**Supplementary Appendix**

**An outbreak of *Mycobacterium marinum* infection associated with handling seabass**

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# Questionnaire

New Patient Registration Form

No. Date Name of staff

Personal Information

Name Sex Date of birth Race

Address Occupation\_\_\_\_\_\_\_

ID card number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Telephone

Closest relative \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Relative Phone

Clinical Information

1. History of exposure to the seafood: A. No history of exposure;

B. Yes (Name of seafood \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ; Seafood market ; Weight of seafood ; Any left );

C. Other exposures: swimming fish tanks gardening

2. Wear gloves when prepare seafood: No Yes

3. Injured by seafood: No Yes (Date )

4. Date of appearance of skin lesions:

Location of skin lesions:

Symptoms:

5. Accompanying symptoms (such as fever): No Yes (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ )

6. Patients with similar symptoms in the family: No Yes (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

7. Other disease: No Yes (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

8. Medical examination (description of skin lesions):

9. Have been to hospital before: No Yes (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

10. If the answer of question of Q8 is yes, please write the diagnosis and treatment:

# Diagnostic criteria

Final diagnosis was based on medical history and clinical manifestations of patients and the results of laboratory examinations. Suspected cases were defined as individuals who were injured when handling fish and presented with plaques, nodules, ulcers, or deep tissue involvement. Probable cases were defined as suspected cases with histopathological evidence of granulomas/granulomatous inflammation, acid-fast bacilli (AFB) staining positive for mycobacterial infection, or clinical improvement after treatment for presumed *M. marinum* infection. Confirmed cases were defined as suspected or probable cases with positive results for *M. marinum* culture or qPCR.

