

Introduction of activities from WOAHA Reference Laboratory for Viral Haemorrhagic Septicaemia

Regional Workshop for WOAHA Focal Points for Aquatic Animals

Hyoung Jun Kim

7 – 9 July 2026 | Tokyo, Japan

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A designated expert of WOAHA reference laboratory for VHS in Korea

Head of WOAHA Collaborating Centre for reference materials of molecular diagnostic techniques in Korea



National Institute of
Fisheries Science



WOAHA Reference Laboratory
for Viral Haemorrhagic Septicaemia



World Organisation
for Animal Health



Australian Government
Department of Agriculture,
Fisheries and Forestry



国立大学法人
東京海洋大学
Tokyo University of Marine Science and Technology



New WOAHA collaborating centre in Korea (2024)

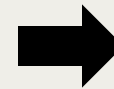
for reference materials of molecular diagnostic techniques in animal diseases



↑ **Diagnostic reliability**

↓ **Diagnostic error**

using reference material



**Contribute to global food security
& healthy aquatic ecosystems**



Research papers (2023.7-2026)

Aquaculture 612 (2026) 743131

Contents lists available at ScienceDirect

Aquaculture

journal homepage: www.elsevier.com/locate/aquaculture

Validation of a dual-probe quantitative reverse transcription polymerase chain reaction for rapid detection of spring viremia of carp virus

Ji-Yoon Park^{a,1}, Ji Su Kim^{a,1}, Hyoung Jun Kim^b, Euna Choi^c, Do-Hyung Kim^d, Dongbin Yun^e, Hisae Kasai^f, Jun Nagata^g, Tae Sung Jung^h, Se Ryun Kwon^{i,j}

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^f Laboratory of Aquatic Animal Diseases, Research Institute of Natural Science, Gyeongang National University, Jinju 52828, South Korea

Fish and Shellfish Immunology 168 (2026) 110994

Contents lists available at ScienceDirect

Fish and Shellfish Immunology

journal homepage: www.elsevier.com/locate/fsi

Full length article

Development of a neutralization ccombody, synthetic hagfish antibody, for viral hemorrhagic septicemia virus (VHSV) targeting glycoprotein G

Abigail Joy D. Rodelas-Angelia^a, Mark Rickard N. Angelia^{a,b}, Seung Pyo Jeong^{a,c}, Young Rim Kim^d, Myoung Gwang Choi^e, Hyoung Jun Kim^f, Se Ryun Kwon^g, Kim D. Thompson^h, Tae Sung Jung^{i,j,k}

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^b Institute of Chemistry, College of Arts and Sciences, University of the Philippines Los Baños, College Laguna, 4031, Philippines
^c Europhos Co., Ltd., 200 Sanggongwon-dong, 991 Wonsan-si, Wonsan, Jang, Gyeongang, 52829, Republic of Korea
^d Pathology Research Division, National Institute of Fisheries Science, 234 Gijanghwa-ro, Gijang-gu, Busan, 46083, Republic of Korea
^e Department of Aquatic Life Medical Sciences, Sunmoon University, Asan, 31460, Republic of Korea
^f Meridian Research Institute, Penlands Science Park, Bush Loan, Penicula, 8126 0PZ, Scotland, United Kingdom

Sensors and Actuators Reports 10 (2025) 100375

Contents lists available at ScienceDirect

Sensors and Actuators Reports

journal homepage: www.sciencedirect.com/journal/sensors-and-actuators-reports

Molecularly imprinted poly(o-aminophenol)-based electrochemical sensor for the quantitative detection of a VP28 biomarker for white spot syndrome virus

Young-Ran Yun^a, Hyoung Jun Kim^b, Sung Yang^{a,*}

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^b WOAHA Reference Laboratory for VHS, National Institute of Fisheries Science, Busan 46083, Republic of Korea

