NATIONAL REFERENCE CENTRE FOR ANISAKIASIS - ITALY: ACTIVITIES AND STUDIES PERFORMED DURING 2018

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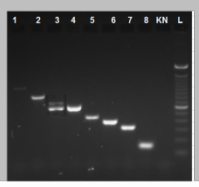
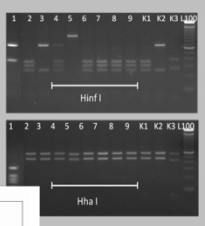
The National Reference Centre (NRC) for Anisakiasis (C.Re.N.A.) was established in the IZS of Sicily, in Palermo, by decree of 22 February 2005 of the Italian Ministry of Health and, the following year, based on Regulation (EC) N. 882/2004 Art. 33, was also recognized as National Reference Laboratory (NRL) for Anisakiasis.

METHODS			
PdP CRENA 01	Detection of Anisakis larvae	Circ Min San n.10/92+ Reg CE 2074/2005 All. II Sez.1	Rev 2 :2013
POS CRENA 02	Identification of Anisakis spp by PCR-RFLP	Internal method	Rev 6 :2014
POS CRENA 03	Detection and identification of Anisakidae nematodes (visual method+optical microscopy)	Internal method	Rev 3 :2013
POS CRENA 04	Detection and identification of Anisakidae nematodes (chloro peptic digestion)	Internal method	Rev 0 :2013
POS CRENA 05	Detection of Anisakidae DNA Anisakis and Pseudoterranova by Real Time PCR	Internal method	Rev 1 :2016
*POS CRENA 06	Identification of Pseudoterranova spp. larvae by sequencing	Internal method	Rev 0 :2015
PdP CRENA 07	Identification of Anisakidae larvae at the species level by multiplex PCR	ISS-EURLP MI-10 Rev.0 2013	Rev 0 :2015
POS CRENA 08	Detection of Anisakidae larvae by mechanical chloro peptic digestion system Trichineasy	Internal method	Rev 0: 2016





Scientific publications

Veterinary Parasitology
Volume 259, 15 August 2018, Pages 13-16

Short communication

Presence of Anisakis pegreffii in farmed sea bass (*Dicentrarchus labrax* L.) commercialized in Southern Italy: A first report

Gaetano Cammilleri, Antonella Costa, Stefania Graci, Maria Drussilla Buscemi, Rosaria Collura, Antonio Valle, Andrea Pulvirenti, Antonello Cicero, Giuseppe Giangrosso, Pietro Schembri, Vincenzo Ferrantelli

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BioOne

Molecular Identification of *Hysterothylacium* spp. In Fishes From the Southern Mediterranean Sea (Southern Italy)

Author(s): Antonella Costa, Stefania Graci, Gaetano Cammilleri, Maria Drussilla Buscemi, Rosaria Collura, Antonio Valle, and Vincenzo Ferrantelli
Source: Journal of Parasitology, 104(4):398-406.
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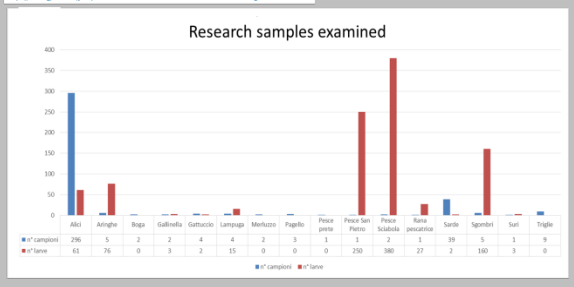
https://doi.org/10.1645/16-60
URL: http://www.bioone.org/doi/full/10.1645/16-60

Parasitology International
Volume 67, Issue 1, February 2018, Pages 23-28

Anisakis spp. larvae in three mesopelagic and bathypelagic fish species of the central Mediterranean Sea

G. Gaglio, P. Battaglia, A. Costa, R. M. Cavallaro, G. Cammilleri, S. Graci, M.D. Buscemi, V. Ferrantelli, F. Andaloro, F. Marino



Confirmation of Anisakidae larvae

During 2018 C.Re.N.A. receveid 93 nematode samples from official control IZSs laboratories for morphological and molecular identification.

Fish species	N. larvae	IZS	Result
Merluccius merluccius	7	IZS ME Catanzaro	*Anisakis pegreffii*
Lophius piscatorius	24	IZS Teramo ASL Lanciano-Vasto-Chieti segnalazione UVAC - sequestro	*Anisakis pegreffi, A. simplex s.s., Hysterothylacium (da tracina); , A. simplex s.s. da rana pescatrice*
Lophius piscatorius	2	IZS LER- Reggio Emilia (ASP SIAOA- Parma) segnalazione consumatore	*Pseudoterranova spp*
Lophius piscatorius	1	IZS Teramo (AUSL-SIAN Giulianova TE) segnalazione consumatore	*Pseudoterranova spp*
Lophius piscatorius	12	IZS TO (ASL1 Ventimiglia-segn UVAC vincolo sanitario)	*A. simplex s.s.*
Merluccius merluccius	12	IZS Foggia (ASL Brindisi-segn UVAC blocco partita)	*Anisakis pegreffi (3), A. simplex s.s. (8), A. simplex s.s./A. pegreffii (1 ibrido)*
Scomber scombrus	30	IZS SI Catania	*Anisakis pegreffi (5), A. simplex s.s. (25)*
Salmo salar	3	IZS Torino (ASL Ivrea Dip prevenzione); NAS Torino	*A. simplex s.s. (5)*
Engraulis encrasicolus	-	IZS CT/ASP CT	*Presenza larve di Anisakis/ Anisakis pegreffi (10)*
Chelidonichthys lucerna	1	IZS LER Pavia/ASL Pavia segnalazione consumatore	*Pseudoterranova spp*
Pleuronectes platessa	1	IZS LER Reggio Emilia/AUSL Modena segnalazione consumatore	*A. simplex s.s.*
Engraulis encrasicolus	1	IZS TO ASP Torino segnalazione consumatore	*Anisakis pegreffii*
Gadus morhua	1	IZS LER Reggio Emilia ASP Distr Veterin Mantova	*Pseudoterranova spp*

Total analysis during 2018

Sample type	Anisakis larvae visual inspection	Anisakidae larvae visual inspection	Chloro-peptic digestion Trichineasy
Osteichthyes	402	402	402
Fish fillets	20	20	20
Canned fish	41	41	41

N. Larvae Morphological identification	N. Larvae PCR-RFLP analysis	N. Larvae PCR-Multiplex analysis	N. Larvae Real-time PCR
2465	1184	5	104

Ring test: *Anisakis* larvae detection

18 partecipants:
- 17 official control IZSs laboratories
- European Union Reference Laboratory for Parasites (EURLP-ISS)

Matrix: fresh water farmed fish fillets
Item: *Anisakis* larvae
N. of samples: 5 for each partecipant (2 negative and 3 artificially infested by 2 larvae)
Result evaluation: qualitative

Results: 18 labs reported correct results

Ring test: molecular identification of *Anisakis* spp. larvae by PCR-RFLP

5 partecipants:
- 4 official control IZSs laboratories
- European Union Reference Laboratory for Parasites (EURLP-ISS)

DNA samples of *Anisakis* spp: 3 for each partecipant (*A. pegreffii*, *A. simplex s.s.*, *A. pegreffii*)

Results: all labs reported correct results

NRL Workshop
23-24/05/2019