# Supplementary Tables

## Supplementary Table 1. Detailed summary of cases.

| **Number** | **ID of Patients** | **Case Definition** | **Month of Exposure** | **Month of Rash** | **Rash** | **Results** | | | | **Treatment** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Biopsy** | **Acid-fast bacilli stain** | **qPCR** | **Culture** |
| 1 | 001 | Confirmed | September | October | Rash on right forefinger and right arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting then minocycline (received surgical treatment before) |
| 2 | 002 | Probable | August | August | Rash on right thumb | - | - | - | - | received surgical treatment before |
| 3 | 003 | Confirmed | August | August | Rash on right forefinger and little finger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | minocycline due to intolerant of rifampin and clarithromycin |
| 4 | 004 | Confirmed | August | September | Rash on left ring finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 5 | 005 | Confirmed | NA | September | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 6 | 006 | Confirmed | October | October | Rash on both right and left forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 7 | 007 | Confirmed | September | September | Rash on right forefinger and dorsum of right hand | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | minocycline (visiting our hospital before interview) |
| 8 | 008 | Confirmed | October | NA | Rash on right hand; Bx=infective granulomas | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 9 | 009 | Confirmed | NA | November | Rash on right middle finger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin |
| 10 | 010 | Confirmed | November | November | Rash on left thumb and forefinger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin |
| 11 | 011 | Confirmed | September | September | Rash on right ring finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin |
| 12 | 012 | Confirmed | November | November | Rash on right thumb and left forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 13 | 013 | Confirmed | September | September | Rash on left middle finger and left arm | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 14 | 014 | Confirmed | September | September | Rash on left thumb and left arm | infective granulomas | negative; (PAS=spores within giant cells) | positive *M. marinum* | negative *M. marinum* | terbinafine and minocycline (received surgical treatment before) |
| 15 | 015 | Probable | October | October | Rash on left thumb | - | - | - | - | rifampin and clarithromycin then clarithromycin due to decreased WBC counting (received surgical treatment before) |
| 16 | 016 | Confirmed | NA | November | Rash on palm of left hand | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin |
| 17 | 017 | Confirmed | September | November | Rash on left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin (received surgical treatment before) |
| 18 | 018 | Confirmed | September | September | Rash on left forefinger and left arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 19 | 019 | Confirmed | December | December | Rash on left little finger and left arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 20 | 020 | Confirmed | September | September | Rash on dorsum of right hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 21 | 021 | Confirmed | September | October | Rash on left forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 22 | 022 | Confirmed | September | September | Rash on left forefinger and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting (received surgical treatment before) |
| 23 | 023 | Confirmed | October | October | Rash on right forefinger and left middle finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin (received surgical treatment before) |
| 24 | 024 | Confirmed | November | December | Rash on left ring finger, dorsum of left hand, and left arm | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 25 | 025 | Confirmed | October | October | Rash on right forefinger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 26 | 026 | Confirmed | October | October | Rash on right middle finger, ring finger, and left middle finger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 27 | 027 | Confirmed | NA | NA | Rash on right middle finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin (received surgical treatment before) |
| 28 | 028 | Probable | October | October | Rash on right forefinger; received mass excision before interview | - | - | - | - | rifampin and clarithromycin then discontinued rifampin (received surgical treatment before) |
| 29 | 029 | Confirmed | October | October | Rash on left thumb, forefinger, and left arm | infective granulomas | positive | negative *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 30 | 030 | Probable | December | December | Rash on right middle finger | infective granulomas | negative | - | - | rifampin and clarithromycin for two weeks then patient declined (received surgical treatment before) |
| 31 | 031 | Confirmed | October | NA | Rash on right forefinger and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 32 | 032 | Confirmed | September | September | Rash on right forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 33 | 033 | Probable | September | October | Rash on right ring finger and left thumb | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | clarithromycin then rifampin and clarithromycin |
| 34 | 034 | Probable | September | September | Rash on right forefinger | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 35 | 035 | Confirmed | September | September | Rash on right ring finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting (received surgical treatment before) |
| 36 | 036 | Confirmed | September | September | Rash on right thumb, forefinger, little finger, left thumb, forefinger, and middle finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 37 | 037 | Confirmed | November | December | Rash on right forefinger and right arm | inflammation | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin for one month then discontinued due elevated ALT and AST |
| 38 | 038 | Confirmed | October | November | Rash on right middle finger, dorsum of right hand, and right arm | lymphocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 39 | 039 | Confirmed | November | November | Rash on right forefinger and right arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 40 | 040 | Confirmed | October | November | Rash on left thumb, forefinger, and left arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 41 | 041 | Probable | October | October | Rash on right middle finger | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 42 | 042 | Confirmed | September | September | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 43 | 043 | Confirmed | October | October | Rash on left middle finger and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 44 | 044 | Confirmed | September | October | Rash on left forefinger and dorsum of left hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin |
| 45 | 045 | Confirmed | October | October | Rash on right ring finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 46 | 046 | Probable | September | October | Rash on dorsum of right hand | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 47 | 047 | Confirmed | October | October | Rash on right forefinger, right arm, and left middle finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin (received surgical treatment before) |
| 48 | 048 | Probable | November | November | Rash on right forefinger, ring finger, left thumb, forefinger, and middle finger | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 49 | 049 | Probable | October | October | Rash on right forefinge | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 50 | 050 | Confirmed | October | October | Rash on left thumb | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then discontinued due to intolerant of both drugs |
| 51 | 051 | Confirmed | August | August | Rash on right forefinger, dorsum of right hand, and right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 52 | 052 | Probable | October | October | Rash on right forefinger and right arm | - | - | - | - | rifampin and clarithromycin then clarithromycin due to decreased WBC counting (received surgical treatment before) |
