## 7<sup>th</sup> International Conference on AQUACULTURE & FISHERIES October 19-21, 2017 | Rome, Italy

## Molecular identification of crayfish plague fungus (*Aphanomyces astaci*) in Turkish crayfish (*Astacus leptodactylus*) populations by PCR and its current status

Süleyman Akhan, Ifakat Tülay Çagatay, Selçuk Berber, Büşra Arli, Yigit Taştan and Tuba Çatli Akdeniz University, Turkey

A phanomyces astaci is an oomycete that causes plague diseases in crayfish. Astacus leptodactylus is highly sensitive to crayfish plague disease. In the middle of the 1980s, Turkish crayfish stocks began to collapse due to crayfish plague disease and this plague disease have started to spread out all the countries in a short time. Today, those collapsed Turkish crayfish stocks are trying to recover back. In this study, we aimed to determine *A. astaci* in clinical samples by PCR, prevalence and distribution of crayfish plague in the main crayfish stocks in Turkey. For this purpose, crayfish samples were taken from 41 different water bodies in Turkey and transferred to the laboratory and gross examinations were performed to identify symptomatic individuals. Beside the previously used primers by former researchers, additionally new primers were designed which was specific to the ITS region of *A. astaci* pathogen. PCR conditions were optimized by using total genomic DNA from clinical samples and the genotype A and B strains were used as positive controls, accuracy and sensitivity of primers were validated in clinically symptomatic individual and control. Symptomatic individuals were encountered in all stations and the presence of *A. astaci* pathogen in 34 water bodies was identified by PCR. In this scope, prevalence of crayfish plague which will lead to subsequent crayfish management and conservation programs of Turkey was determined. According to molecular diagnosis results, the prevalence rates were changed between 3.75% and 37.5% in 34 stations except 7 water bodies.

## Biography

Suleyman Akhan has completed his MSc and PhD from Ege University, Graduate School of Natural and Applied Sciences, Department of Fisheries and Aquaculture. He is an Associate Professor at Akdeniz University, Faculty of Fisheries. He has got more than 15 projects upon fisheries and aquaculture. He has 26 scientific articles published in reputed scientific journals.

akhan@akdeniz.edu.tr

Notes: