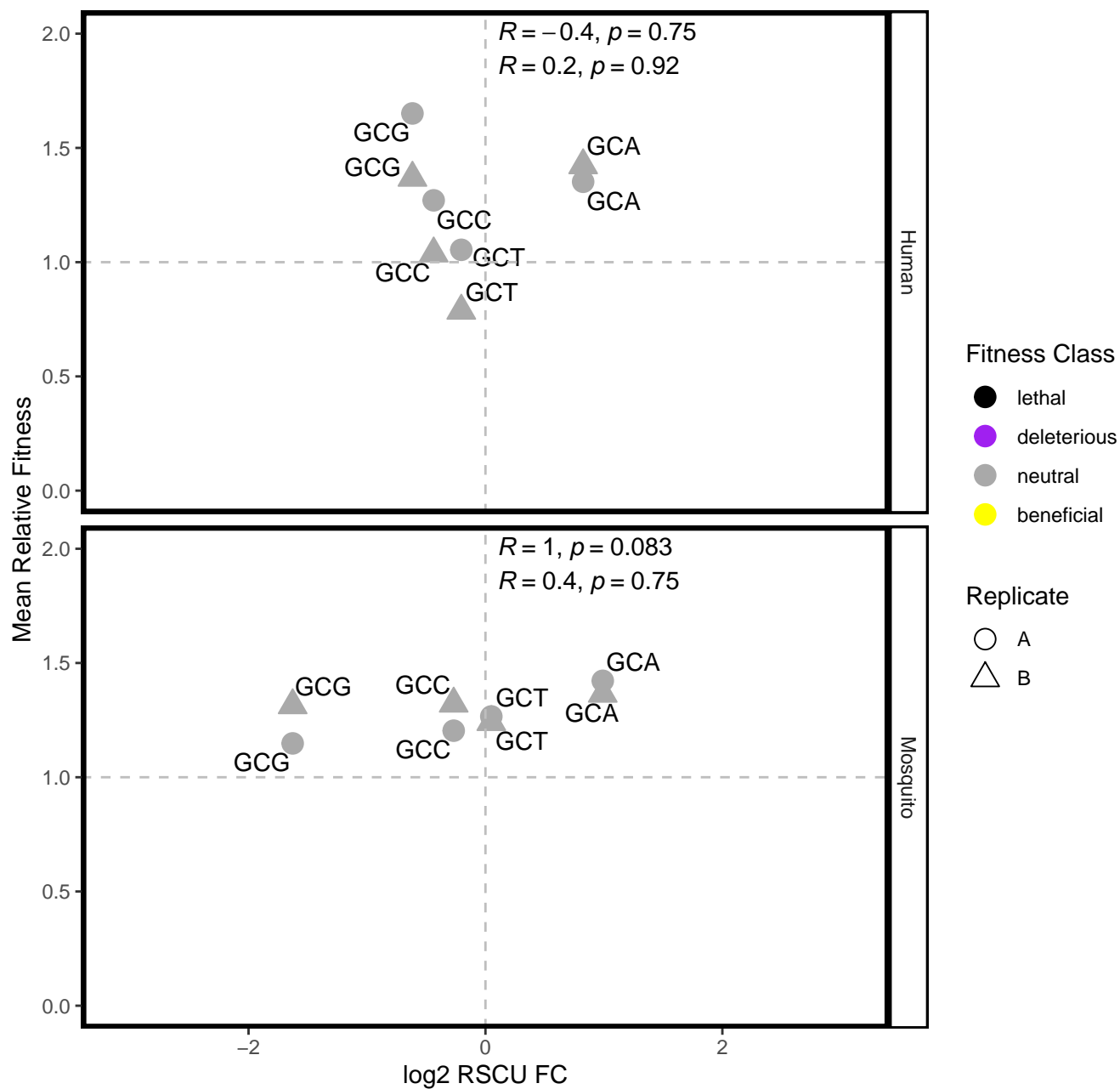
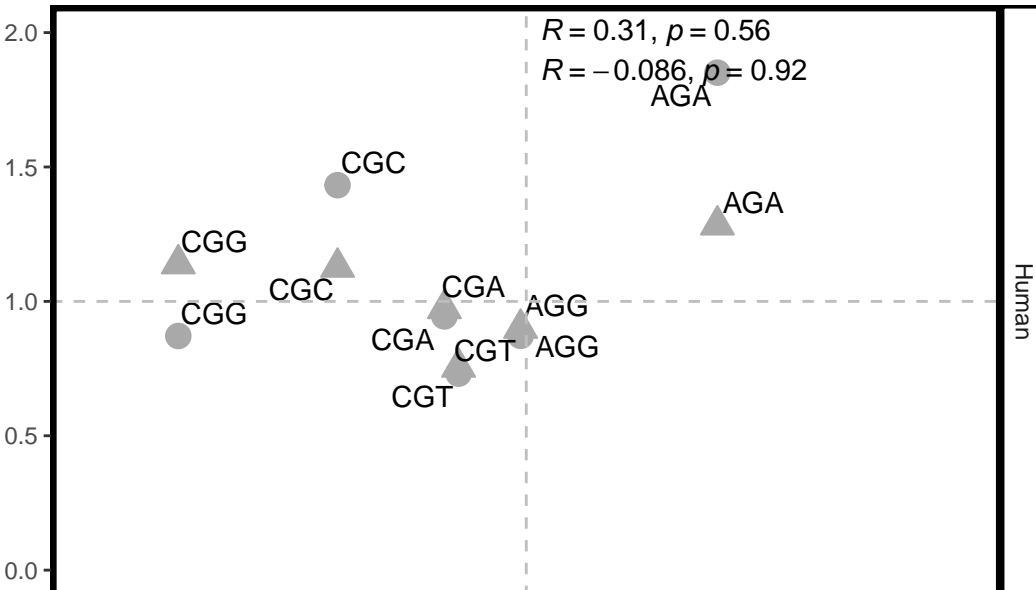


