

# SCRI Research Programme

## 2000-2001

SEERAD funded research programme showing: SEERAD project number; Title (prefixed ROA for ROAMEd core-funded projects; FF for Flexible Fund projects); Scientific Project Leader. In addition to this list, there are research projects undertaken on behalf of various bodies, including other governmental bodies, commerce and levy boards.

SCR/479/96	ROA Maintenance, improvement, evaluation and exploitation of biodiversity in germplasm collections of potato	Mackay G R
SCR/494/97	ROA Genetic control of pathogenicity, host specificity and race structure at the molecular level in the fungal pathogens <i>Phytophthora infestans</i> , <i>Phytophthora fragariae</i> and related <i>Phytophthora</i> species	Duncan J M
SCR/497/97	ROA Studies on mechanisms of host gene-mediated and pathogen-derived transgene-mediated resistance to viruses to improve the deployment of new types of resistance for germplasm enhancement	Barker H
SCR/508/98	ROA Cell biology of plant-virus interactions	Oparka K J
SCR/509/98	ROA Molecular dissections of plant viral movement proteins	Oparka K J
SCR/510/98	ROA Molecular mechanisms involved in the aphid transmission of luteoviruses, potyviruses and the nematode transmission of tobamoviruses	Mayo M A
SCR/512/98	ROA Produce and maintain pathogen-tested stocks of <i>Rubus</i> , <i>Ribes</i> and <i>Fragaria</i> germplasm and index for infection material imported into SCRI	Jones A T
SCR/513/98	ROA Gene expression and manipulation in barley	Machray G C
SCR/514/98	ROA Isolation and functional characterisation of genes important in the host-parasite interaction of plant parasitic nematodes including <i>Globodera</i> , <i>Meloidogyne</i> and <i>Xiphinema</i> spp.	Jones J T
SCR/518/98	ROA Towards the construction of a physical and functional map of the interval between GP21 and GP179 on potato linkage group V	Waugh R
SCR/520/98	ROA Mapping and isolation of <i>Rhynchosporium secalis</i> recognition and early signalling genes in barley	Newton A C
SCR/521/98	ROA Genetic modification of soft fruit crops and risk assessment for their introduction	Graham J
SCR/525/99	ROA Interactions between the structure of soil habitats and biological processes	Bengough G
SCR/526/99	ROA Integrative mapping of the long arm of barley chromosome 5H	Thomas W T B
SCR/527/99	ROA Development of a graphical database for the visualisation of genotypic and phenotypic data in barley	Marshall D F
SCR/528/99	ROA Use of an accelerated marker assisted selection scheme to introgress novel variation for economically important traits into cultivated barley	Thomas W T B
SCR/532/99	ROA Plant membrane lipid compositions and stress, with respect to genetically modified <i>Arabidopsis</i> and rape with primary lipid defects and cold tolerance in blackcurrant	Dobson G

