

Phenotypic analysis of virulence factors produced by *Aeromonas* spp. strains isolated from Tambaqui fish (*Colossoma macropomum*)

Pessoa, R.B.G.¹; Xavier, A.L.¹; Marques, D.S.C.¹; Lima, G.M.S.²; Araújo, J.M.²;
Maciel de Carvalho, E.V.M.¹; Coelho, L.C.B.B.¹

¹Departamento de Bioquímica, ²Departamento de Antibióticos, Centro de Ciências
Biológicas, Universidade Federal de Pernambuco – Recife/PE – Brazil

INTRODUCTION. The tambaqui (*Colossoma macropomum*) is one of the most important fish present in the national pisciculture with favorable characteristics. However, the conditions in the culture may cause stress and makes the Tambaqui susceptible to bacterial infections mainly from *Aeromonas* genus. **OBJECTIVE.** To analyze the phenotypical production of haemolysins, lipases and proteases by *Aeromonas* spp. isolated from *C. macropomum*. **MATERIAL AND METHODS:** To evaluate the phenotypical production of virulence factors, 40 strains of *Aeromonas* spp. were developed in tryptic soy agar keeping the same diameter and smeared onto agar culture plates for each enzyme assay. The identification of haemolysins, proteases and lipases were performed with 5% blood agar, milk agar and olive oil/rhodamine b agar, respectively. **DISCUSSION AND RESULTS:** The analysis of the production of haemolysins and proteases involved the presence of the inhibition zone formed around the bacterial colony. The phenotypical evaluation of haemolysin, among 40 tested bacteria, showed 10 with evident inhibition zone, 14 less evident and 16 isolates did not show any inhibition zone. The phenotypical evaluation of the proteases, considering all tested bacteria, showed inhibition zone. The analysis of lipases production made by ultraviolet light irradiation changed the strain color to orange. The assay showed 27 positive and 13 negative from the 40 isolates. **CONCLUSION:** The phenotypical evaluation showed that some strains of *Aeromonas* spp. are capable of expressing all three tested enzymes, increasing the virulence potential of the strain and causing more damage to the fish; however, the production of proteases was more evident and common.

Key words: Virulence Factors, *Aeromonas*, *Colossoma macropomum*.
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