| 53 | 053 | Probable | October | October | Rash on palm of left hand and left arm | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 54 | 056 | Probable | September | October | Rash on left forefinger and left arm | - | - | - | - | clarithromycin (received surgical treatment before) |
| 55 | 057 | Probable | August | September | Rash on left ring finger | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 56 | 058 | Confirmed | September | September | Rash on right little finger, right arm, and left ring finger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 57 | 059 | Confirmed | September | September | Rash on right ring finger and right arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 58 | 060 | Confirmed | September | September | Rash on all five fingers of right hand and both rignt and left arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting |
| 59 | 061 | Confirmed | October | October | Rash on right middle finger, right arm, left thumb, and left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 60 | 062 | Confirmed | September | September | Rash on right forefinger and right wrist | histiocytes and lymphocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 61 | 063 | Confirmed | September | September | Rash on right forefinger, little finger, right arm, left thumb, left little finger, and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 62 | 064 | Probable | September | October | Rash on right forefinger | lymphocytes infiltration | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin |
| 63 | 065 | Probable | September | September | Rash on right thumb, forefinger, left forefinger, and left arm | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 64 | 066 | Probable | December | December | Rash on right middle finger | central necrosis peripheralized by histinocytes and lymphocytes infiltration | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 65 | 067 | Probable | September | September | Rash on left forefinger, middle finger, and palm of left hand | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 66 | 068 | Confirmed | October | November | Rash on right forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 67 | 069 | Probable | November | November | Rash on left little finger | - | - | - | - | rifampin and clarithromycin |
| 68 | 070 | Probable | October | December | Rash on left forefinger | - | - | - | - | rifampin and clarithromycin then clarithromycin due to decreased WBC counting |
| 69 | 071 | Probable | November | December | Rash on left forefinger | - | - | - | - | rifampin and clarithromycin |
| 70 | 072 | Probable | October | October | Rash on left forefinger | - | - | - | - | rifampin and clarithromycin |
| 71 | 073 | Confirmed | October | October | Rash on right forefinger and right arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin |
| 72 | 074 | Confirmed | October | October | Rash on right ring finger and right arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin |
| 73 | 075 | Probable | November | November | Rash on left thumb | - | - | - | - | rifampin and clarithromycin |
| 74 | 076 | Probable | November | November | Rash on left middle finger and ring finger | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 75 | 077 | Probable | October | October | Rash on right thumb | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 76 | 078 | Probable | September | October | Rash on right thumb and right arm | - | - | - | - | clarithromycin (received surgical treatment before) |
| 77 | 079 | Confirmed | October | October | Rash on left thumb and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 78 | 080 | Confirmed | November | November | Rash on left ring finger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | no treated due to elevated AST and ALT |
| 79 | 081 | Confirmed | September | October | Rash on right forefinger and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 80 | 082 | Confirmed | November | November | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | clarithromycin then discontinued due to decreased WBC counting (received surgical treatment before) |
| 81 | 084 | Confirmed | October | December | Rash on right thumb, forefinger, right arm, left thumb, and forefinger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting |
| 82 | 085 | Probable | December | December | Rash on right thumb | - | - | - | - | clarithromycin (received surgical treatment before) |
| 83 | 086 | Probable | October | October | Rash on left ring finger | - | - | - | - | clarithromycin then minocycline due to intolerant of clarithromycin |
| 84 | 087 | Confirmed | August | September | Rash on right middle finger, dorsum of right hand, and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 85 | 088 | Confirmed | October | October | Rash on right forefinger, dorsum of right hand, and right arm | lymphocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 86 | 089 | Probable | September | September | Rash on right forefinger and little finger | - | - | - | - | clarithromycin |
| 87 | 090 | Confirmed | October | October | Rash on left thumb | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 88 | 091 | Probable | September | October | Rash on right ring finger, little finger, left thumb, forefinger, and left wrist | - | - | - | - | rifampin and clarithromycin then clarithromycin |
| 89 | 092 | Probable | September | October | Rash on right forefinger | - | - | - | - | clarithromycin (received surgical treatment before) |
| 90 | 093 | Confirmed | November | November | Rash on right thumb, forefinger, left thumb, and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 91 | 094 | Confirmed | September | September | Rash on right thumb, middle finger, ring finger, and left middle finger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 92 | 095 | Probable | September | September | Rash on right forefinger | - | - | - | - | clarithromycin |
| 93 | 096 | Confirmed | September | September | Rash on right middle finger, dorsum of right hand, and right arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin (received surgical treatment before) |
| 94 | 097 | Confirmed | November | November | Rash on right forefinger, ring finger, left forefinger, and left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin (received surgical treatment before) |
| 95 | 098 | Confirmed | August | September | Rash on right forefinger, left middle finger, dorsum of both hands, and both arms | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 96 | 099 | Confirmed | September | September | Rash on left forefinger, middle finger, dorsum of left hand, and left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting |
| 97 | 101 | Confirmed | October | October | Rash on right forefinger, right arm, and left thumb | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 98 | 102 | Confirmed | September | September | Rash on right forefinger, right arm, and left forefinger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then discontinued due to decreased WBC counting |
| 99 | 103 | Probable | October | October | Rash on right thumb and left wrist | - | - | - | - | clarithromycin (received surgical treatment before) |
| 100 | 104 | Confirmed | November | December | Rash on right middle finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 101 | 105 | Confirmed | October | October | Rash on left middle finger and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 102 | 106 | Probable | August | September | Rash on left middle finger and palm of left hand | - | - | - | - | rifampin and clarithromycin then recommonded to visit hand surgeon (received surgical treatment before) |
| 103 | 107 | Confirmed | October | October | Rash on left forefinger and middle finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 104 | 108 | Confirmed | September | September | Rash on left thumb | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 105 | 109 | Confirmed | September | September | Rash on right thumb, forefinger, palm of right hand, right arm, and left ring finger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 106 | 110 | Confirmed | December | December | Rash on left ring finger | only epidermal layer | negative | positive *M. marinum* | positive *M. marinum* | clarithromycin |
