

# Accepted Manuscript

Protection and antibody reactivity following vaccination of lumpfish (*Cyclopterus lumpus* L.) against atypical *Aeromonas salmonicida*

Anita Rønneseth, Gyri T. Haugland, Duncan J. Colquhoun, Espen Brudal, Heidrun I. Wergeland



PII: S1050-4648(17)30168-7

DOI: [10.1016/j.fsi.2017.03.040](https://doi.org/10.1016/j.fsi.2017.03.040)

Reference: YFSIM 4509

To appear in: *Fish and Shellfish Immunology*

Received Date: 1 September 2016

Revised Date: 1 March 2017

Accepted Date: 22 March 2017

Please cite this article as: Rønneseth A, Haugland GT, Colquhoun DJ, Brudal E, Wergeland HI, Protection and antibody reactivity following vaccination of lumpfish (*Cyclopterus lumpus* L.) against atypical *Aeromonas salmonicida*, *Fish and Shellfish Immunology* (2017), doi: 10.1016/j.fsi.2017.03.040.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

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

Protection and antibody reactivity following vaccination of lumpfish (*Cyclopterus lumpus* L.)  
against atypical *Aeromonas salmonicida*

Anita Rønneseth<sup>1a</sup>, Gyri T. Haugland<sup>a</sup>, Duncan J. Colquhoun<sup>a,b</sup> Espen Brudal<sup>c</sup> and Heidrun  
I.Wergeland<sup>a</sup>

<sup>a</sup>Department of Biology, University of Bergen, Bergen High-Technology Centre, PO box  
7803, NO-5020 Bergen, Norway

<sup>b</sup>Norwegian Veterinary Institute, Oslo, Norway

<sup>c</sup>PHARMAQ, Oslo, Norway

<sup>1</sup>Corresponding author

E-mail address; anita.rønneseth@uib.no

University of Bergen

PO box 7803

5020 Bergen

Norway

Tlf.: +47 55584400 (switchboard)

+ 47 55584421 (office)

Fax: + 4755584450

Key words: vaccination, mortality, bacterial infection, fish pathogen, lumpfish, adaptive  
immunity, A-layer, *vapA*

Download English Version:

<https://daneshyari.com/en/article/5540527>

Download Persian Version:

<https://daneshyari.com/article/5540527>

[Daneshyari.com](https://daneshyari.com)