SCR/533/99	ROA Molecular and genetic studies of the basis of virulence/avirulence in plant parasitic nematodes	Phillips M S
SCR/534/99	ROA Isolation and functional analysis of plant genes involved in resistance responses to nematodes	Blok V C
SCR/536/00	ROA Development and application of chemical strategies to facilitate genetic and molecular marker studies of factors affecting quality traits in potatoes	Davies H V
SCR/537/00	ROA Biochemical approaches to define novel targets for the genetic improvement of malting barley	Davies H V
SCR/538/00	ROA Optimising production and biodiversity of arable plants and invertebrates at patch and landscape scales	Squire G
SCR/539/00	ROA Self organisation of plant and canopy architecture in barley and feral brassicas: trade offs between production and defense	Squire G
SCR/540/00	ROA Genetics of cultivated potatoes	Bradshaw J E
SCR/541/00	ROA Genetic approaches to evaluation and utilisation of soft fruit germplasm	Bradshaw J E
SCR/542/00	ROA Consequences of soil biodiversity for the functioning and health of agricultural soils in relation to C cycling dynamics and resilience	Griffiths B S
SCR/544/00	ROA Consequences of soil biological diversity for the functioning and health of agricultural soils in relation to N cycling processes	Ritz K
SCR/545/00	ROA Detection, diversity and epidemiology of important viruses and their vectors in berryfruit crops and strategies for their effective control	Jones A T
SCR/546/00	ROA Development and use of molecular markers to study the epidemiology of late blight ( <i>Phytophthora infestans</i> ) of potato in Scotland	Cooke D
SCR/547/00	ROA Biodiversity in the antioxidant status and composition of <i>Rubus</i> and other soft fruit germplasm	Stewart D
SCR/549/00	ROA Characterisation of molecular interactions between soft rot erwinias and potato	Lyon G D
SCR/550/00	ROA Control of meristematic activity in plants: dormancy in potato tubers as the model system	Viola R
SCR/551/00	ROA Post-transcriptional control of gene function	Brown J W S
SCR/552/00	ROA Barley 'deletion' mutation grid	Waugh R
SCR/553/00	ROA Characterising plant responses to viral infection	Palukaitis P
SCR/554/00	ROA Protein-protein interactions and the role of virus proteins in disease processes	Torrance L
SCR/505/97	FF Molecular approaches to manipulate the development and composition of strawberry fruit	Davies H V
SCR/516/97	FF Genetic mapping and molecular cloning of novel sources of resistance to <i>Globodera pallida</i>	Waugh R
SCR/522/98	FF Development of <i>Rubus</i> genotypes with transgenic resistance to <i>Raspberry bushy dwarf virus</i>	Jones A T
SCR/523/98	FF Investigation of the mechanisms of disease induction and host-specificity in major bacterial and fungal potato pathogens	Birch P R J

SCR/524/98	FF Unravelling the pathways of protein transport in plant and animal cells using virus-based vectors	Oparka K J
SCR/535/99	FF Impacts of a conventional and an organic crop insecticide spray treatment on life history traits of two-spot ladybirds	Birch A N E
SCR/555/00	FF Cereal transcriptome resources	Waugh R
SCR/556/00	FF Comparison of the molecular bases of pathogenicity in the model oomycetes <i>Peronospora parasitica</i> and <i>Phytophthora infestans</i> through a genomics approach	Birch P R J
SCR/567/00	Appraisal of options for aphid monitoring and control to manage virus transmission in Scottish seed potato crops	Woodford J A T
SCR/568/00	Significance and mechanisms of landscape-scale gene flow	Ramsay G
SCR/569/00	<i>Phytophthora</i> diseases of soft fruit: determining their prevalence and the source of new outbreaks in Scotland	Duncan J M
SCR/570/00	Mechanical properties of primary cell walls by micro-stretching <i>in vivo</i>	Bengough A G
SCR/808/94	FF Development of molecular biological and physiological techniques in studies of the interaction between microbes, nutrient cycling and vegetation among a range of agriculturally important pastures, to enable scaling from microcosm to field	Ritz K
SCR/816/95	FF Phenotypic and genotypic bases of population dynamics in heterogeneous, species-rich grassland	Squire G
SCR/818/95	FF Genetic engineering of crop plants for resistance to insect and nematode pests: effects of transgene expression on animal nutrition and the environment	Jones A T
SCR/822/97	FF The application of the free-living nematode <i>C. elegans</i> to the development of control procedures for nematode parasites of animals and plants	Jones J T
SCR/823/97	FF Significance of physical heterogeneity for scaling of solute chemistry in soils from fine scale to subcatchment	Bengough G
SCR/824/97	FF Efficacy studies on a plant virus-based expression system and on alternative delivery routes for peptides and proteins with pharmaceutical, therapeutic and related uses for improving animal health, nutrition and welfare	Brown J W S
SCR/832/99	FF Identification and assessment of nutritional relevance of antioxidant compounds from soft fruit species	Davies H V
SCR/833/00	Microsatellites as population genetic markers	Powell W