Ala



Arg

Mean Relative Fitness

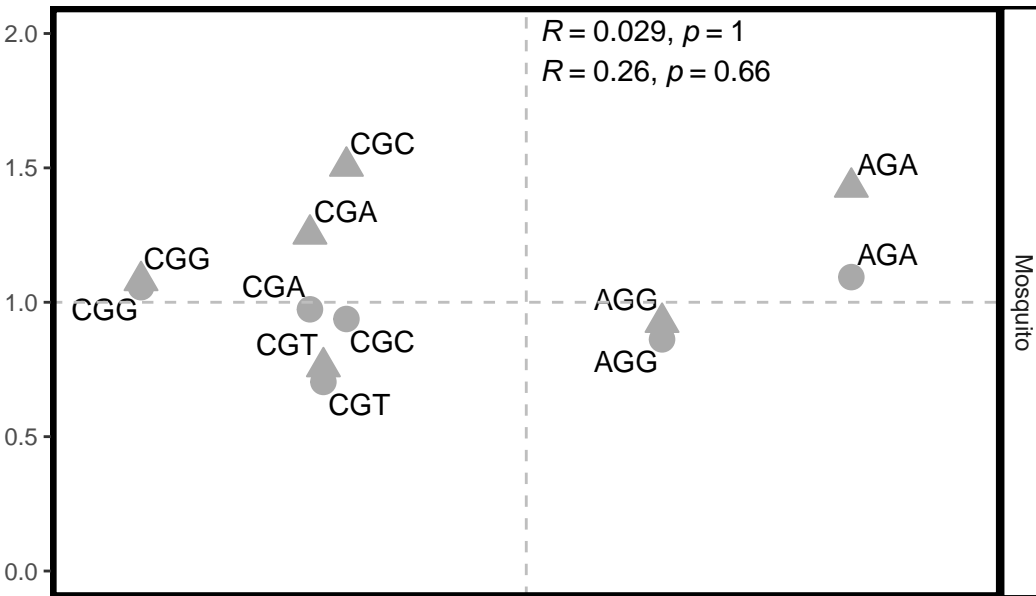


Fitness Class

- lethal
- deleterious
- neutral
- beneficial

Replicate

- A
- △ B



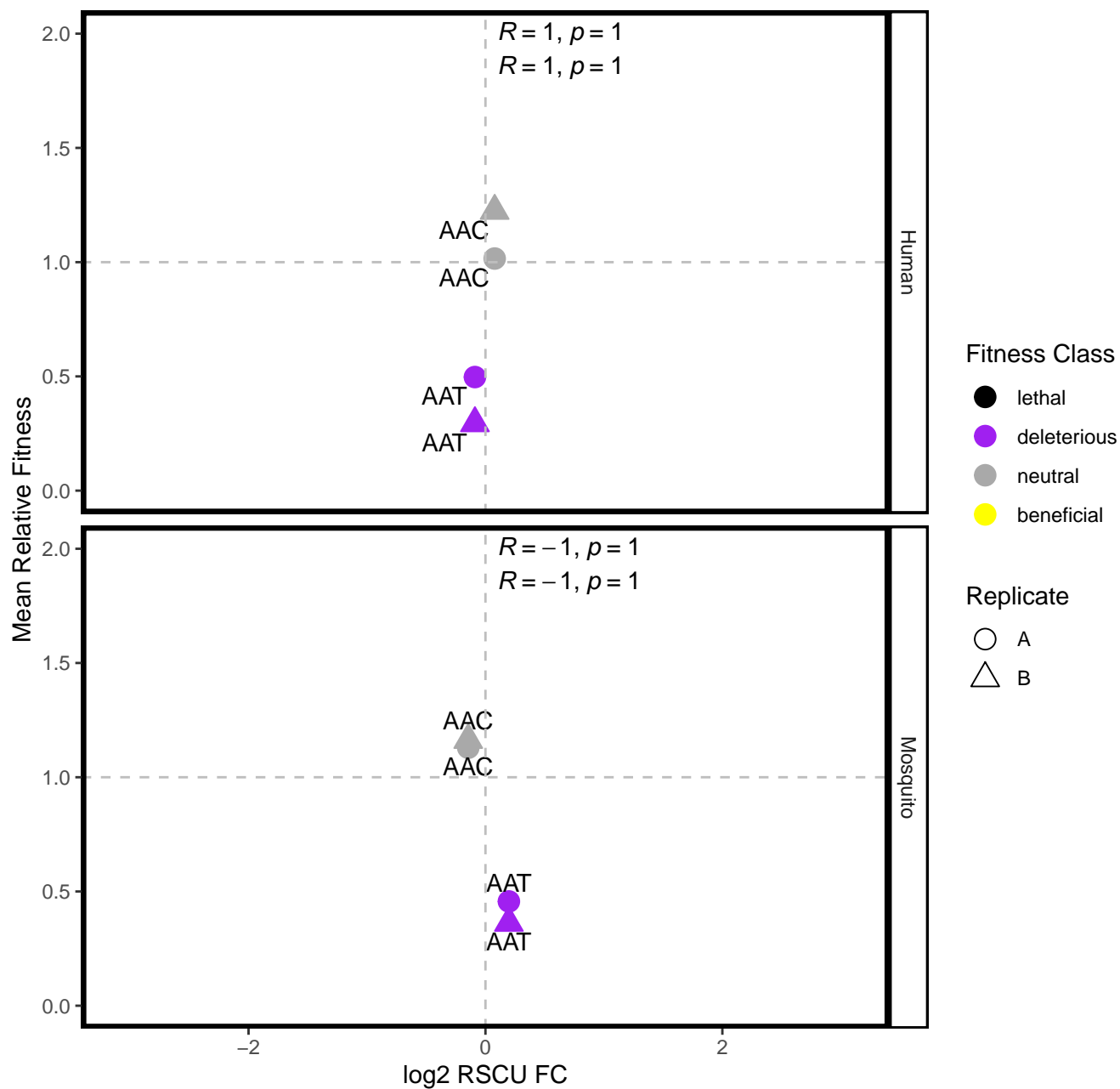
-2

0

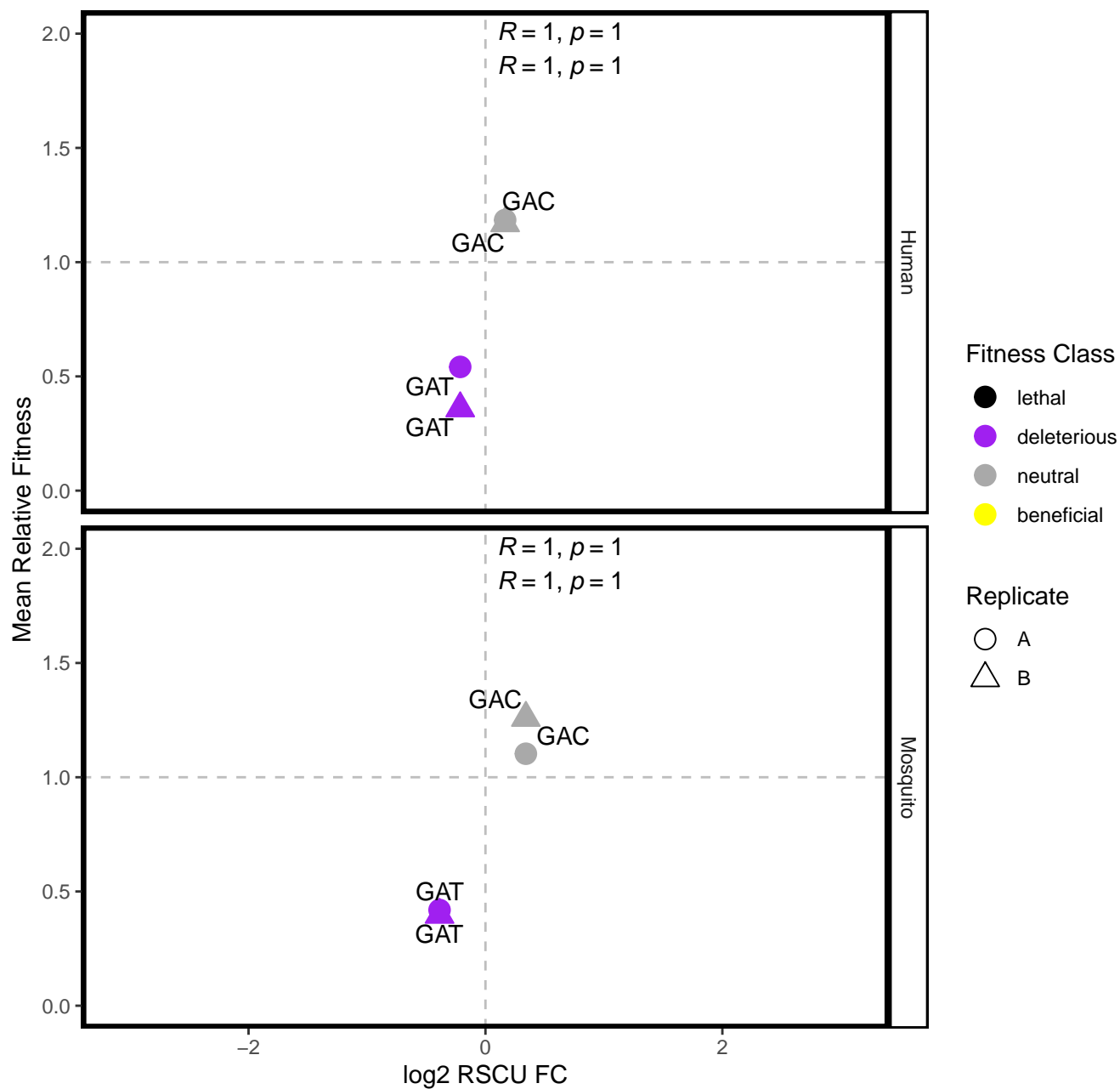
2

log2 RSCU FC

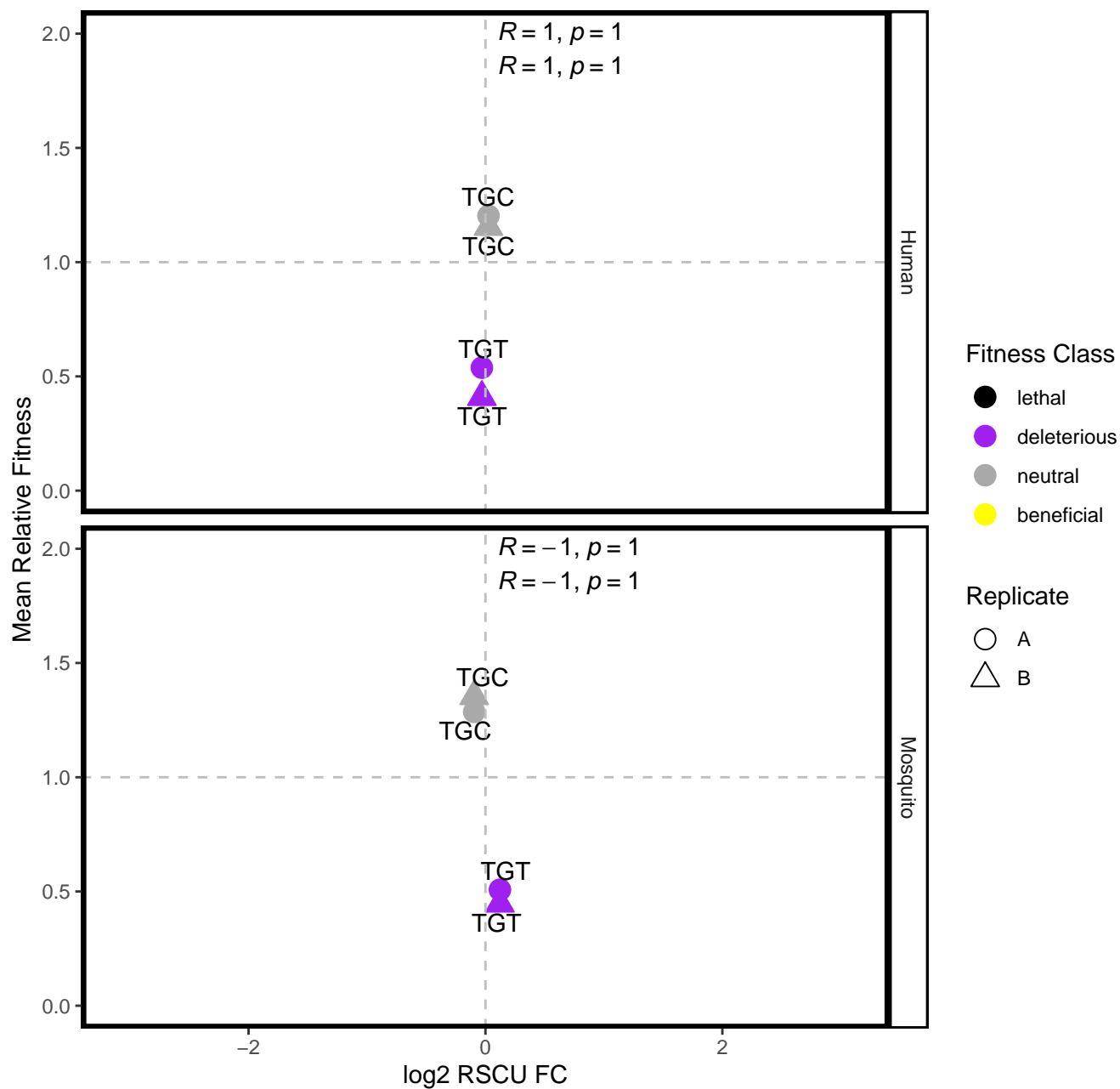
Asn



Asp