Development of SVCV PCR method

Development of antibody to VHSV

Development of diagnostic tool for WSSV

Journal of Virological Methods 334 (2025) 115128

Contents lists available at ScienceDirect

Journal of Virological Methods

journal homepage: www.elsevier.com/locate/jviro

Protocols

Evaluation of inactivated snakehead rhabdovirus as an internal positive control for RT-qPCR diagnosis of viral hemorrhagic septicemia virus in fish

Myoung Gwang Choi^a, Do-Hyung Kim^b, Hyoung Jun Kim^{b,c}, Ki Hong Kim^{b,d,e}

^a Department of Aquatic Life Medicine, Pukyong National University, Busan 48513, South Korea
^b WOAHA Reference Laboratory for VHS, National Institute of Fisheries Science, Busan 46083, South Korea

microorganisms

Article

Improved Detection Sensitivity of Spring Viremia of Carp Virus by Substituting a Two-Step with a One-Step Nested Reverse Transcription Polymerase Chain Reaction Method

Ji-Yoon Park^{1,†}, In-Joo Shin^{1,†}, Hyunwoo Kim¹, Eun Sup Lee¹, Euna Choi², Hyoung Jun Kim^{2,†} and Se Ryun Kwon^{1,†}

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[‡] These authors contributed equally to this work.

scientific reports

Development of a novel strategy to reduce diagnostic errors in real-time polymerase chain reaction using probe-based techniques

Hyoung Jun Kim^{1,†}, Morten Schiøtt², Niels Jørgen Olesen², Euna Choi³, Bok Kyung Ko⁴, Young Ki Lee³, Hye Young Jeong³, Ilseob Lee³, Seong Mok Kim³, Myoung Cho³ & Young Chul Kim^{1,4,†}

microorganisms

Article

First Report of Bacterial Kidney Disease (BKD) Caused by *Renibacterium salmoninarum* in Chum Salmon (*Oncorhynchus keta*) Farmed in South Korea

Kyung-Hui Kong^{1,2}, In-Ha Gong¹, Sung-Ju Jung¹, Myung-Joo Oh¹, Myung-Hwa Jung³, Hyun-Ja Han², Hyoung Jun Kim^{1,4,*} and Wi-Sik Kim^{1,4}

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Development of positive control DNA for VHSV gene detection

Improvement of diagnostic method for SVCV gene detection

Development of reference material for real-time PCR

Case report for BKD in Korea

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DOI: 10.1111/raq.12873

REVIEW

Nucleic acid amplification-based methods for diagnosis of shrimp viral diseases

Yoonhang Lee¹ | Jasna Vijayan^{1,†} | HyeongJin Roh^{1,2} | Jiyeon Park¹ | Ju-Yeop Lee¹ | Thanh Luan Nguyen^{3,†} | Hyoung Jun Kim⁴ | Wi-Sik Kim⁵ | Arun K. Dhar⁶ | Chan-Il Park⁷ | Do-Hyung Kim^{1,†}

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Aquaculture 577 (2023) 739968

Contents lists available at ScienceDirect

Aquaculture

journal homepage: www.elsevier.com/locate/aquaculture

A multiplex real-time polymerase chain reaction (qPCR) kit targeting VP664 and VP28 genes of white spot syndrome virus (WSSV)

Hwi-Jin Kim^a, Shyam K.U.^a, Myung-Joo Oh^a, Jun-hee Lee^b, Rajendran K.V.^c, Do-Hyung Kim^d, Hyoung Jun Kim^{a,*}, Wi-Sik Kim^{a,†}

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Fish and Shellfish Immunology 142 (2023) 109307

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Fish and Shellfish Immunology

journal homepage: www.elsevier.com/locate/fsi

CD4⁺ T lymphocyte responses to viruses and virus-relevant stimuli in teleost fish

Dennis Berbulba Bela-ong^{a,*,†}, Kim D. Thompson^b, Hyoung Jun Kim^c, Seong Bin Park^d, Tae Sung Jung^{a,†}

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Review for diagnostic methods of shrimp viral diseases

