From:	Marty, Gary D AGRI:EX
To:	"Marian McLoughlin"
Subject:	Question about whether clinical signs are used for the diagnosis of HSMI
Date:	Friday, February 16, 2018 10:10:08 AM

Hi Marian,

We met briefly during a continuing education seminar that you gave in Campbell River, BC, on 19 February 2009. s.22 . s.14 s.14 .

I want to follow up the e-mail that I sent to James Hoare last month regarding the diagnosis of HSMI.

A recent story by an online news source correctly states that I rely on your 2007 review paper for the diagnosis of HSMI (McLoughlin, M.F. and D.A. Graham. Alphavirus infections in salmonids: a review. J. Fish Dis. 30(9):511-531.) [emphasis mine]: "It is important to make a sound diagnosis based on a combination of **clinical signs**, gross [pathology] and histopathology…"

I interpret this quote to mean that you recommend the use of clinical signs for the diagnosis of PD, CMS, and HSMI (i.e., not just PD).

The online story includes a different interpretation of the quote from another scientist: "'It's evident that, in the sentence reported by Dr. Marty, the authors clearly refer to PD,' he said, not HSMI."

Source: https://thetyee.ca/News/2018/01/10/DFO-Deadly-Farmed-Salmon-Disease-Downplay/

Here is the relevant paragraph from McLoughlin and Graham (2007) (emphasis mine):

Improved diagnostic methods including the development of IHC and molecular in situ techniques for the detection of antigen/genetic material in fixed tissues are essential to fully understand the pathogenesis of PD and SD, and to differentiate between SAV diseases and similar pathologies such as **HSMI** and CMS. The use of sero-epidemiology and longitudinal studies on farms with a history of **HSMI** and/or CMS could also rapidly advance our knowledge of these conditions and resolve the controversy over their aetiology. While RT-PCR is a useful screening tool, it should not be used as a sole diagnostic indicator. It is important to make a sound diagnosis based on a combination of clinical signs, gross and histopathology, serology, virus isolation plus molecular and/or IHC techniques.

Request: I would appreciate hearing your thoughts about the value of clinical signs for the diagnosis of PD, CMS, and HSMI (particularly in regions where the diseases have not been previously diagnosed).

Best regards,

Gary

Gary D. Marty, D.V.M., Ph.D., Diplomate, A.C.V.P.

Senior Fish Pathologist
Animal Health Centre
Ministry of Agriculture
1767 Angus Campbell Rd.
Abbotsford, BC, V3G 2M3
604-556-3123

From:	Marian McLoughlin
To:	Marty, Gary D AGRI:EX
Subject:	RE: Question about whether clinical signs are used for the diagnosis of HSMI
Date:	Monday, February 19, 2018 2:26:56 AM

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Regards
Marian

From: Marty, Gary D AGRI:EX [mailto:Gary.Marty@gov.bc.ca]
Sent: 16 February 2018 18:10
To: Marian McLoughlin
Subject: Question about whether clinical signs are used for the diagnosis of HSMI

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From:	Marty, Gary D AGRI:EX
To:	"Marian McLoughlin"
Subject:	RE: Question about whether clinical signs are used for the diagnosis of HSMI
Date:	Monday, February 19, 2018 9:47:03 AM

Hi Marian,

Thank you for the detailed response.

REQUEST - **May I have your permission for to forward your summary to other people?**

Some people have expressed concerns about my citation of McLoughlin and Graham (2007) as justification for considering clinical signs as important for the first diagnosis of HSMI in BC. In contrast, I see this as a seminal paper that provides that basis for the differential diagnosis of PD, CMS, and HSMI.

Best regards,

Gary

From: Marian McLoughlin [mailto:marian.mcloughlin@fishvetgroup.com]
Sent: Monday, February 19, 2018 2:27 AM
To: Marty, Gary D AGRI:EX
Subject: RE: Question about whether clinical signs are used for the diagnosis of HSMI

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Regards
Marian

From: Marty, Gary D AGRI:EX [mailto:Gary.Marty@gov.bc.ca]
Sent: 16 February 2018 18:10

To: Marian McLoughlin <marian.mcloughlin@fishvetgroup.com>
Subject: Question about whether clinical signs are used for the diagnosis of HSMI

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From: Marian McLoughlin
To: Marty, Gary D AGRI:EX
Subject: Re: Question about whether clinical signs are used for the diagnosis of HSMI
Date: Tuesday, February 20, 2018 12:58:03 AM

Hi Gary,
That's is fine. That paragraph was to address the necessary methodology to make a differential diagnosis.
In the Ferguson HSMI paper in Scotland these fish had just been through a PD infection/outbreak and without the use of immunhistochemistry it is not possible to differentiate the lesions described by his paper and make a firm diagnosis of HSMI hence the ambiguity of the title.
Currently HSMI in Scotland tends to be a sub clinical disease with mild heart and skeletal lesions and tends to occur in first 6-9 months post sea transfer.
Marian

Marian McLoughlin
Veterinary Surgeon & Fish Pathologist
FVG Ltd, UK

On 19 Feb 2018, at 17:47, Marty, Gary D AGRI:EX <Gary.Marty@gov.bc.ca> wrote:

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