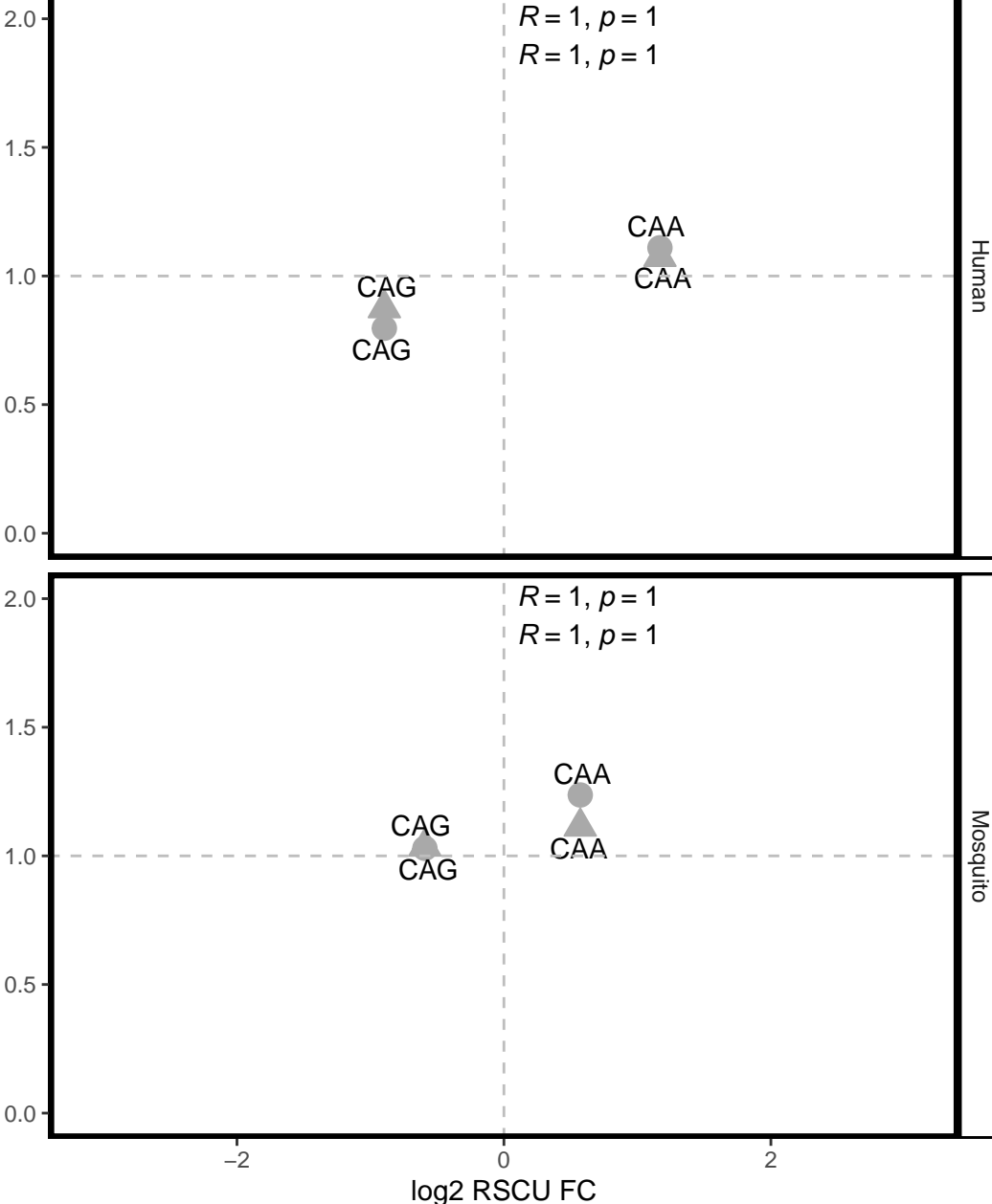


Cys



Gln

Mean Relative Fitness



Fitness Class

- lethal
- deleterious
- neutral
- beneficial

Replicate

- A
- B

Glu

Mean Relative Fitness

$R = 1, p = 1$
 $R = 1, p = 1$

Human

Fitness Class

- lethal
- deleterious
- neutral
- beneficial

Replicate

- A
- B

$R = 1, p = 1$
 $R = 1, p = 1$

