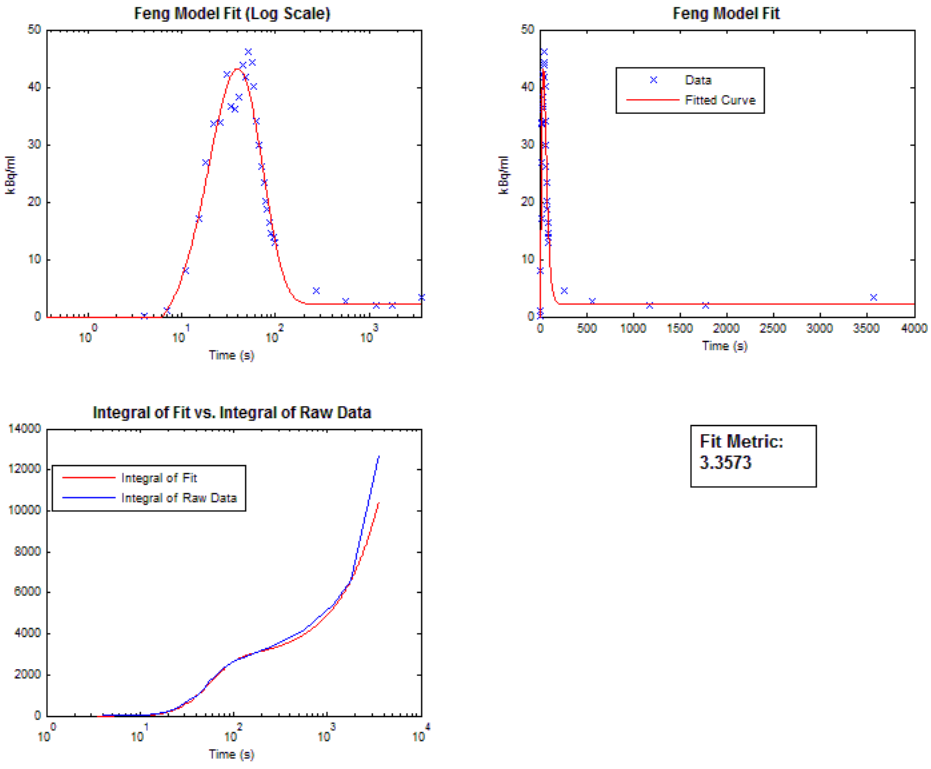
- $M$ *= goodness of fit*
- $t$ *= duration of the blood data (s)*
- $x$ *= raw data points*
- $x'$ *= fitted data*

*According to the metric, a perfect fit would yeild M = 0. The "best fit" will have a value M closest to 0.*

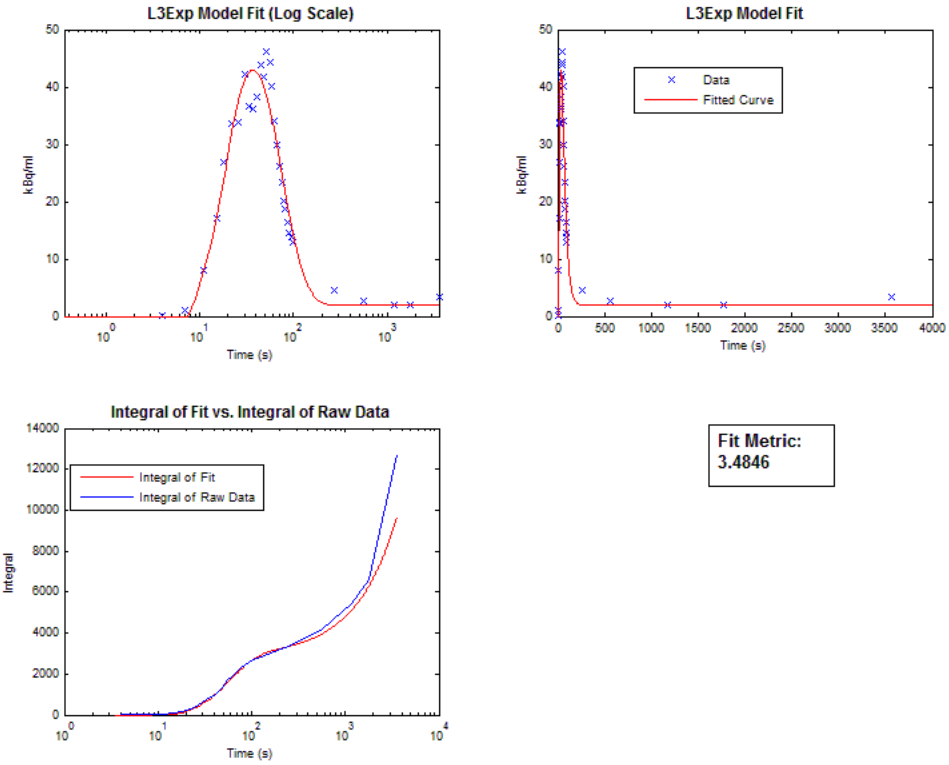
```
Model Goodness of Fit =
                    Feng_Fit    L3Exp_Fit
   Fit_Metric        3.35730      3.48459


   'Best TAC Model: '    'Feng'
```

