

Do environmental conditions influence the viability of wild salmon through effects on oxidative stress and telomere dynamics? (NERC CASE studentship)

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Project Details: This exciting project will investigate links between environmental stressors and levels of oxidative stress and telomere shortening in wild Atlantic salmon - a study species that is of particular concern due to declines in condition and numbers of fish returning from the ocean to spawn. The project will use seaward-migrating fish and spawning fish from the Conon river system, which differ in life history strategy (e.g. age at time of migration to sea and/or time spent at sea). These samples, together with targeted lab experiments in Glasgow that involve the rearing of eggs and fry under different temperature and food regimes, will allow the student to test specific hypotheses that link oxidative stress, telomere dynamics and rate of cellular senescence to environmental stressors. Oxidative stress will be measured by a series of laboratory assays, while relative telomere lengths will be measured by RT-qPCR. The student will be joining well-funded laboratories working on fish ecology, oxidative stress and telomere biology. The complementary expertise of the supervisors will result in the student receiving training in a broad range of skills including experimental design and fish biology, lab assays in oxidative stress and telomere length measurement, and experimental data collection in the lab and field, as well as experience in working with Government and NGO conservation organisations.

Further details of the research interests of the University supervisors can be found at: <http://www.gla.ac.uk/researchinstitutes/bahcm/staff/>

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