Mosquito

-2

0

2

log2 RSCU FC

GAG
GAG

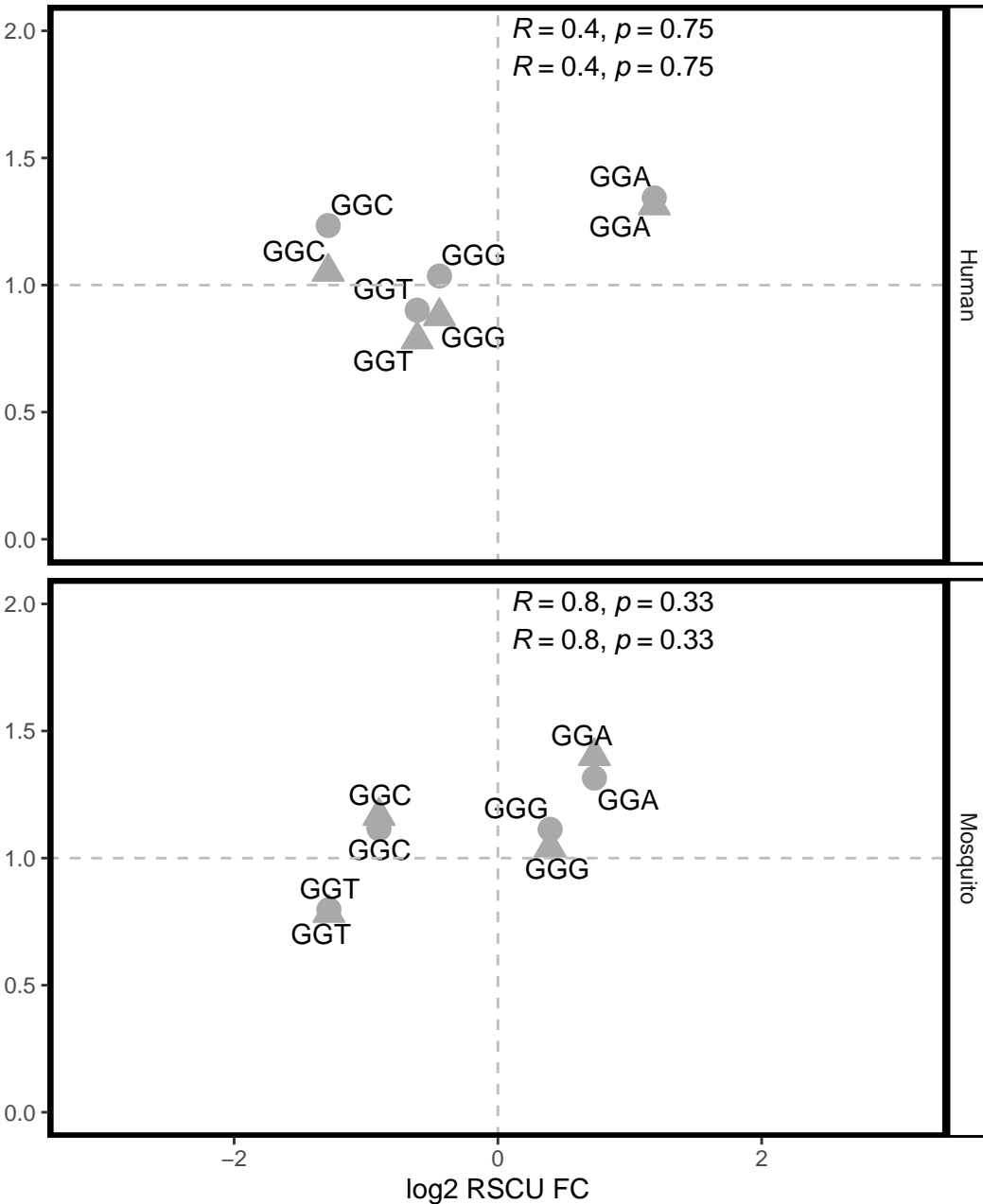
GAA
GAA

GAG
GAG

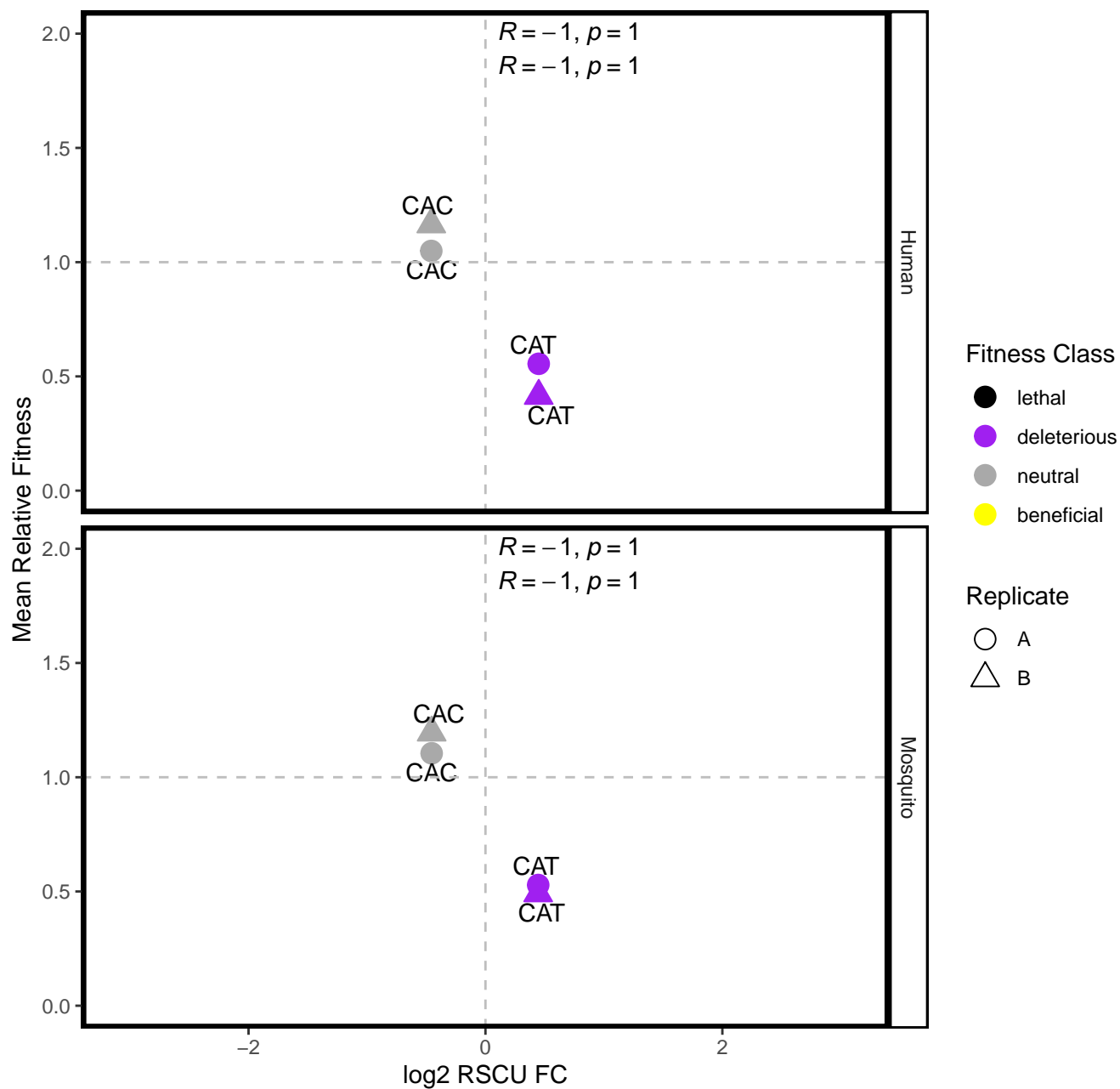
GAA
GAA

Gly

Mean Relative Fitness



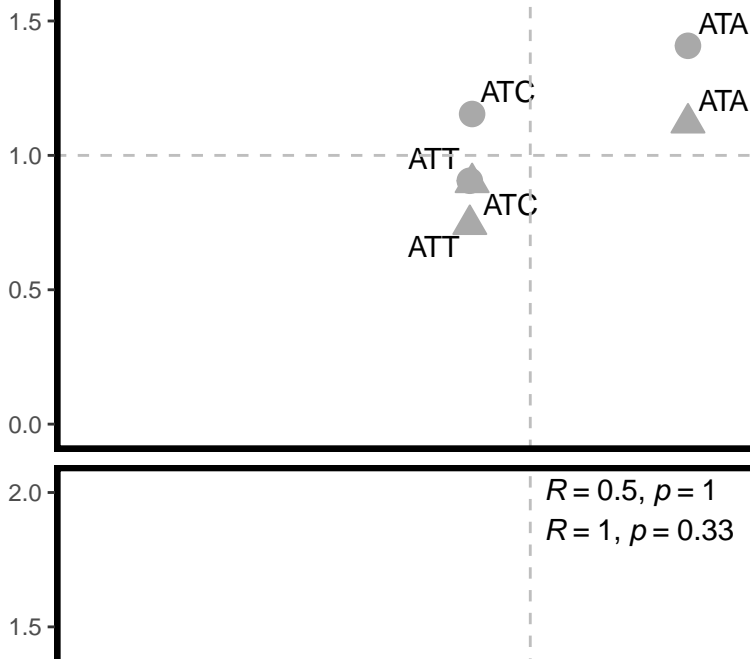
His



Ile

Mean Relative Fitness

$R = 1, p = 0.33$
 $R = 1, p = 0.33$



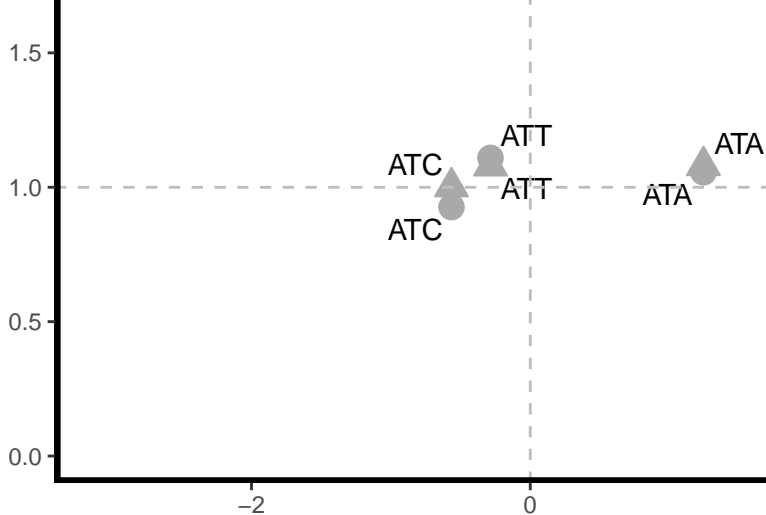
