

Supplemental Material

```
# Box 1: Sample R code and calculations following equations D and E (Table 2),  
using the Lactobacillus abundance data in Table 5.
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```
p1<-0.26
```

```
p2<-0.10
```

```
r<-1
```

```
alpha<-0.05
```

```
beta<-0.20
```

```
n2 <- (p1*(1-p1)/r+p2*(1-p2))*((qnorm(1-alpha/2)+qnorm(1-beta))/(p1-p2))^2
```

```
n2
```

```
[1] 86.58295
```

```
ceiling(n2)
```

```
[1] 87
```

```
z <- (p1-p2)/sqrt((p1*(1-p1)/n2*r)+(p2*(1-p2)/n2))
```

```
Power <- pnorm(z-qnorm(1-alpha/2))+pnorm(-z-qnorm(1-alpha/2))
```

```
Power
```

```
[1] 0.8
```

Box 2: Sample R code and calculations following equations C and E (Table 2), using the data presented in Table 7.

```
=====
=====
p1<-0.30
p2<-0.16
r<-1

alpha<-0.05
beta<-0.20

(n2=(p1*(1-p1)/r+p2*(1-p2))*((qnorm(1-alpha/2)+qnorm(1-beta))/(p1-p2))^2)
[1] 137.916

ceiling(n2)
[1] 138

z=(p1-p2)/sqrt((p1*(1-p1)/n2*r)+(p2*(1-p2)/n2))
(Power=pnorm(z-qnorm(1-alpha/2))+pnorm(-z-qnorm(1-alpha/2)))
[1] 0.8
```

Box 3: Sample R code and calculations following equations C and E (Table 2), using the data presented in Table 8.

```
=====
=====
p1<-0.2263
p2<-0.4123
r<-1

alpha<-0.05
beta<-0.20

(n2=(p1*(1-p1)/r+p2*(1-p2))*((qnorm(1-alpha/2)+qnorm(1-beta))/(p1-p2))^2)
[1] 94.69589

ceiling(n2)
[1] 95

z=(p1-p2)/sqrt((p1*(1-p1)/n2*r)+(p2*(1-p2)/n2))
(Power=pnorm(z-qnorm(1-alpha/2))+pnorm(-z-qnorm(1-alpha/2)))
[1] 0.8
```