

Cephalopod eye ESTs

4,657, 1,185 and 2,683 genes from
pygmy squid, squid and octopus

Elimination genes positive to RNA of non-camera eye molluscs on the custom array

Elimination of genes which homolog(s) were found in non-camera eye molluscan ESTs

Cephalopod camera eye-specific candidates

2,607, 1,014 and 2,086 genes from
pygmy squid, squid and octopus

1) Confirmation of
developmental functions

53.8 % (3,075/5,707) of positive genes to
pygmy squid embryonic RNA and 364
embryonic stage-specific genes

2) Estimation of
lineage specific
functional changes

156 positively selected genes
in the cephalopod lineage

Centaurin gamma,
cornichon homologs

3) Comparison with
vertebrate eye genes

1,571 genes having homologs
in the vertebrate eye ESTs

Ets-4 homolog

Experimental validation