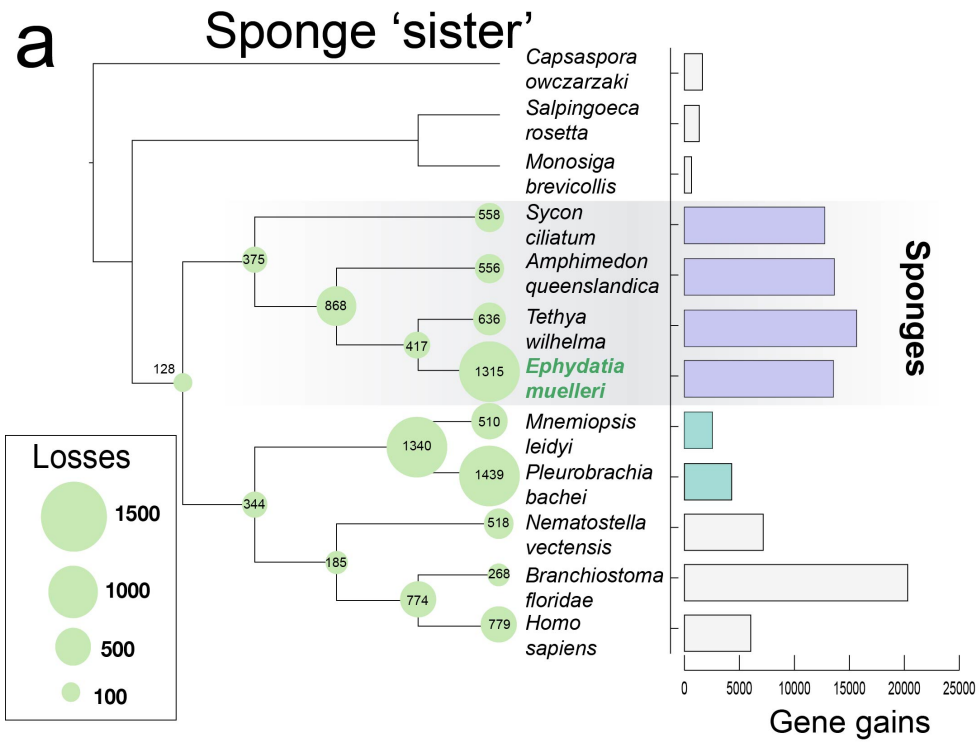
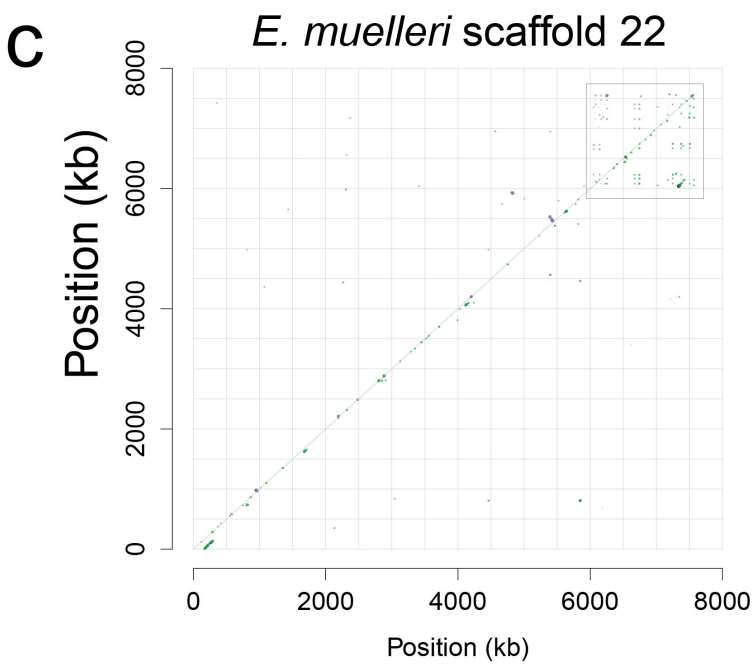
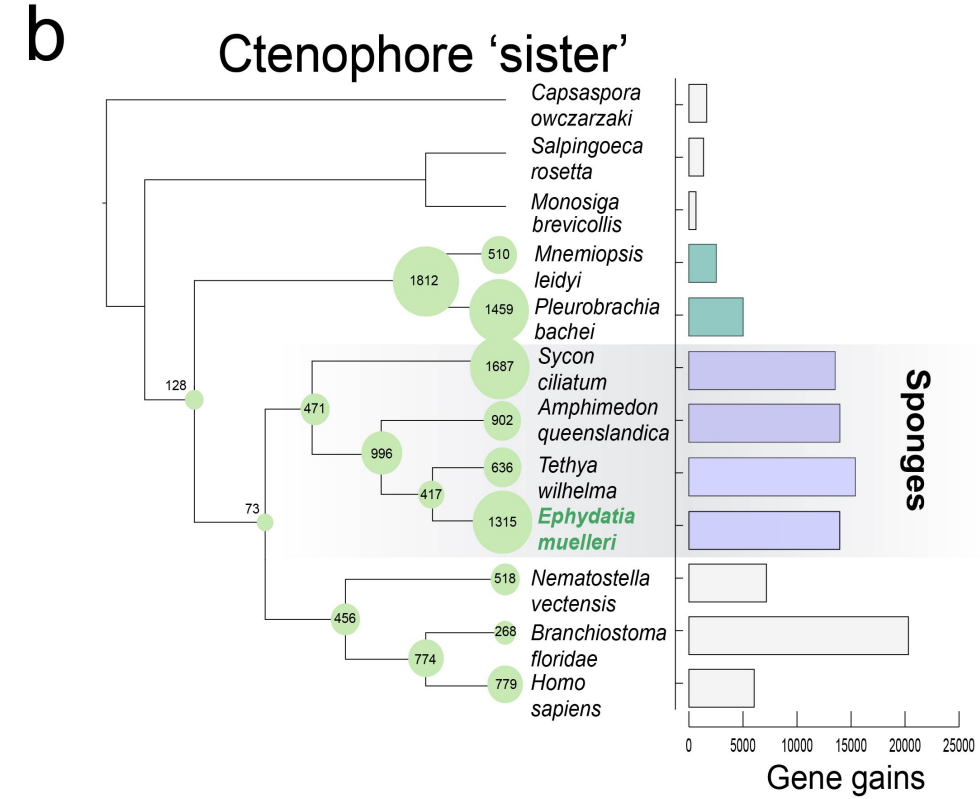
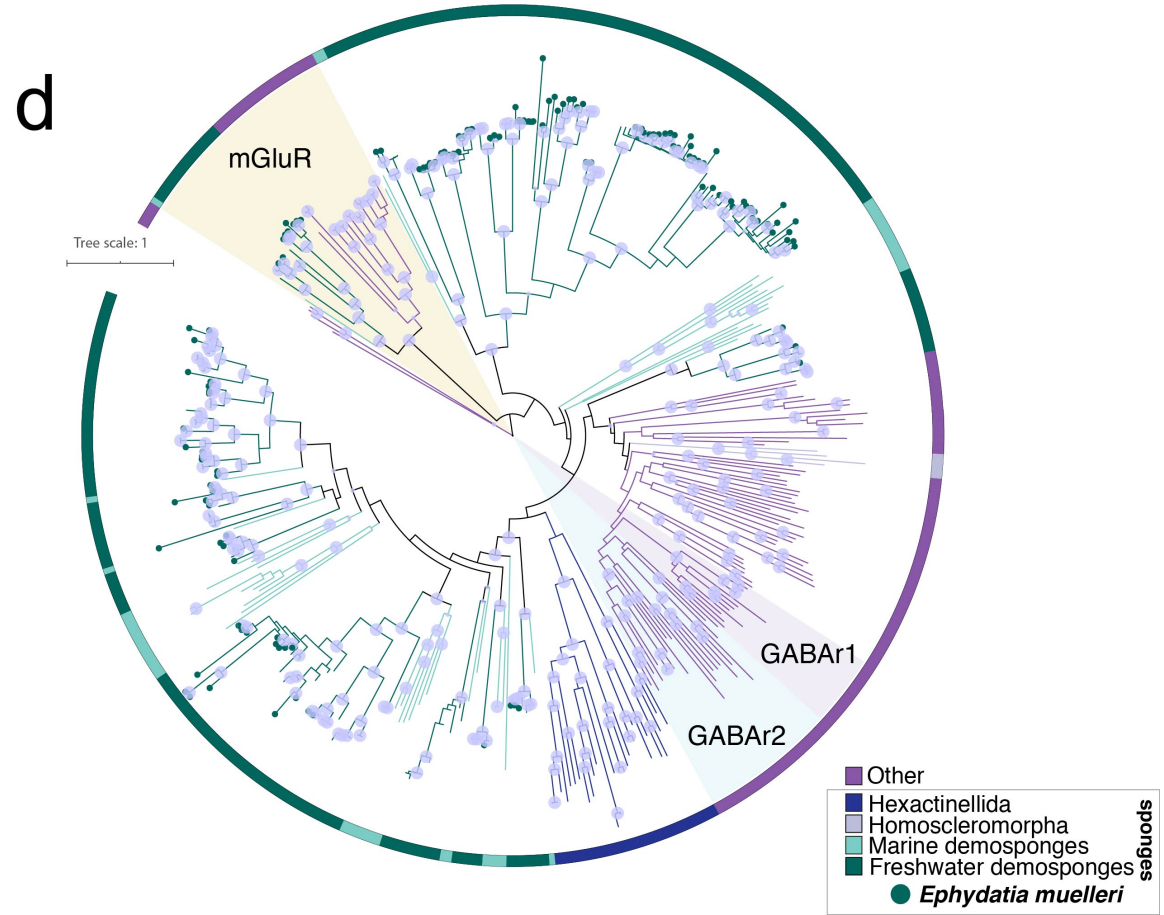

a
Sponge 'sister'
Capsaspora owczarzaki
Salpingoeca rosetta
Monosiga brevicollis
Sycon ciliatum
Amphimedon queenslandica
Tethya wilhelma
Ephydatia muelleri
Mnemiopsis leidyi
Pleurobrachia bachei
Nematostella vectensis
Branchiostoma floridae
Homo sapiens
Sponges
Losses
1500
1000
500
100
Gene gains
0
5000
10000
15000
20000
25000


c
E. muelleri scaffold 22
Position (kb)
0
2000
4000
6000
8000


b
Ctenophore 'sister'
Capsaspora owczarzaki
Salpingoeca rosetta
Monosiga brevicollis
Mnemiopsis leidyi
Pleurobrachia bachei
Sycon ciliatum
Amphimedon queenslandica
Tethya wilhelma
Ephydatia muelleri
Nematostella vectensis
Branchiostoma floridae
Homo sapiens
Sponges
Gene gains
0
5000
10000
15000
20000
25000


d
mGluR
Tree scale: 1
GABAr1
GABAr2
Other
Hexactinellida
Homoscleromorpha
Marine demosponges
Freshwater demosponges
Sponges
Ephydatia muelleri