Fitness Class

- lethal
- deleterious
- neutral
- beneficial

Replicate

- A
- B

$R = 0.5, p = 1$
 $R = 1, p = 0.33$



-2

0

2

log2 RSCU FC

Leu

Mean Relative Fitness

$R = -0.029, p = 1$
 $R = 0.14, p = 0.8$

Human

Fitness Class

- lethal
- deleterious
- neutral
- beneficial

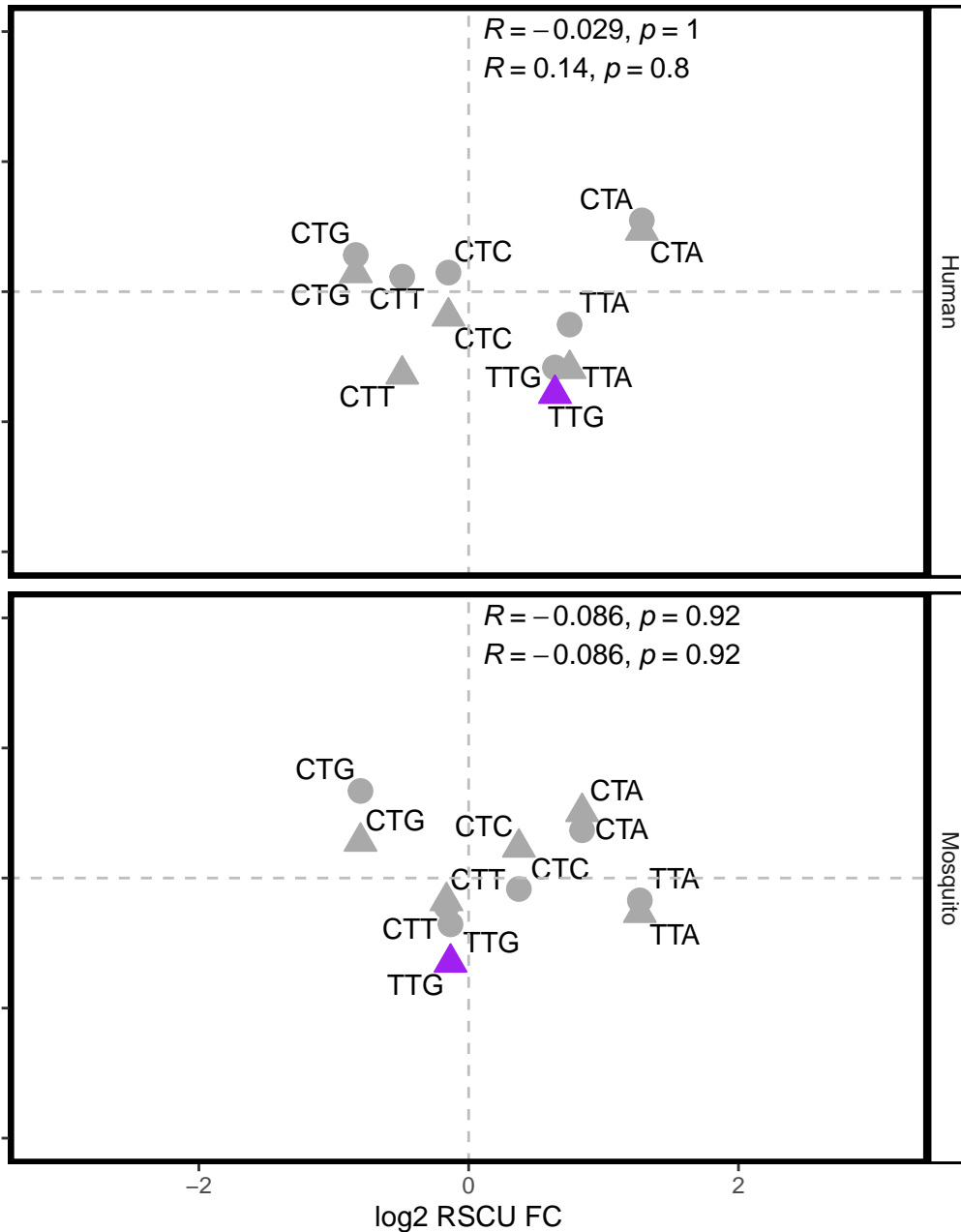
