EPITOPES OF TILAPIA RED BLOOD CELLS.
I. SPECIES-SPECIFIC ANTIBODIES FOR THE CONTROL OF TILAPIA BREEDING STOCKS

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Abstract
Specific antisera against red blood cells of some tilapia species were obtained by reciprocal interspecific and intergeneric immunizations. The antisera were used to confirm co-dominant expression of epitopes in F₁ interspecific hybrids and to identify the parental origin of three red tilapia strains. The antisera in all hybrids (Oreochromis niloticus x O. mossambicus, O. aureus x O. hornorum, O. niloticus x S. galilaeus and O. niloticus x O. aureus) were positive to both parental strains. However, while all F₁ hybrids of O. mossambicus x O. hornorum were positive to anti-O. mossambicus antiserum, only 50% were positive to anti-O. hornorum antiserum. In most cases, these results point to co-dominant expression of the species-specific epitopes in hybrids.

In addition, the triple parental origins of the Philippine red tilapia (positive for O. aureus, O. mossambicus and O. niloticus epitopes) and of mossambicus red tilapia (positive for O. hornorum, O. mossambicus and O. niloticus epitopes) were assessed. The O. niloticus red tilapia, described as a purebred red variant of O. niloticus, was positive for both anti-O. niloticus and anti-O. aureus antibodies, with a significantly more intense reaction to the latter. A possible genetic basis of this last finding is discussed.