| 107 | 111 | Confirmed | October | November | Rash on right middle finger and dorsum of right hand | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin |
| 108 | 112 | Confirmed | September | September | Rash on right middle finger, dorsum of right hand, and right arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 109 | 113 | Confirmed | September | September | Rash on right thumb, dorsum of right hand, and right wrist | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | clarithromycin then minocycline due to decreased WBC counting (received surgical treatment before) |
| 110 | 114 | Confirmed | October | October | Rash on right thumb, forefinger, middle finger, left middle finger, ring finger, dorsum of both hands, and both arms | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 111 | 115 | Confirmed | October | November | Rash on right thumb and left thumb | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin then minocycline due to decreased WBC counting |
| 112 | 117 | Confirmed | August | August | Rash on right forefinger and right arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting |
| 113 | 118 | Confirmed | November | November | Rash on right middle finger | lymphocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 114 | 119 | Confirmed | October | October | Rash on right thumb and forefinger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 115 | 120 | Suspected | October | October | Rash on right ring finger | - | - | - | - | - |
| 116 | 121 | Suspected | September | September | Rash on right forefinger and left ring finger | - | - | - | - | - |
| 117 | 122 | Confirmed | September | September | Rash on right middle finger and left forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 118 | 123 | Confirmed | September | NA | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 119 | 124 | Probable | December | December | Rash on left thumb | - | - | - | - | rifampin and clarithromycin then clarithromycin due to decreased WBC counting (received surgical treatment before) |
| 120 | 125 | Probable | December | December | Rash on palm of left hand | - | - | - | - | received surgical treatment before |
| 121 | 126 | Confirmed | October | November | Rash on right forefinger, dorsum of right hand | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to that patient declined rifampin |
| 122 | 127 | Confirmed | October | December | Rash on right forefinger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin then clarithromycin due to intolerant of rifampin |
| 123 | 128 | Confirmed | NA | September | Rash on dorsum of right hand and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 124 | 129 | Confirmed | September | October | Rash on right thumb and middle finger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 125 | 130 | Confirmed | September | November | Rash on right thumb | granulomatous inflammation | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 126 | 131 | Confirmed | November | November | Rash on right forefinger, dorsum of right hand, and right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 127 | 132 | Confirmed | September | October | Rash on right ring finger and little finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 128 | 133 | Confirmed | October | November | Rash on right forefinger, left little finger, and left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting (received surgical treatment before) |
| 129 | 134 | Confirmed | October | October | Rash on right thumb, forefinger, middle finger, and left thumb | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 130 | 135 | Confirmed | October | November | Rash on right forefinger and right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 131 | 136 | Suspected | October | November | Rash on left forefinger | - | - | - | - | - |
| 132 | 138 | Probable | October | October | Rash on right forefinger and dorsum of right hand | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 133 | 139 | Confirmed | October | October | Rash on right middle finger and right arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 134 | 140 | Confirmed | November | November | Rash on right forefinger and right arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 135 | 141 | Confirmed | October | October | Rash on right forefinger, right wrist, and left middle finger | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | clarithromycin |
| 136 | 143 | Probable | NA | November | Rash on right middle finger and right arm | - | - | - | - | rifampin and clarithromycin |
| 137 | 145 | Confirmed | November | November | Rash on left forefinger | lymphocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin then discontinued due to decreased WBC counting |
| 138 | 146 | Probable | September | September | Rash on right little finger and right wrist | - | - | - | - | rifampin and clarithromycin (received surgical treatment before) |
| 139 | 147 | Probable | September | September | Rash on right ring finger | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | clarithromycin (received surgical treatment before) |
| 140 | 148 | Confirmed | November | November | Rash on right forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 141 | 149 | Confirmed | November | November | Rash on right middle finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 142 | 150 | Confirmed | September | October | Rash on right forefinger and left thumb | inflammation | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 143 | 151 | Confirmed | NA | September | Rash on right forefinger and dorsum of right hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 144 | 152 | Confirmed | December | December | Rash on left forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 145 | 153 | Probable | September | September | Rash on left forefinger, left ring finger, and left arm | - | - | - | - | rifampin and clarithromycin (received surgical treatment before) |
| 146 | 154 | Confirmed | October | November | Rash on right ring finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 147 | 155 | Confirmed | September | October | Rash on left forefinger and left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then minocycline due to decreased WBC counting (received surgical treatment before) |
| 148 | 156 | Confirmed | October | October | Rash on right thumb and forefinger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 149 | 157 | Probable | December | December | Rash on left thumb | - | - | - | - | received surgical treatment before |
| 150 | 158 | Probable | November | November | Rash on right thumb | - | - | - | - | clarithromycin |
| 151 | 159 | Confirmed | September | September | Rash on right forefinger and middle finger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin due to decreased WBC counting |
| 152 | 161 | Probable | September | October | Rash on right thumb and forefinger | - | - | - | - | rifampin and clarithromycin (received surgical treatment before) |
| 153 | 162 | Confirmed | September | October | Rash on left thumb | inflammation | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 154 | 163 | Probable | November | December | Rash on left ring finger | - | - | - | - | rifampin and clarithromycin |
| 155 | 164 | Confirmed | December | December | Rash on left ring finger, dorsum of left hand, and left arm | inflammation | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 156 | 165 | Confirmed | November | December | Rash on palm of left hand left arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 157 | 166 | Probable | NA | NA | Rash on right thumb | - | - | - | - | clarithromycin (received surgical treatment before) |
| 158 | 167 | Confirmed | September | September | Rash on right forefinger and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 159 | 168 | Probable | October | October | Rash on right forefinger | - | - | - | - | rifampin and clarithromycin |