Replicate

- A
- △ B

$R = -0.086, p = 0.92$
 $R = -0.086, p = 0.92$

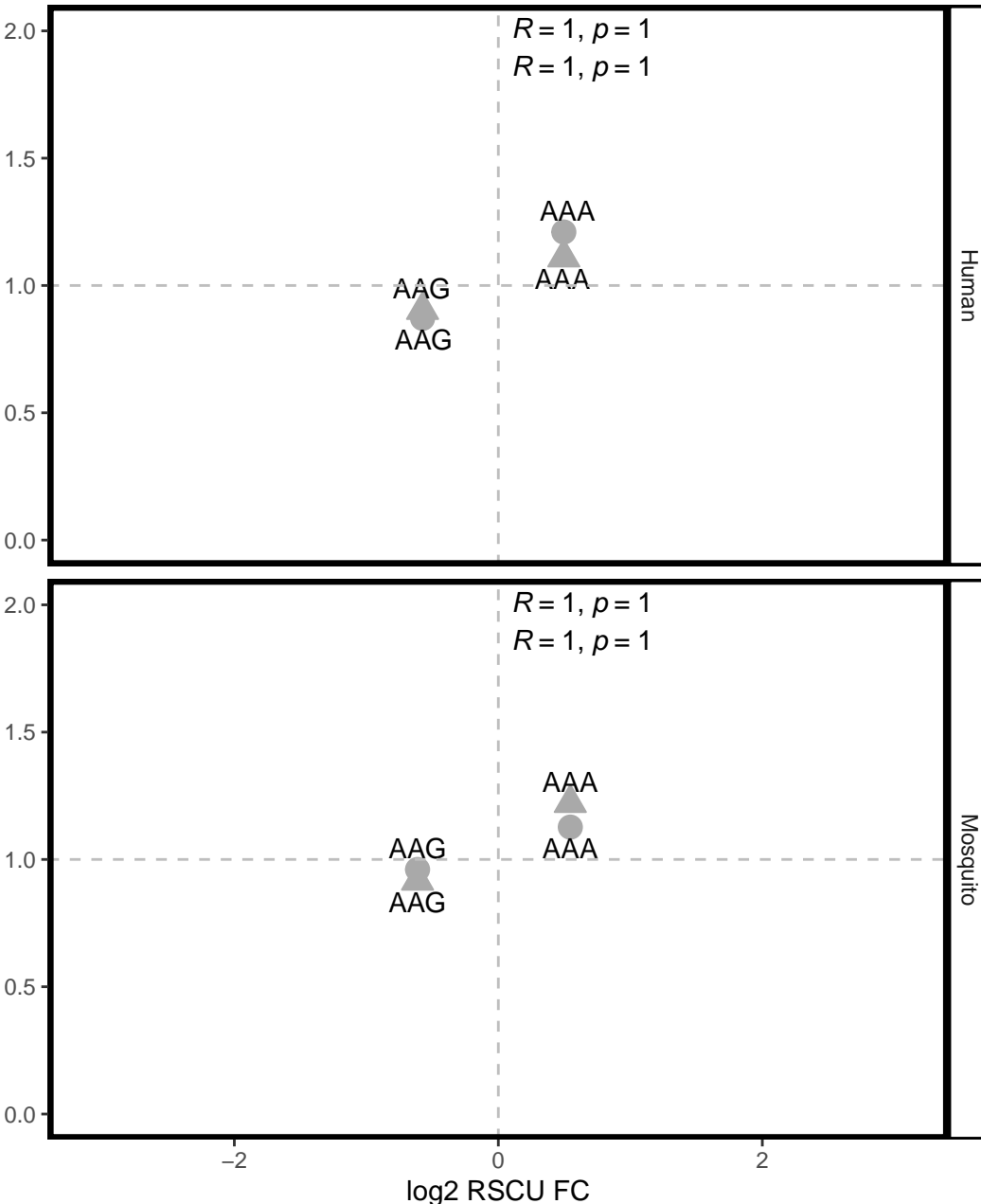
Mosquito

log2 RSCU FC



Lys

Mean Relative Fitness



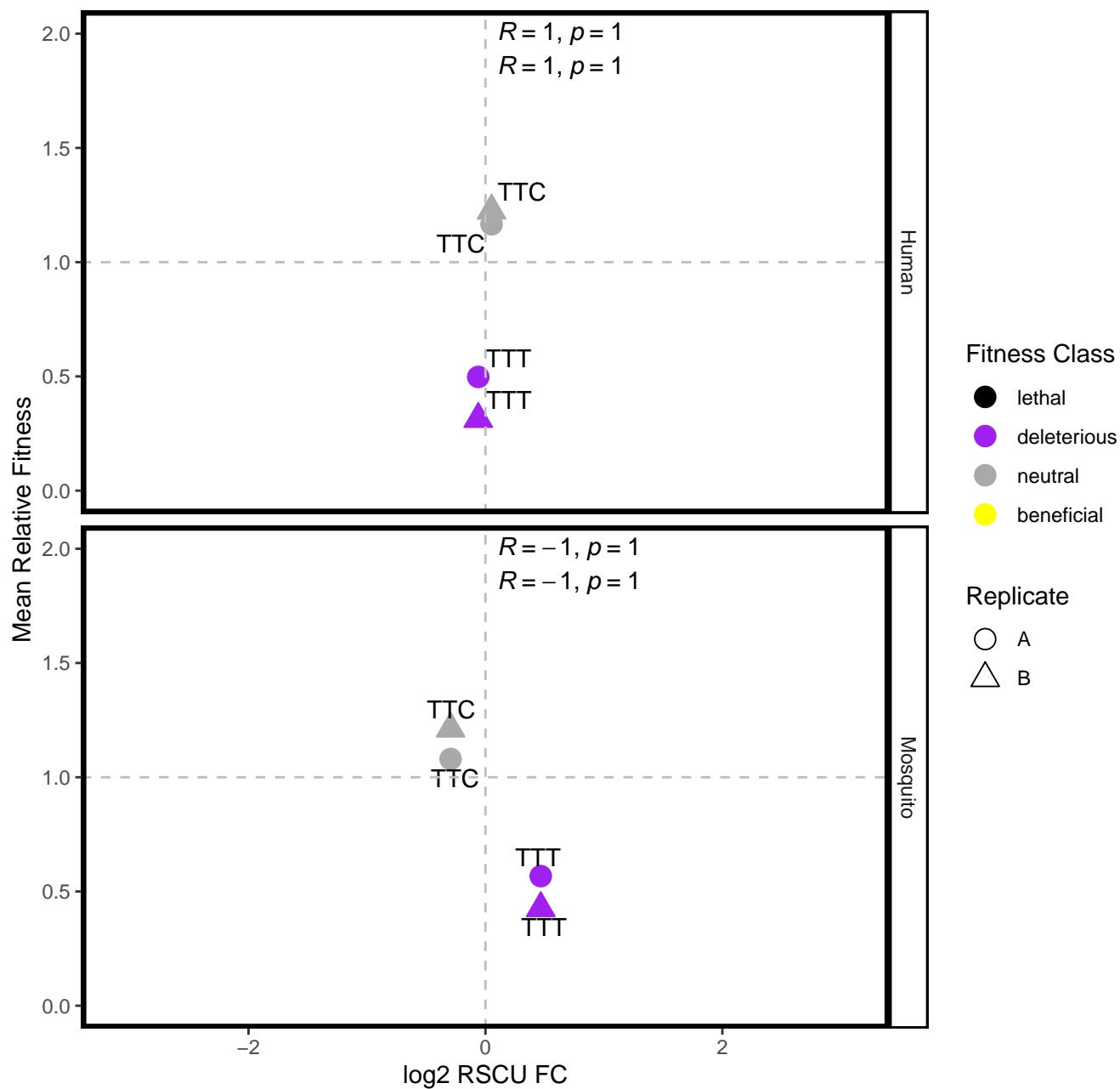
Fitness Class

- lethal
- deleterious
- neutral
- beneficial

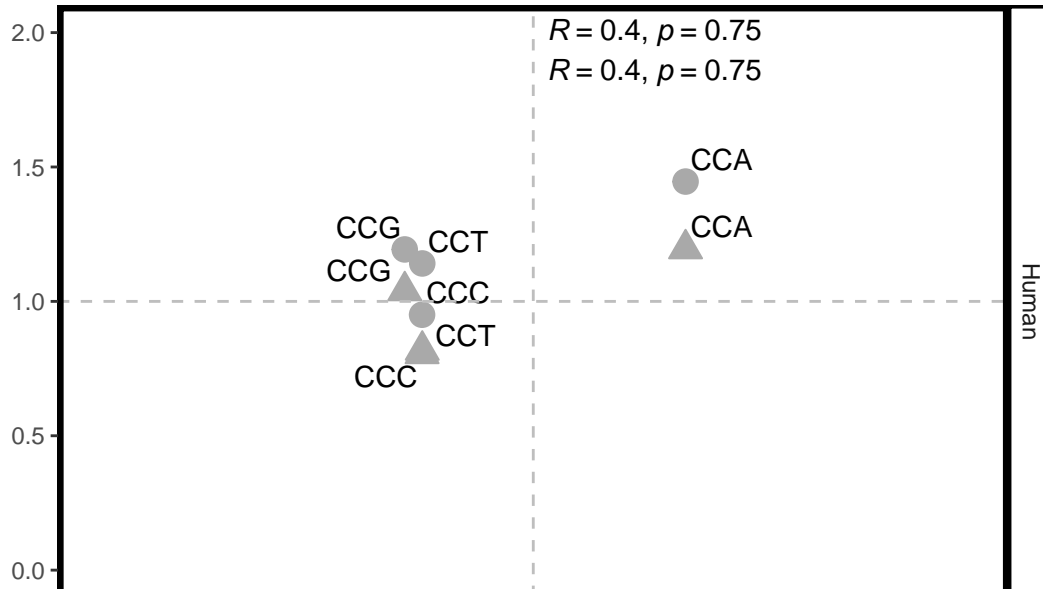
Replicate