Development of multiplex qPCR method for WSSV

Immunological research in fish

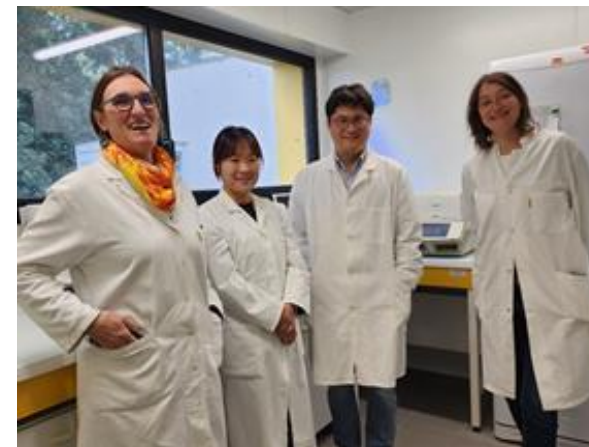


A group of four people (three women and one man) standing on the steps in front of the OHSU building entrance. The building has a sign that reads "OHSU" and "OREGON HEALTH SCIENCES UNIVERSITY". The people are dressed in business casual attire.



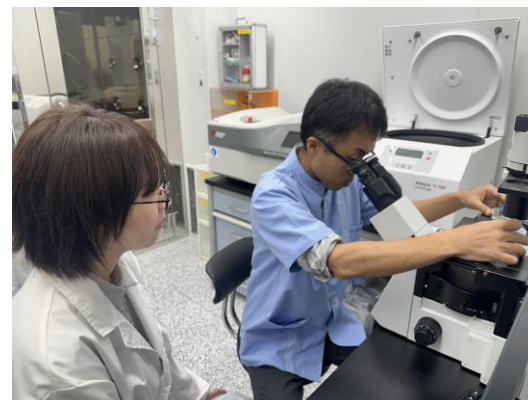
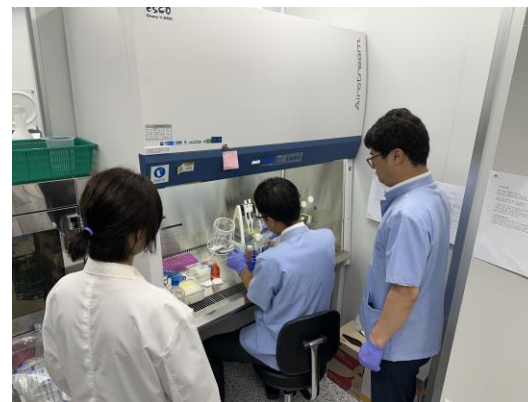
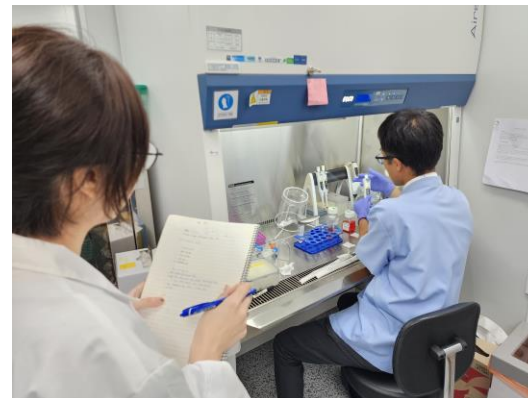
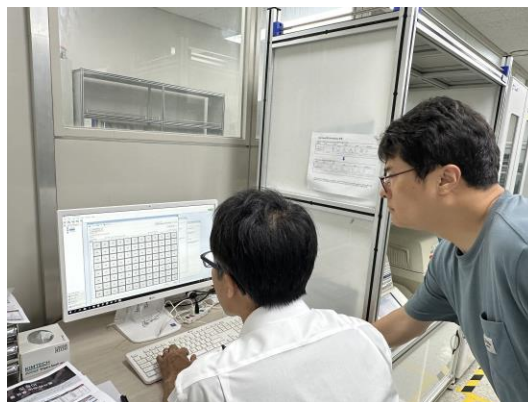
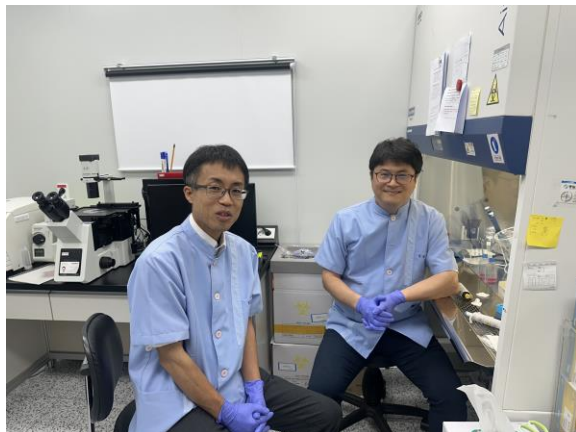


