tively little is known about the interactions of the parasite and the oyster immune system. *In vivo* experimental infections of both *C. virginica* and *C. gigas* caused an important enhancement of the nitric oxide (NO) production in hemolymph after 24 hours of infection. In vitro, *P. marinus* caused, to a lesser extent, an enhancement of NO production in both oyster species hemocytes. Significant NO production was also observed in vitro after hemocytes were incubated with phorbol myristrate acetate (PMA) and lipopolysaccharide (LPS) in the case of *C. virginica*, but only PMA in *C. gigas*. This stimulation was partially inhibited by cell treatment with the NO synthase inhibitor, N-w-nitro-L-arginine (L-NAME). In opposition, Zymosan failed to significantly increase NO production in both *C. virginica* and *C. gigas* haemocytes. The antiparasitic activity of an exogenous NO donor S-nitroso-N-acetyl-penicillamine (SNAP) was studied against *in vitro* cultured *P. marinus* cells. It was found that high doses (100 and 50 mM) of this NO donor were able to kill the parasite up to 30% after 24 hours of incubation. These results demonstrate that both *C. gigas* and *C. virginica*, as demonstrated in other bivalve species are able to produce NO and that these molecules might play an important role in the oysters defense against *P. marinus* infections.

SURVIVAL, INFECTIVITY, AND FATTY ACID CONTENT OF *PERKINSUS MARINUS* MERONTS MAINTAINED IN SEAWATER FOR UP TO 7 DAYS. Eric D. Lund* and **Fu-Lin E. Chu**, Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA 23062.

Perkinsus marinus is the parasite of a sessile host with no known intermediary host to serve as a vector for disease transmission. As such, the ability of *P. marinus* cells to remain viable and infective in the water column is critical for disease transmission and affects the epidemiology of Dermo disease. The fatty acid synthesis capability of *P. marinus* allows host-associated meronts to accumulate lipids that may act as a fuel source when parasites are free-living in the water column. To determine if there is a change in lipid content of free-living *P. marinus*, meronts were incubated in artificial sea water (ASW) for 7 days and their fatty acid contents were analyzed. Infectivity of *P. marinus* incubated in ASW for 0, 2 and 7 days was determined by inoculating meronts (4×10^6 viable cells) into oysters ($n = 7$ per *P. marinus* culture). After 9 weeks incubation all treatment groups except negative controls contained oysters with light infection at similar prevalence (50–70%). Fatty acid content of meronts incubated in ASW declined from 11.9 mg/g dw to 3.0 ±0.6 mg/g dw after 7 days. Results suggest that *P. marinus* meronts utilize stored lipid reserves while free living in the water column and can remain infective for at least 7 days.

THE SUSCEPTIBILITY OF YOUNG, PRESPAWNING OYSTERS, *OSTREAE EDULIS, TO BONAMIA OSTREAE.* S. A. Lynch, S. Wylde, D.V. Armitage, M. F. Mulcahy and S. C. Culloty*. Department of Zoology, Ecology, Plant Science, AFDC/ Environmental Research Institute, University College Cork, Ireland.

This study investigated the susceptibility of young oysters *Ostrea edulis* to the parasite *Bonamia ostreae*. Many previous studies have concentrated on screening older oysters post-spawning (two years up). Young, prespawning oysters, *Ostrea edulis*, were held over 6 months at two different *Bonamia*-endemic sites in Ireland, to determine if they could become infected with the protozoan parasite *Bonamia ostreae*. Prevalence and intensity of infection were monitored, using both the traditional method of ventricular heart smears and polymerase chain reaction (PCR). Results show that both 0+ and 1+ oysters are susceptible to infection, developing high prevalence and intensity of infection over a six-month period. These results indicate that monitoring programmes may need to take consideration of all age groups when screening for *Bonami,a* and the results may have some implications for movements of oysters and methods of diagnosis for *Bonamia*.

QUAHOG PARASITE UNKNOWN (QPX) AND MARINE AGGREGATES: ARE MACROPHYTES THE LINK? M. Maille Lyons*Ψ, J. Evan Ward, Rebecca J. Gast, Kevin R. Uhlinger and **Roxanna Smolowitz**, Department of Marine Sciences, University of Connecticut, Groton, CT 06320.

We are investigating the role of marine aggregates (i.e., marine snow) as an environmental reservoir for the thraustochytrid pathogen, Quahog Parasite Unknown (QPX), of the northern quahog, *Mercenaria mercenaria*. Using a quick and simple technique for collecting aggregates in shallow, nearshore waters along with *in situ* hybridization and denaturing gel gradient electrophoresis (DGGE), we have detected QPX in marine aggregates from 5 sites in Massachusetts, USA. Within these marine aggregates, QPX was often observed in association with pieces of degrading macrophytes (e.g., seaweeds, seagrasses). The relationships between macrophytes and thraustochytrids and between macrophytes and marine aggregates have been previously documented, but the potential role of macrophytes as a link between thraustochytrids and aggregates has not been explored. We will present photographic evidence of the link between QPX and pieces of macrophytes found in the marine aggregates. The presence of pathogen-laden marine aggregates in the areas subjected to QPX outbreaks suggests a means for the spread and survival of QPX and may provide a target for environmental monitoring of this marine pathogen.