

CLAIMS

What is claimed is:

1. A transgenic rainbow shark comprising a chromosomally integrated expression cassette encoding a fluorescent protein, wherein the rainbow shark comprises a transformation event
5 selected from the group consisting of:
the “Orange rainbow shark 1 transformation event,” sperm comprising the Orange rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010802); or
the “Purple rainbow shark 1 transformation event,” sperm comprising the Purple rainbow
10 shark 1 transformation event being deposited at the ECACC (Accession Number 19010801); or
the “Blue rainbow 1 transformation event,” sperm comprising the Blue rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010803); or
the “Green rainbow shark 1 transformation event,” sperm comprising the Green rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010804).
- 15 2. The transgenic rainbow shark of claim 1, further defined as a fertile, transgenic rainbow shark.
3. The transgenic rainbow shark of claim 1, wherein the fish is homozygous for the integrated expression cassette.
4. The transgenic rainbow shark of claim 1, wherein the fish is heterozygous for the
20 integrated expression cassette.
5. A method of providing a transgenic rainbow shark to the ornamental fish market, comprising obtaining a transgenic rainbow shark in accordance with claim 1, and distributing the fish to the ornamental fish market.

6. The method of claim 5, wherein the fish are distributed by a grower to a commercial distributor.

7. The method of claim 5, wherein the fish are distributed by a grower or a commercial distributor to a retailer.

5 8. The method of claim 7, wherein the retailer is a multi-product retailer having an ornamental fish department.

9. A method of producing a transgenic rainbow shark comprising:

(a) obtaining a first rainbow shark that comprises a chromosomally integrated expression cassette encoding a fluorescent protein, wherein the rainbow shark comprises a transformation
10 event selected from the group consisting of:

the "Orange rainbow shark 1 transformation event," sperm comprising the Orange rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010802); or

15 the "Purple rainbow shark 1 transformation event," sperm comprising the Purple rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010801); or

the "Blue rainbow 1 transformation event," sperm comprising the Blue rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010803); or

the "Green rainbow shark 1 transformation event," sperm comprising the Green rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010804),

20 (b) breeding the first rainbow shark with a second rainbow shark to provide a third rainbow shark, wherein the third rainbow shark comprises the same transformation event of the first rainbow shark.

10. The method of claim 9, wherein the second rainbow shark is a non-transgenic rainbow shark.

11. A progeny fish of the transgenic rainbow shark of claim 1 that comprises a chromosomally integrated expression cassette encoding a fluorescent protein, wherein the rainbow shark and progeny exhibit fluorescence and comprise a transformation event selected from the group consisting of:

5 the “Orange rainbow shark 1 transformation event,” sperm comprising the Orange rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010802); or

 the “Purple rainbow shark 1 transformation event,” sperm comprising the Purple rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010801); or

10 the “Blue rainbow 1 transformation event,” sperm comprising the Blue rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010803); or

 the “Green rainbow shark 1 transformation event,” sperm comprising the Green rainbow shark 1 transformation event being deposited at the ECACC (Accession Number 19010804),

12. The progeny fish of claim 11, wherein the progeny is a fertile, transgenic rainbow shark.

15 13. The progeny fish of claim 11, wherein the progeny is homozygous for the integrated expression cassette.

14. The progeny fish of claim 11, wherein the progeny is heterozygous for the integrated expression cassette.

20 15. A method of providing a transgenic fish to the ornamental fish market, comprising obtaining a progeny in accordance with claim 11, and distributing the progeny to the ornamental fish market.

16. The method of claim 15, wherein the transgenic fish are distributed by a grower to a commercial distributor.

17. The method of claim 16, wherein the transgenic fish are distributed by a grower or a commercial distributor to a retailer.

18. The method of claim 17, wherein the retailer is a multi-product retailer having an ornamental fish department.

5 19. A method of producing a transgenic fish comprising:

(a) obtaining a first transgenic fish in accordance with claim 11; and

(b) breeding the first transgenic fish with a second fish to provide a third fish, wherein the third fish comprises the same transformation event of the first transgenic fish.

20. The method of claim 19, wherein the second fish is a non-transgenic fish.