Cooperation research with EU reference laboratory for molluscs disease in France





Cooperation research with WOAH reference laboratory for *Megalocytivirus pagrus* 1



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Global Framework and Capacity Building

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10 April 2026

Dr Hyung Jun Kim
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Invitation to participate in an interlaboratory comparability test for *Megalocytivirus pagrus*

Dear Dr Kim,

It is a pleasure to contact you. You and your laboratory have been identified as potential participants in an interlaboratory comparability test (ILCT) for *Megalocytivirus pagrus*.

Following the adoption of *Megalocytivirus pagrus* as a WOAH-listed disease of aquatic animals, the corresponding chapter of the WOAH *Manual of Diagnostic Tests for Aquatic Animals* (Aquatic Manual) needs to be updated to include validated diagnostic methods that are inclusive of viruses across all three genogroups of *M. pagrus*: red sea bream iridovirus (RSIV), infectious spleen and kidney necrosis virus (ISKNV), and turbot reddish body iridovirus (TRBV). To support this work, the WOAH is organising an ILCT to evaluate diagnostic methods for inclusion in the Aquatic Manual chapter. This ILCT is based on a prior evaluation of the peer-reviewed scientific literature on assays for the detection and identification of all three genogroups.

Your laboratory has been selected following criteria established for laboratory participation. We would be grateful if you could kindly confirm that your laboratory meets the following criteria:

- The laboratory is a national reference laboratory;
- The laboratory is a WOAH Reference Laboratory for infection with RSIV or a WOAH Reference Laboratory for finfish pathogens;
- The laboratory routinely undertakes molecular diagnostic testing for finfish pathogens of significance;
- The laboratory operates under a quality system (if ISO 17025 accreditation is not in place).

If your laboratory complies with the above criteria, I am pleased to invite you to participate in this ILCT. The CSIRO Australian Centre for Disease Preparedness will coordinate the exercise. Dr Nick Moody (nick.moody@acdp.gov.au) will be your main contact and will reach out to you directly upon confirmation of your participation. You will find the details of the expected procedures in attachment.

I kindly invite you to review the Privacy Policy, which explains how your personal data will be processed by WOAH. Should you have any concerns regarding the processing of your personal data, please contact scientific.data@woah.org within 10 days of receipt of this letter.

You are also requested to complete and return a Declaration of Interests form and a signed Confidentiality Undertaking. Please send the completed forms to Dr Mariana Delgado (m.delgado@woah.org) by 20 April 2026.

Should you have any questions, please do not hesitate to contact Dr Delgado.

We hope you will be able to accept this invitation and thank you in advance for your valuable contribution to this important work.

Yours sincerely,

Dr Baba Soumaré



MOU between NIFS and FAVET in Chile & Training for VHS diagnostic techniques



Training for diagnostic techniques using reference materials in Peru



Training for diagnostic techniques using reference materials in Ecuador





KOICA program (strengthen of diagnostic capacity for animal diseases) between Korea and Fiji (2025 – 2027)



Thank you