- A
- △ B

Phe



Pro

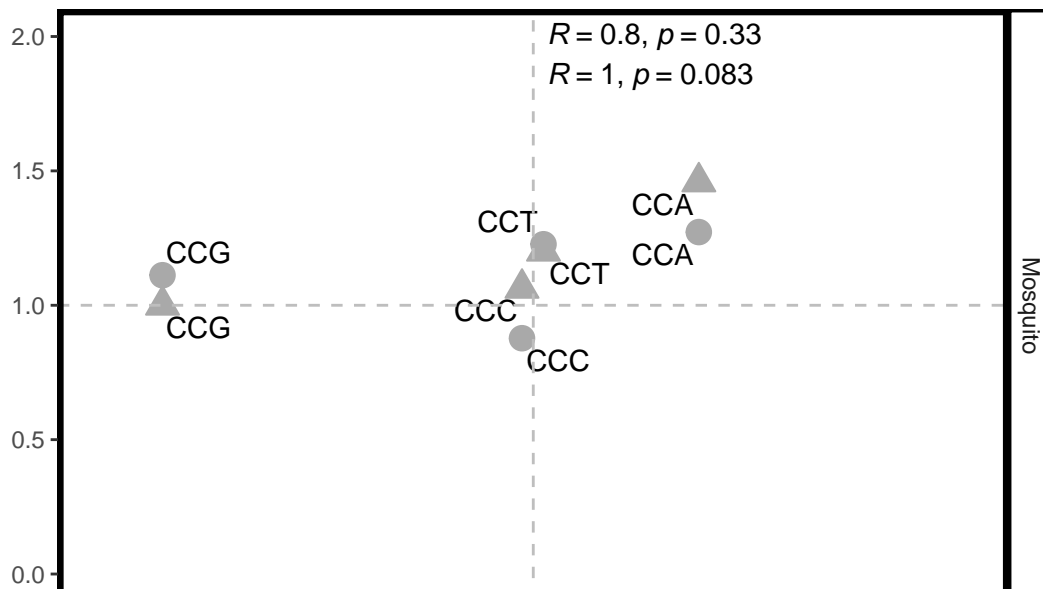


Fitness Class

- lethal
- deleterious
- neutral
- beneficial

Replicate

- A
- B



log2 RSCU FC

Ser

Mean Relative Fitness

$R = 0.26, p = 0.66$
 $R = 0.029, p = 1$

Human

Fitness Class

- lethal
- deleterious
- neutral
- beneficial

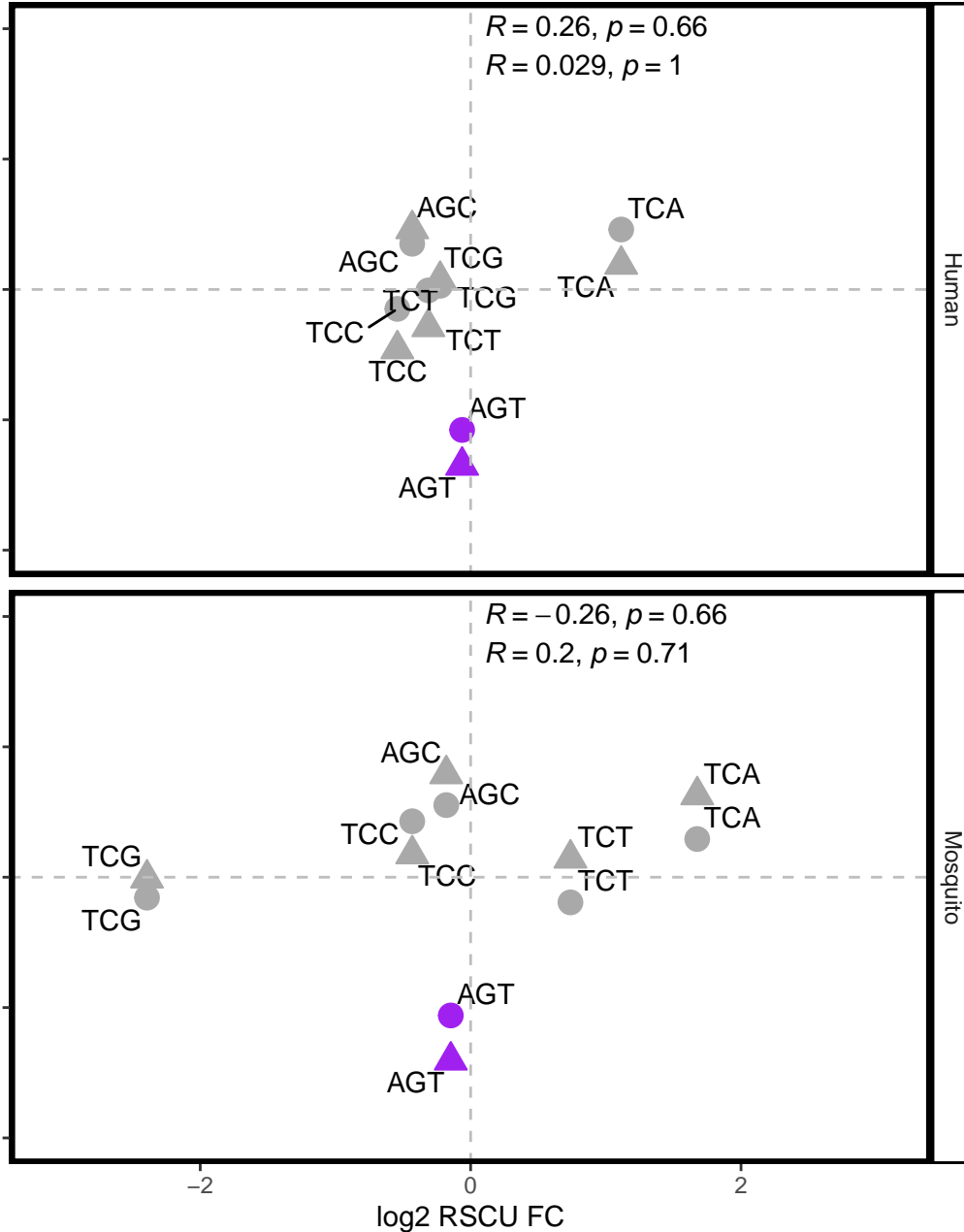
