Figure Legends and Key
Zebrafish Pedigree Data
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Cross 1: Progeny of a dihybrid cross between a purple male and WT female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 1. Key: Grey 8, 17; Purple 5, 6, 9, 10, 14; Blue 1, 2, 3, 4; Red 7, 11, 12, 13, 15, 16, 18, 19, 20; Male 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18 , 19, 20; Female 7, 10.

Cross 2: Progeny of a monohybrid cross between red male and female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 2. Key: Red 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 27, 28; Grey 20, 26; Male 5, 8, 9, 11, 12, 21, 22, 25; Female 1, 2, 3, 4, 6, 7, 10, 13, 14, 15, 16, 17, 18, 19, 20, 23, 24, 26, 27, 28.

Cross 3: Progeny of a monohybrid cross between a red female and WT male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 3. Key: Red 4, 5, 6, 7, 12, 13, 15, 16, 17, 18, 19, 20, 21, 23; Grey 1, 2, 3, 8, 9,10, 11, 14, 22, 24.

Cross 4: Progeny of a dihybrid cross between a non-striped, red female and striped, red male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 4. Key: Red and striped 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25; Male 1, 4, 5, 7, 10, 13, 14, 15, 16, 24; Female 2, 3, 6, 8, 9, 11, 12, 17, 18, 19, 20, 21, 22, 23.

Cross 5: Progeny of dihybrid cross between a red female and yellow male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 5. Key: Yellow 1, 5, 6, 10, 13, 15, 16, 19, 20; Orange 2, 3, 4, 7, 8, 11, 12, 14, 17, 18; Male 1, 7, 10, 15, 16, 17, 18, 19, 20; Female 2, 3, 4, 5, 6, 8,11, 12, 13, 14.

Cross 6: Progeny of a monohybrid cross between a homozygous red female and yellow male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 6. Key: Red 3, 4, 5, 7, 8; Orange 1,2, 6, 9; Male 1, 5, 8; Female 2, 3, 4, 6, 7, 9.

Cross 7: Progeny of dihybrid cross between a purple female and purple male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 7. Key: Purple 1, 2, 3, 4, 5, 6, 8, 9, 11; Grey 10, 13; Purple; no pigment 7; Grey; no pigment 12; Male 2, 3, 4, 5, 7, 8, 11; Female 1, 6, 9, 10, 12, 13.

Cross 8: Progeny of trihybrid cross between a red male and a purple female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 8. Key: Grey, striped 7; Purple, striped 4, 8; Red, striped 1, 2, 6, 9, 16; Red-purple, striped 13, 15, 17; Grey; no pigment 3, 5; Red; no pigment 10, 11; Red-purple; no pigment 12, 14; Male 1, 3, 4, 5, 6, 7, 8, 9, 10, 11 12, 14, 15, 16, 17; Female 2, 13.

Cross 9: Progeny of dihybrid cross between a WT female and orange male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 9. Key: Grey 2; Yellow 1, 3, 6, 7, 8; Red 4, 5, 9, 10, 12; Orange 11, 13, 14; Male 7; Female 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14.

Cross 10: Progeny of tetrahybrid cross between a short finned, striped, purple male and long finned, spotted, yellow female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 10. Key: Yellow 1, 2, 4; Yellow-purple 3; Short finned 1, 2, 4; Long finned 3; Striped 1, 4; Spotted 2, 3; Female 1, 2, 3, 4.

Cross 11: Progeny of a dihybrid cross between an orange male and orange female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 11. Key: Orange 1, 2, 3, 7, 12, 17; Yellow 4, 5, 8, 9, 13; Grey 6, 10, 11, 19; Red 14, 15, 16, 18; Female 2, 4, 6, 8, 10, 11, 12, 14, 15, 16, 17, 18; Male 1, 3, 5, 7, 9, 13, 19.

Cross 12: Progeny of trihybrid cross between a purple male and purple female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 12. Key: Grey, striped 16; Blue, striped 2, 3, 4; Red, striped 5, 6, 7, 10, 12, 14; Purple, striped 1, 8, 9, 15; Grey, striped 11; Purple, no pigment 13; Female 2, 4, 8, 9,10,13; Male 1, 5, 6, 7,11,12,14,15,16.

Cross 13: Progeny of dihybrid cross between a homozygous red male and homozygous yellow female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 13. Key: Orange 1, 2, 3, 4, 5, 6; Female 2, 5; Male 1, 3, 4, 6.

Cross 14: Progeny of a dihybrid cross between a green, no pigment male and purple, striped female zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 14. Key: Grey 1, 3, 10; Green 2, 4, 9, 11, 12; Purple 5, 8; Green-purple 6, 7; Female 1, 3, 5, 11; Male 2, 4, 6, 7, 8, 9, 10, 12.

Cross 15 (20): Progeny of a monohybrid cross between a grey female and red male zebrafish. Images of the parents and all of the progeny were auto-toned using Photoshop. Data and chi-square analysis for this cross are found in Table 15. Key: Grey 1, 2, 3, 4, 6, 7, 8, 9; Red 5, 10, 11, 12; Female 2, 3, 4, 5, 7, 10; Male 1, 6, 8, 9, 11, 12.