cal practice that should be recognized in judging the information. This can best be demonstrated by reviewing E–Mycin protocols CS #037 and CS #056.

CS No. 037.—When the dosage forms are prepared from different erythromycins or possess different drug release patterns, it is imperative that the bioavailability protocol fully characterize each product in the study. Study CS #037 employs three different erythromycins (erythromycin base, Upjohn; erythromycin ethylsuccinate, Abbott, and erythromycin ethylcarbonate, Lilly) with different solubilities, different resistance to gastric acid and different absorption characteristics. Erythrocin® Ethylsuccinate Suspensions are rapidly absorbed and generally achieve peak serum drug levels in one-half hour, before the first blood sample was drawn in this study. This means that the peak heights for the blood serum levels were missed. Since peak heighfs tend to characterize the curve and have a significant impact on the area under the curve, a study that is designed to miss the peak heights cannot honestly reflect the performance of that drug. (Area under the curve is a measure of the total amount of drug absorbed.) Of more major and serious concern, however, is the fact that the Abbott Erythrocin Ethylsuccinate Granules were improperly dosed. Our product literature clearly states under "Dosage and Administration":

"Adults: 400 mg. erythromycin ethylsuccinate every six hours is the usual dose. . . . If twice a day dosage is desired in either adults or children, one-half of the total daily dose may be given every 12 hours, one hour before meals."

Therefore, the proper does of hte Abbott product should have been 800 mg. This would be the *recommended* dose equivalent to 500 mg. of the Upjohn product. This also explains the unusual dose of the Abbott product used in this study. Twelve and one-half ml. (2½ teaspoonsful) were dosed. Because of the following equivalencies, the product is formulated to provide 200 mg. per teaspoonful. The proper dose should have been four teaspoonsful.

Erythromycin base:	*Erythromycin Ethylsuccinate*
125 mg. equivalent to	200 mg.
250 mg. equivalent to	400 mg.
500 mg. equivalent to	800 mg.

The liquid suspension products of Erythrocin Ethylsuccinate have shown better clinical acceptance by pediatric patients than coated erythromycin tablets. A large tablet is not an acceptable dosage form for small children. The Upjohn tablet cannot be chewed or crushed for smaller children. E–mycin is an enteric-coated tablet. That is, it is coated with a special material that protects the erythromycin base from rapid destruction by the gastric acid. The table does not disintegrate and make the erythromycin base available for absorption until after the tablet reaches the small intestine (where the environment is alkaline and will not destroy the erythromycin). In contrast, erythromycin ethylsuccinate is more resistant to gastric acid destruction and does not require the special enteric protection. Because E–mycin tablets must wait until they leave the stomach to release the erythromycin base, the absorption of the drug is significantly delayed. This is clearly seen in Study CS #037. The blood levels for E–mycin do not peak until three hours after the dose is taken. The Abbott product peaks within one-half hour, providing more immediate serum levels. Although there is some danger in comparing bioavailability studies done at different times and under different protocols, it is worthwhile to note the average peak serum levels and area under the curve obtained in a recent Abbott study on erythromycin ethylsuccinate, given at the proper 800 mg. dose.

	Average peak level (megacycle per mile)	Area	Dose (milligrams)
Upjohn CS No. 037	[1] 1.00	[1] 3.01	[1] 500
Abbott study No. 73–190	2.10	5.02	800

[1] Improper dosage level.

Rather than the value of 1.00 mcg./ml. reported in CS #037, this level of 2.10 mcg./ml. can be roughly compared to the E–mycin value of 1.37 mcg./ml. Remember that considerable caution must be exercised in trying to compare values obtained in different studies.

CS No. 056.—In this study unequal doses were utilized with a "priming" dose