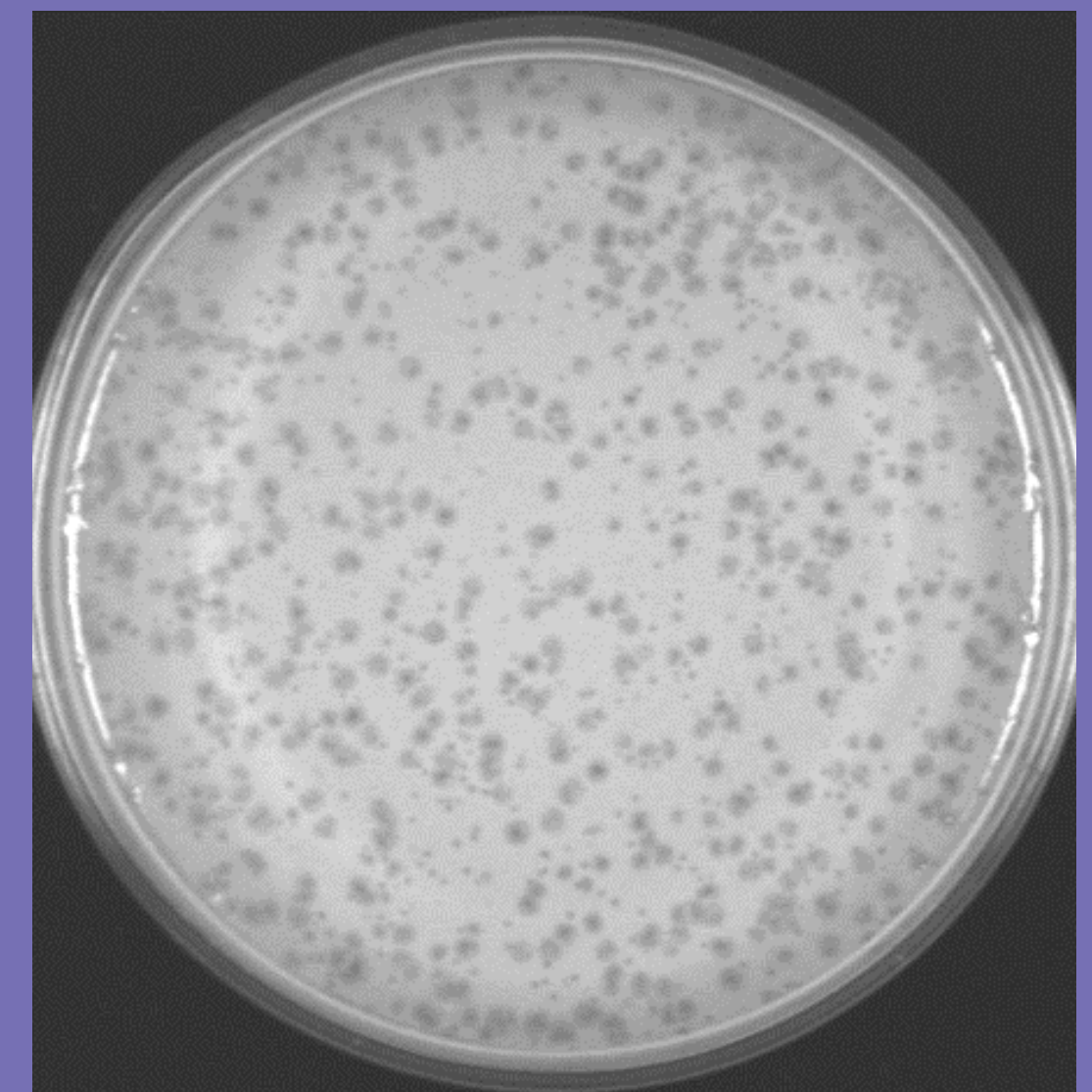