Replicate

- A
- △ B

$R = -0.26, p = 0.66$
 $R = 0.2, p = 0.71$

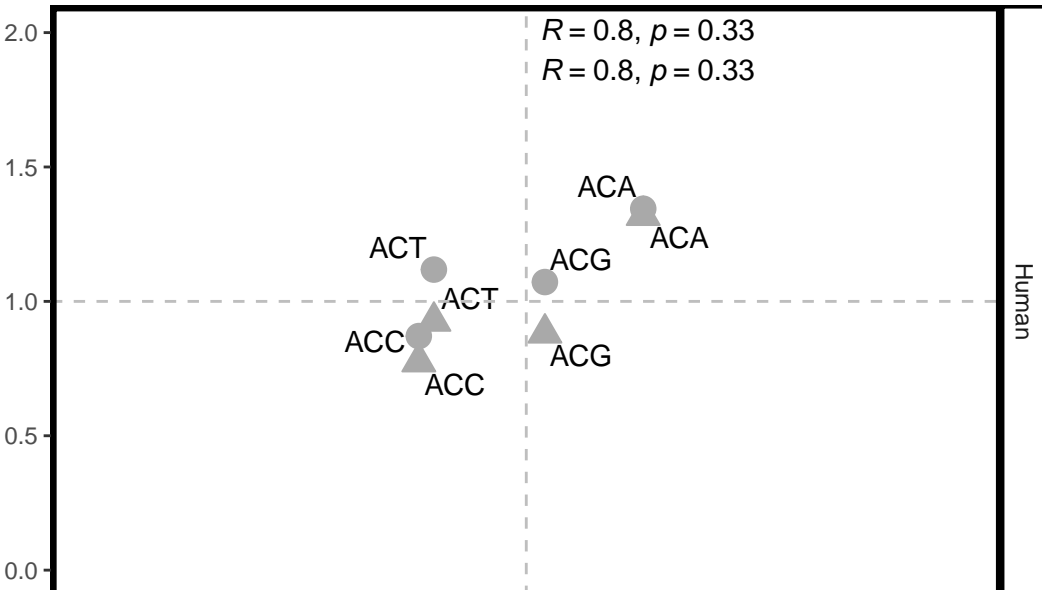
Mosquito

\log_2 RSCU FC



Thr

Mean Relative Fitness

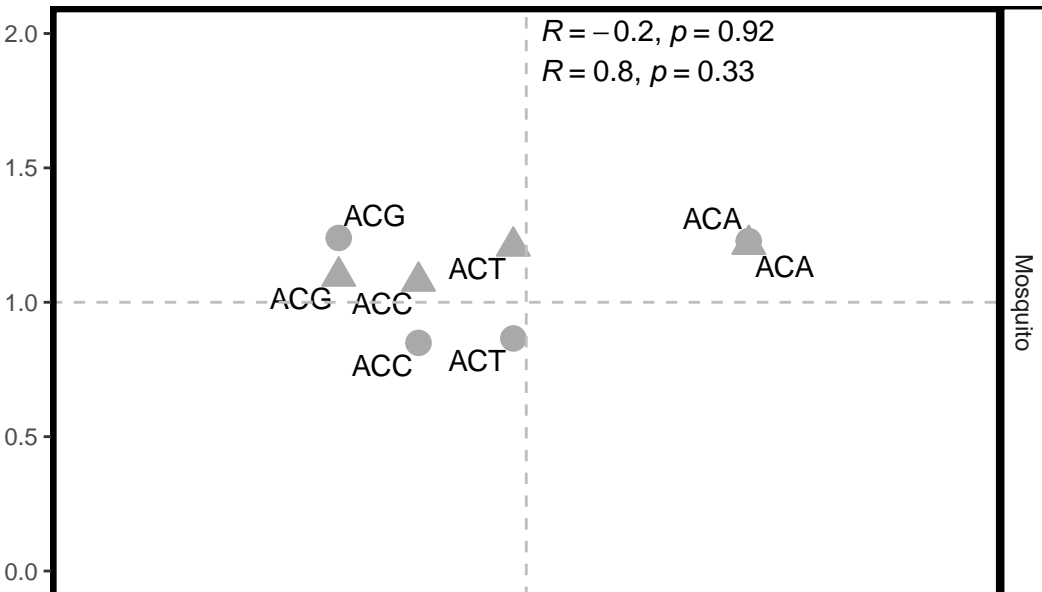


Fitness Class

- lethal
- deleterious
- neutral
- beneficial

Replicate

- A
- B



-2

0

2

log2 RSCU FC

