

石斑魚虹彩病毒不活化疫苗之研發

生物研究組

黃淑敏 助理研究員

摘要

本研究利用本所選取90-點帶石斑株之虹彩病毒為疫苗株，進行不活化疫苗之研發。測試不同佐劑、不同的抗原與佐劑比及不同之免疫途徑，以評估疫苗之效力，並評估試製疫苗之安全性、穩定性，以作為未來田間試驗之疫苗效力比較之參考依據。結果顯示：以腹腔注射混有佐劑B之疫苗，其保護指數為73%；混有MVP佐劑疫苗之保護指數只有50%；腹腔注射的免疫效果較肌肉注射效果為佳。安全性試驗顯示無論注射2劑量或1劑量之試製疫苗對魚體皆無不良反應。疫苗之穩定性結果發現，試製疫苗置於4°C儲存1月其疫苗效力達七成；置於4°C儲存1年其疫苗效力降至四成，疫苗外觀呈現分層，顯示疫苗之乳化狀況仍需改善。本年度已改善疫苗之乳化狀況並試製兩批量製疫苗，並已完成實驗室疫苗效力之評估及免疫後之血清中和抗體力價之分析。

關鍵字:虹彩病毒、疫苗、石斑魚

Development an inactive vaccine of iridovirus for grouper

Sue-Min Haung

Abstract

In this project, we select the field strain 90-grouper iridovirus virus with high virulence and antigenicity as the seed virus for vaccine. The different ratio of adjuvants and administration ways were used to evaluate the efficacy of vaccine. The safety and stability test of vaccine were used to evaluate the usability for vaccine. The results show the protective indexes in vaccine mixed with adjuvants B and delivered by intraperitoneal injection is 73%; the vaccine mixed with MVP adjuvants and delivered by intramuscularly injection is 50%. The route of vaccine delivery by intraperitoneal injection is better than intramuscularly injection. The safety test results show no side effect using one dose or two doses vaccine to immune the fish. The stability test results show the efficacy was 70% of vaccine stored at 4°C for 1 month and the efficacy was dropped to 40% of vaccine stored at 4°C for 1 year. The results show the stability of the vaccine was not stable and need to improve. This year we try to improve the stability of the vaccine, to evaluate the efficacy of vaccine and to analyze the serum antibodies responses after vaccination.

Keyword : *Iridovirus, vaccine, grouper*