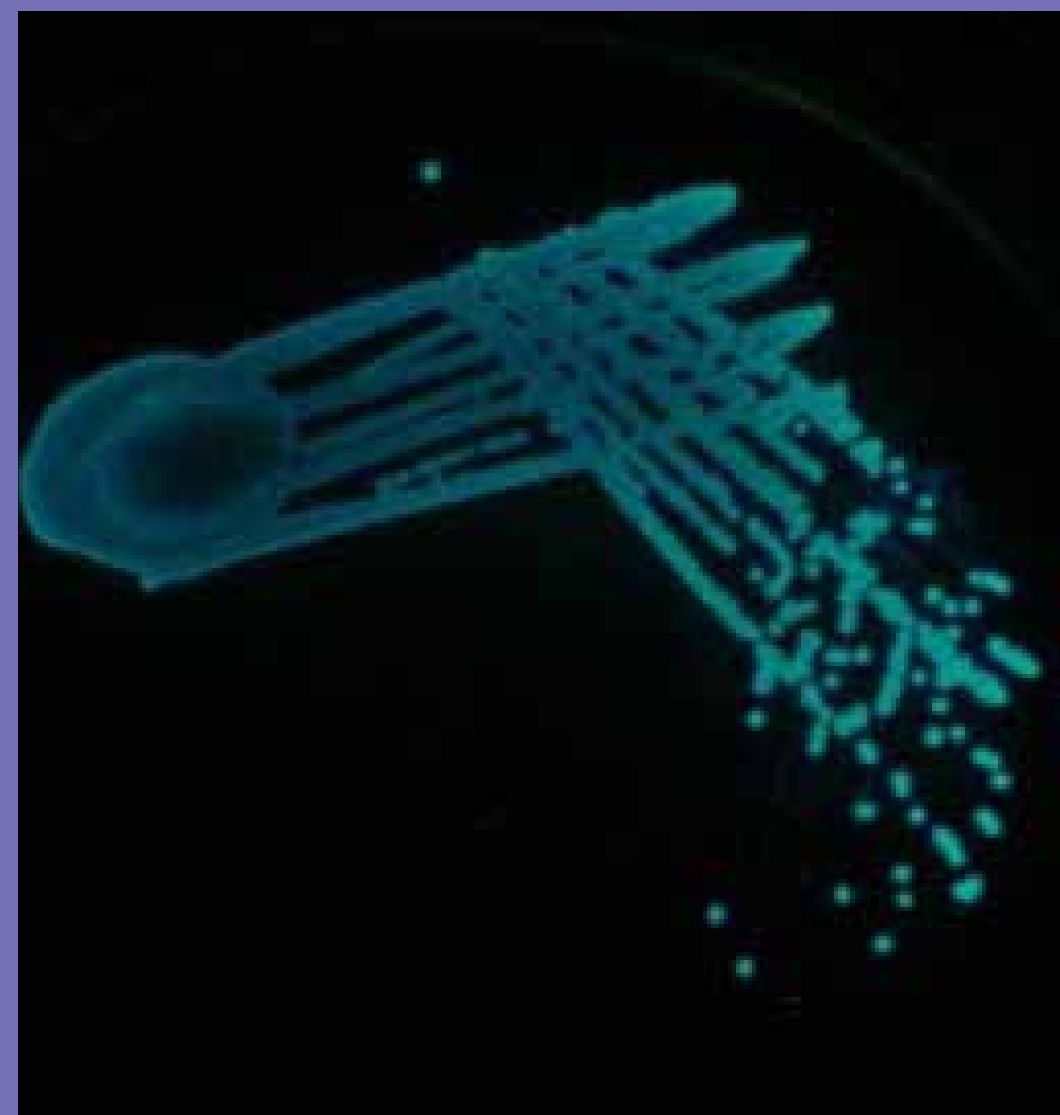




