



Award Details

Development of a new Acoustic Data Storage Tags to track aquatic species****

Research Details

Competition Year:	2018	Fiscal Year:	2018-2019
Project Lead Name:	LeBris, Arnault	Institution:	Memorial University of Newfoundland
Department:	Fisheries and Marine Institute	Province:	Newfoundland and Labrador
Award Amount:	22,700	Installment:	1 - 1
Program:	Engage Grants Program	Selection Committee:	Atlantic Internal Decision Committee
Research Subject:	Animal ecology	Area of Application:	Commercial services
Co-Researchers:	No Co-Researcher	Partners:	InnovaSea Marine Systems Canada Inc.

Award Summary

Acoustic and data-storage tags are widely used to study the movements and behaviour of aquatic organisms. Acoustic tags provide accurate positions of a tagged organism, while archival tags provide near-continuous record of oceanographic data but no direct information on position. VEMCO, the world leader in aquatic acoustic telemetry, is developing a new Acoustic and Data Storage Tags (ADSTs) that combines the transmission capacity of an acoustic tag with the data logging capacity of an archival tag. ****Electronic tags need to be small and light-weighted to be placed on marine organisms without affecting their movement and behaviour. As a consequence, they have limited battery capacity. A major engineering and research challenge associated with the development of the ADST is thus to balance data records, data transmission and battery capacity. Therefore, solutions need to be found to summarize data into informative statistics that can be easily transmitted while providing meaningful information on animal movement, behaviour and habitat. ****VEMCO is partnering with Dr. Arnault Le Bris to develop a mathematical algorithm to summarize environmental data archived by the ADST into a meaningful statistic that can be easily transmitted by an acoustic signal. If successful, the resulting statistic developed in this NSERC Engage project will be used in VEMCO's future ADST technology. This would have a potential to disrupt the electronic tag market by enabling acoustic transmission of stored data in a power efficient manner. This would ultimately enable VEMCO to gain significant ground on its international competitors and thus bring back more business into Nova Scotia Canada.**