



**UNIVERSITÀ
DEGLI STUDI
DI UDINE**
hic sunt futura

Red Mark Syndrome in rainbow trout: advances in diagnostics and management strategies

Innovation Forum “From Policy to Solutions”

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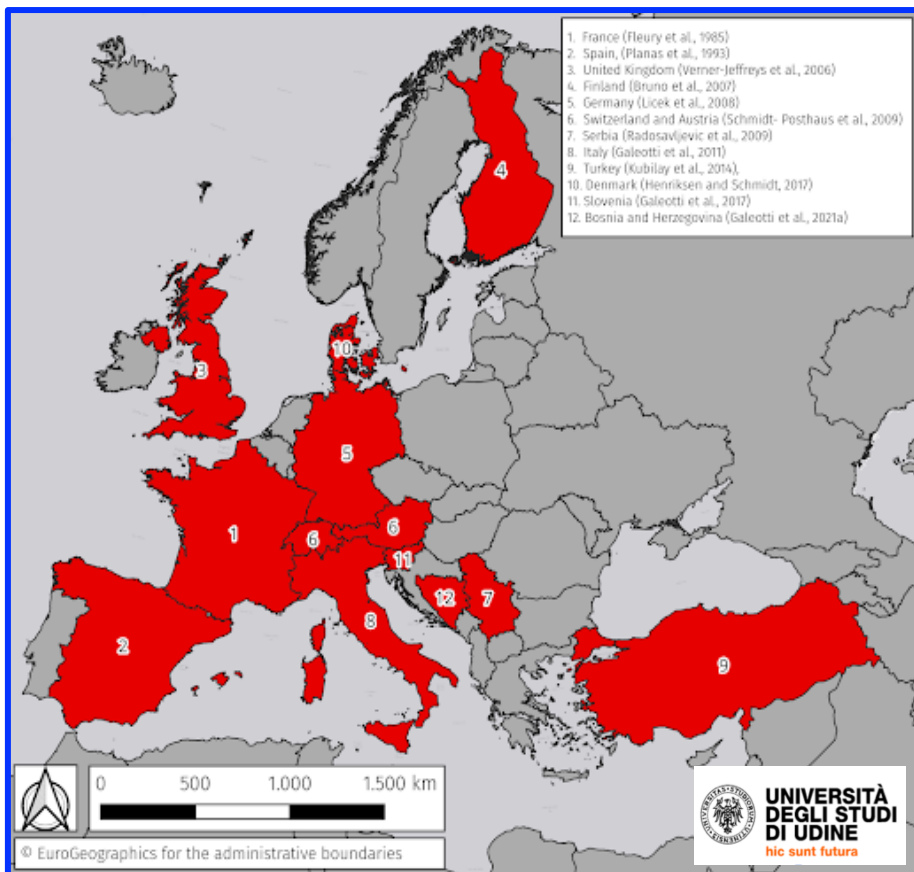
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KNOWLEDGE NEED



RED MARK SYNDROME (RMS)



Skin disease with **worldwide**
distribution

No etiology confirmed → diagnosis?

Role of **Midichloria-like organism**
(**MLO**) ?

SOLUTION (RESULT)

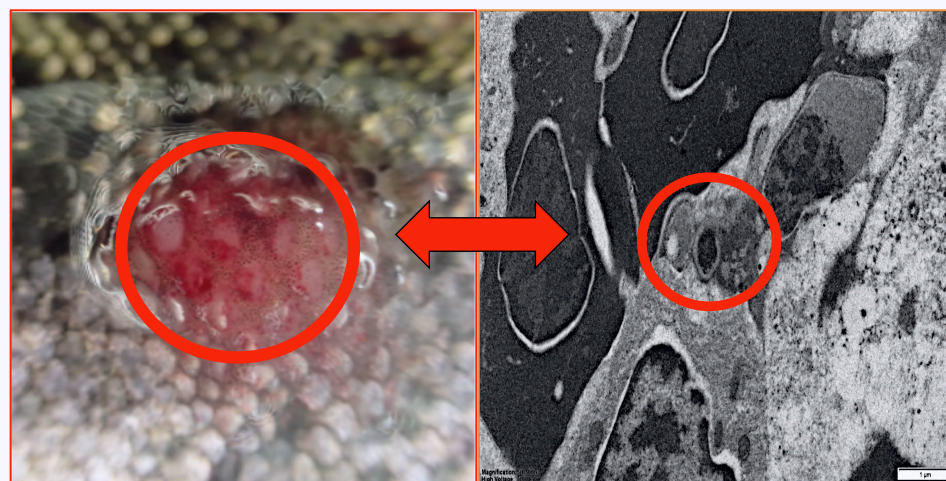
Effect of **WATER T°C** on
development of **RMS**



**MILDER SEVERITY &
QUICKER HEALING
WITH HIGHER T°C**



Association between **RMS** and **MLO**
Visualized **MLO** through **ELECTRON
MICROSCOPY**



Developed and applied a **DIGITAL DROPLET PCR** to detect **MLO DNA**

TARGET MARKET

**PORTION TABLE TROUT PRODUCERS
&
ORGANIC TROUT FARMERS**

Antibiotics

Grading out and holding back

Lack of management strategies

Recognize etiology of RMS
**Use sensitive diagnostic
techniques**

EARLY DETECTION!

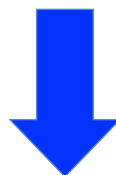


IMPACT and FUTURE

DIGITAL DROPLET PCR



Extract **MLO** from environment
Estimate the **pathogen** abundance



Quantify disease risk
Predict **RMS** outbreaks
Implement biosecurity and management strategies





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Thank you!



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