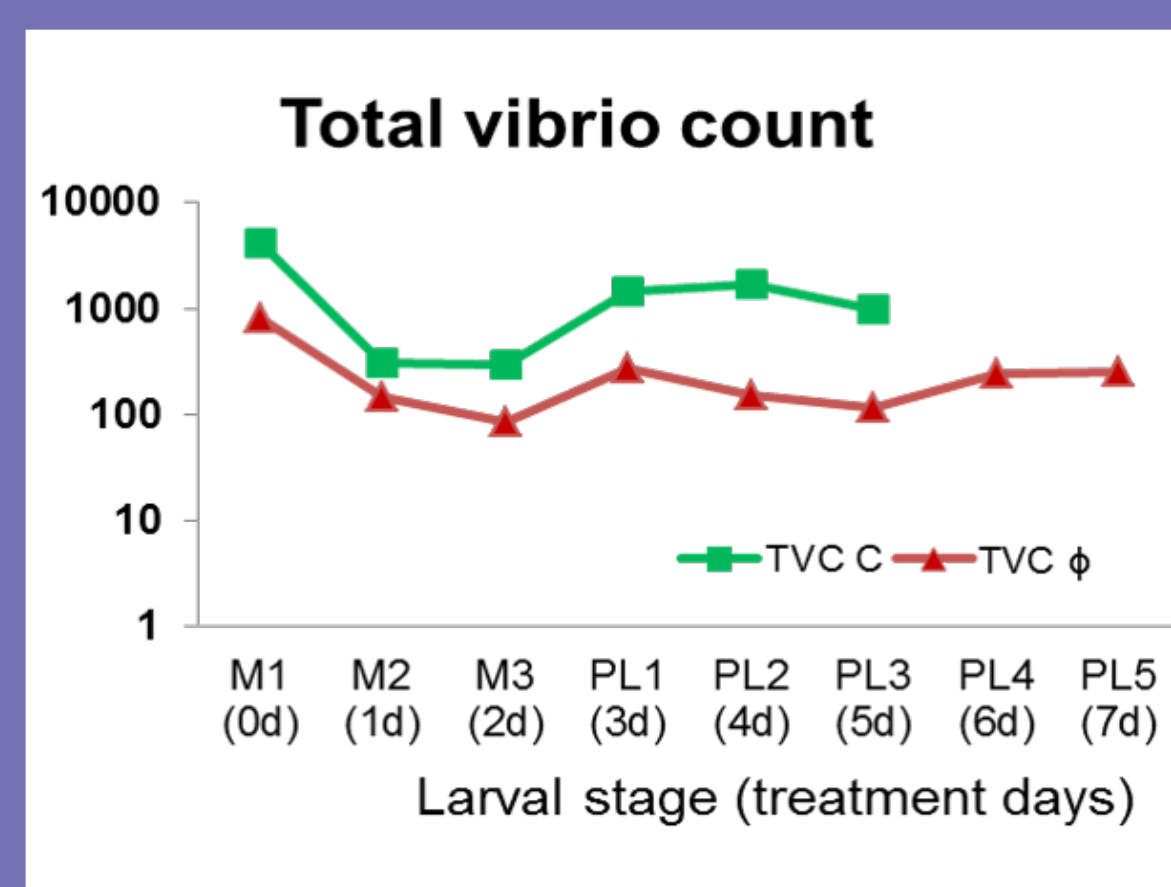
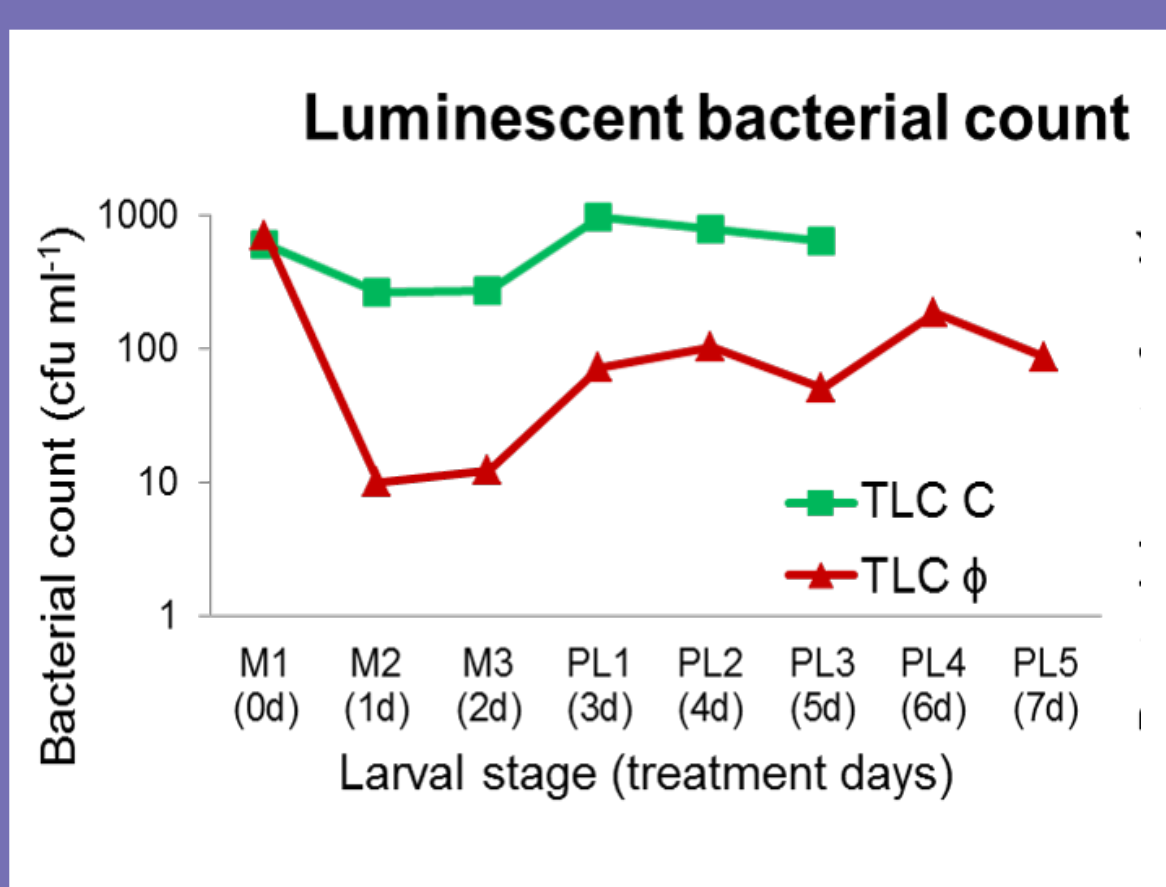
Luminescent bacterial disease (LBD) caused by bacteria belonging to *Vibrio* spp cause significant economic loss to shrimp hatcheries world over. Use of antibiotics to control vibriosis in aquaculture pose issues of tissue residues and antibiotic resistance and has necessitated the development of alternative safer technologies using biocontrol agents. Biocontrol of luminescent bacterial disease in shrimp hatcheries using bacteriophages is an important alternative. Bacteriophages or phages in short are viruses that selectively infect and kill bacteria.

THE TECHNOLOGY

- ▶▶ Developed using bacteriophages capable of selectively infecting and killing luminescent bacteria of *Vibrio* species
- ▶▶ Bacteriophages selected from a pool of over 35 phages having lytic activity against over 350 luminescent bacterial isolates



- ▶▶ The product contains consortia of bacteriophages having broad spectrum activity against virulent vibrios
- ▶▶ Culture conditions optimized for obtaining high yield of bacteriophages in 18 hrs in pilot scale fermenter.
- ▶▶ Efficacy proved in commercial shrimp hatchery as prophylactic and therapeutic for control of luminescent bacterial disease and improved larval survival.



- ▶▶ Therapeutic trial of luminescent bacterial disease in commercial shrimp hatchery with phage consortia improved larval survival up to 36% until PL 5 stage.

TECHNOLOGY BENEFITS

- ▶▶ Effective as prophylactic and therapeutic
- ▶▶ Can be stored at 4°C for a year without losing titres
- ▶▶ Compatible to use along with probiotics
- ▶▶ Self-replicating, hence low dose sufficient
- ▶▶ Can kill pathogenic vibrios hiding in biofilms also.
- ▶▶ Completely organic and absolutely safe