| 160 | 169 | Probable | November | November | Rash on right forefinger | - | - | - | - | clarithromycin |
| 161 | 170 | Confirmed | September | September | Rash on palm of right hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 162 | 171 | Confirmed | November | December | Rash on left forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 163 | 172 | Confirmed | November | December | Rash on left middle finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 164 | 173 | Confirmed | October | October | Rash on right forefinger, dorsum of both hands | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 165 | 175 | Confirmed | September | September | Rash on right forefinger and dorsum of right hand | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 166 | 176 | Probable | October | October | Rash on right thumb | - | - | - | - | rifampin and clarithromycin (received surgical treatment before) |
| 167 | 177 | Confirmed | October | October | Rash on left forefinger and dorsum of left hand | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 168 | 178 | Confirmed | October | October | Rash on dorsum of right hand | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 169 | 179 | Confirmed | October | October | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 170 | 181 | Confirmed | December | December | Rash on right middle finger and right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 171 | 183 | Confirmed | October | October | Rash on right ring finger, right arm, and left thumb | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin then clarithromycin |
| 172 | 184 | Confirmed | October | October | Rash on right middle finger, ring finger, and dorsum of right hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 173 | 186 | Probable | October | October | Rash on left forefinger | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 174 | 187 | Confirmed | November | November | Rash on left forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 175 | 188 | Probable | September | October | Rash on left forefinger and left arm | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin (received surgical treatment before) |
| 176 | 189 | Confirmed | October | October | Rash on left middle finger and left arm | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 177 | 190 | Confirmed | NA | November | Rash on right forefinger and right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 178 | 191 | Suspected | January, 2020 | January, 2020 | Rash on left thumb | - | - | - | - | - |
| 179 | 192 | Probable | September | September | Rash on right ring finger and left little finger | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 180 | 193 | Confirmed | November | November | Rash on dorsum of left hand and left arm | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 181 | 194 | Confirmed | January, 2020 | February, 2020 | Rash on left middle finger and little finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 182 | 195 | Confirmed | October | October | Rash on right forefinger | The number of fibrocytes was increased in dermal tissue. | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 183 | 196 | Confirmed | February, 2020 | February, 2020 | Rash palm of right hand and right elbow | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 184 | 197 | Confirmed | October | November | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 185 | 198 | Confirmed | November | March, 2020 | Rash on right ring finger | infective granulomas | positive | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 186 | 199 | Probable | October | October | Rash on right thumb | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 187 | 200 | Confirmed | November | November | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 188 | 201 | Confirmed | September | October | Rash on right forefinger and right elbow | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 189 | 202 | Confirmed | October | October | Rash on left and right forefinger | infective granulomas | negative | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 190 | 203 | Confirmed | October | November | Rash on left forefinger and dorsum of left hand | lymphocytes infiltration and epithelioid cell granuloma | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 191 | 204 | Confirmed | February, 2020 | February, 2020 | Rash on right thumb, forefinger, and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 192 | 205 | Confirmed | September | October | Rash on dorsum of right hand and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 193 | 206 | Confirmed | October | October | Rash on right hand and right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 194 | 207 | Confirmed | January, 2020 | February, 2020 | Rash on right middle finger, dorsum of right hand, and right arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 195 | 208 | Probable | September | September | Rash on right thumb | infective granulomas | negative | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 196 | 209 | Confirmed | November | November | Rash on right forefinger and dorsum of right hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | minocycline |
| 197 | 210 | Confirmed | August | August | Rash on right forefinger, middle finger, dorsum of right and left hand, and right and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 198 | 211 | Confirmed | December | March, 2020 | Rash on right forefinger | lymphocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 199 | 212 | Confirmed | September | November | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 200 | 213 | Confirmed | November | November | Rash on left forefinger | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 201 | 214 | Confirmed | September | October | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 202 | 215 | Probable | September | September | Rash on right forefinger | infective granulomas | positive | negative *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 203 | 216 | Confirmed | September | September | Rash on left middle finger and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 204 | 217 | Confirmed | September | September | Rash on palm of right hand | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 205 | 218 | Confirmed | September | October | Rash on left middle finger | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | rifampin and clarithromycin |
| 206 | 219 | Confirmed | October | November | Rash on right thumb | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 207 | 220 | Confirmed | February, 2020 | February, 2020 | Rash on right forefinger | lymphocytes and histiocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 208 | 221 | Confirmed | August | September | Rash on palm of left hand and left arm | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | clarithromycin |
| 209 | 222 | Confirmed | January, 2020 | February, 2020 | Rash on right forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 210 | 223 | Confirmed | August | October | Rash on left thumb | epidermoid cyst | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 211 | 224 | Confirmed | November | November | Rash on right thumb | lymphocytes and plasmocytes infiltration | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 212 | 225 | Probable | January, 2020 | January, 2020 | Rash on right middle finger and wrist of right hand | - | - | - | - | rifampin and clarithromycin |
| 213 | 226 | Confirmed | October | October | Rash on left forefinger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 214 | 228 | Confirmed | September | September | Rash on right forefinger and ring finger | infective granulomas | negative | positive *M. marinum* | negative *M. marinum* | rifampin and clarithromycin |
| 215 | mz001 | Confirmed | NA | August | Rash on right arm | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | - |
| 216 | mz002 | Confirmed | NA | August | Rash on right arm | infective granulomas | positive | positive *M. marinum* | positive *M. marinum* | - |
| 217 | mz003 | Confirmed | NA | October | Rash on right little finger | infective granulomas | negative | negative *M. marinum* | positive *M. marinum* | - |