**Feng Model**



**L3Exp Model**

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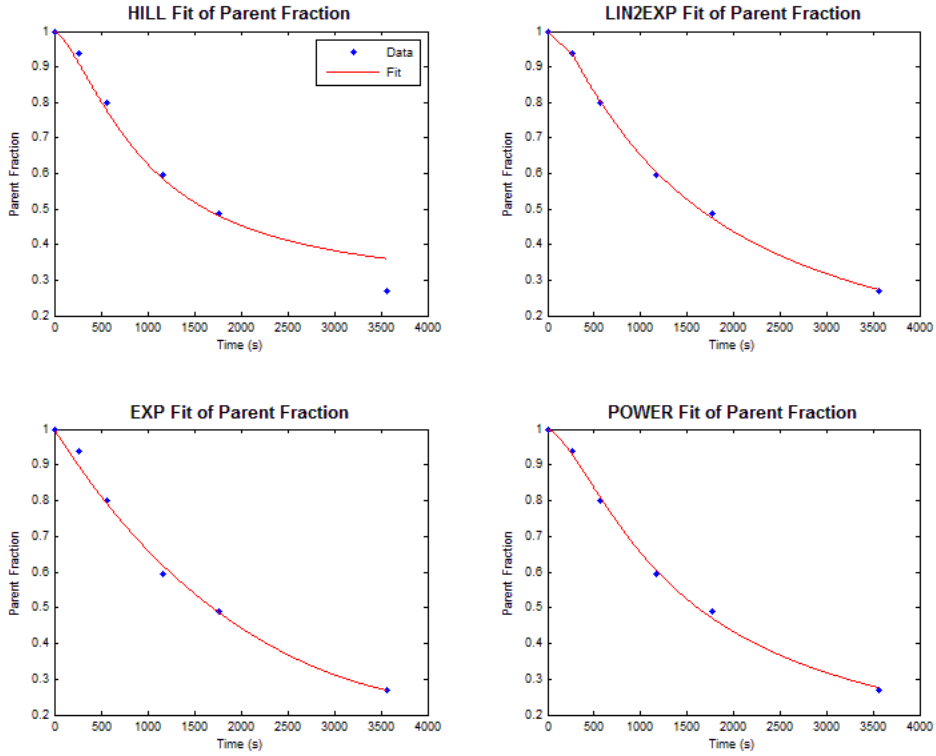
# Summary of Parent Fraction Fit Statistics

*The Parent Fraction has been fitted to four different curves:* # Hill Fit # Linear to Exponential Fit (Lin2Exp) # Exponential Fit (Exp) # Power Fit

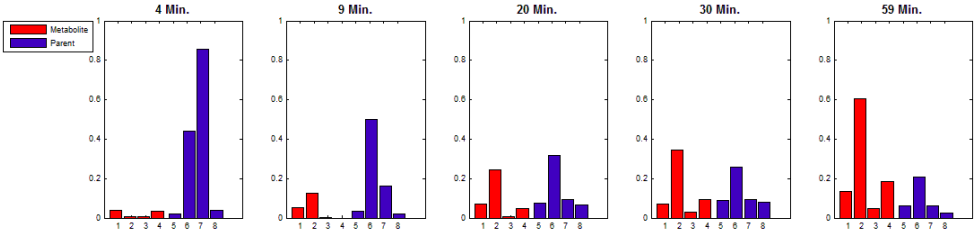
```
Parent Fraction Fit Stats =
                 Rsquare  Adj_RSquare         DFE
    Hill_Fit     0.97479      0.96849      4.00000
  Lin2Exp_Fit    0.99931      0.99886      3.00000
Exponential_     0.99367      0.98945      3.00000
   Power_Fit     0.99849      0.99749      3.00000


'Best Parent Fraction Fit: '    'LIN2EXP'
```

# Parent Fraction Fits




# Histograms for Parent Fraction Data Points

*Each histogram below represents the blood data for single the Parent Fraction Data Point indicated by the graph's title. Red bars show metabolite data and blue bars show the parent data.*




Report Generated with Gamma Bomb! 2.0

Developed at the Hooker Research Group - MGH Martinos Center - Boston, MA

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