NA=not available; qPCR=polymerase chain reaction; WBC=white blood cells; ALT=alanine aminotransferase; AST=aspartate transaminase

**Suspected case**: anyone who was injured when handling fish or preparing fish with an open skin injury; presented with plaques, nodules, ulcers, or deep tissue involvement.

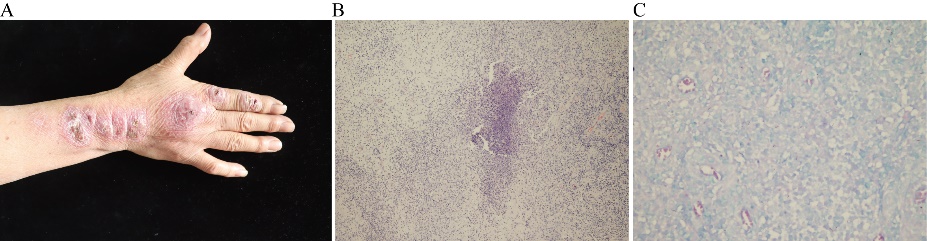
**Probable cases:** all the above plus histopathology showing infective granulomas/granulomatous inflammation, or AFBacid-fast bacillus stain positive for mycobacterial infection, or showing clinical improvement after treatment for presumed *M. marinum*.

**Confirmed case**s: all the above plus either positive culture or qPCR for *M. marinum*

# Supplementary Figures



## Supplementary Figure 1. Flowchart of the study.

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## Supplementary Figure 2. Clinical and pathological photographs.

(A) Sporotrichoid spread of nodules in a 64-years old woman who was stabbed by a fish bone when handling the fish. (B) Infective granuloma in the dermis and an infiltration of lymphocytes (H&E, ×200). (C) Acid-fast bacilli staining shows numerous bacilli (×400).



## Supplementary Figure 3. Epidemic curve of cases with cutaneous *Mycobacterium marinum* infections in Shouguang.



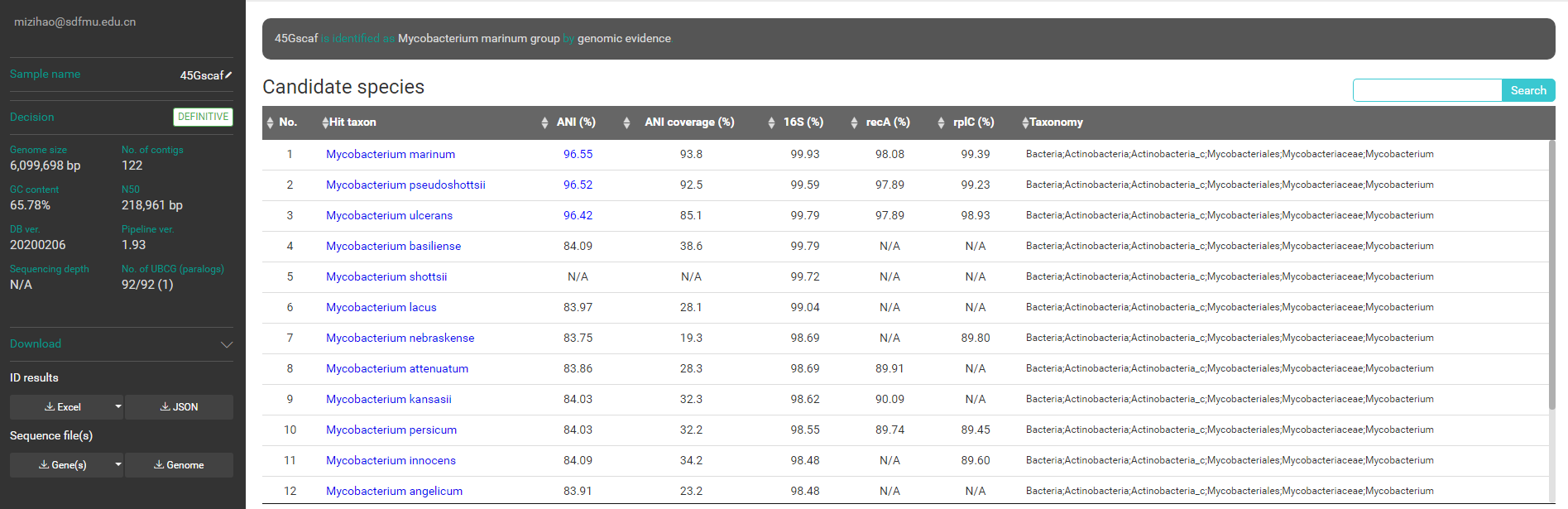
## Supplementary Figure 4. Clinical symptoms of seabass provided by patients.

(A) The seabass from patients showed normal appearance. (B) Length of seabass. Asterisks indicate that the difference in length between seabass from patients and healthy controls was significant (31±4 vs 37±2 cm, \**P*=0.010). (C) Gill color of seabass.



## Supplementary Figure 5. Clustering of all our 71 isolates and nine published *M. marinum* strains based on average nucleotide identity (ANI).

Each number represented the ANI between two isolates in its row and column. The red specimen name represents the fixed type, and the blue name represents the lymphocutaneous type.



## Supplementary Figure 6. Result of online blasting using the EzBioCloud database.

Online blasting using EzBioCloud database confirmed that our isolates in cluster 3 were *M. marinum* (ANI=96·55%, 16S=99·93%).