

# SCRI Research Programme

## 2001-2002

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/513/98	ROA Gene expression and manipulation in barley	Machray G C
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 M
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/533/99	ROA Molecular and genetic studies of the basis of virulence/avirulence in plant parasitic nematodes	Phillips M S
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 Rubus 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/557/01	Targeted long-distance transport of macromolecules in plants	Oparka K
SCR/558/01	Resistance to potato viruses: exploitation of host gene resistance and transgenic resistance to study resistance mechanisms and to develop resistant germplasm	Barker H
SCR/559/01	Molecular biology of potato leafroll virus: aphid transmission and the establishment of infection in host plants	Mayo M A
SCR/560/01	Molecular bases of resistance and susceptibility in potato and barley	Birch P R J
SCR/561/01	Molecular bases of pathogenicity in potato cyst nematodes, <i>Xiphinema index</i> and <i>Phytophthora infestans</i>	Jones J
SCR/562/01	Genetics of seedling root traits in barley	Forster B
SCR/563/01	Conservation and utilisation of the Commonwealth Potato Collection	Mackay G R
SCR/564/01	A gene map of the interval between GP21 and GP179 on potato linkage group V	Bryan G
SCR/565/01	Identification and characterisation of bacterial artificial chromosome (BAC) clones from gene rich regions of the barley genome	Waugh R
SCR/566/01	Produce and maintain pathogen-tested stocks of Rubus, Ribes and Fragaria germplasm and index for infection material imported into SCRI	Jones A T
SCR/571/01	OC Ecological management and biotechnology	Squire G
SCR/572/01	OC Computational biology	Marshall D F
SCR/573/01	OC Functional analysis of novel genes from potato and barley	Oparka K J
SCR/574/01	OC Development and application of metabolic profiling technologies to enhance the understanding of metabolic and developmental processes in plants	Davies H V
SCR/575/01	OC Enhancing food quality and nutritional value through multidisciplinary approaches which exploit genetic and molecular diversity	Davies H V
SCR/576/01	OC Sequence diversity and horizontal genomics (targeted gene discovery)	Waugh R
SCR/577/01	OC Molecular plant diversity and germplasm resources	Waugh R
SCR/578/01	OC Parallel gene expression technologies supporting the discovery of plant and pathogen genes important to agriculture and biotechnology	Machray G C
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 Rubus genotypes with transgenic resistance to raspberry bushy dwarf virus	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 in vivo	Bengough A G
SCR/579/01	Development of robust, broad based QTL maps to improve barley breeding	Thomas W T B
SCR/582/01	Cloning of avirulence genes from the oomycete plant pathogens <i>Peronospora parasitica</i> and <i>Phytophthora infestans</i>	Birch P R J
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. + Phase 2.	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/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
SCR/834/01	Assessment of plant germplasm for bioactive molecules	Ramsay G
SCR/835/01	Genomic sequencing and proteomic analyses of the potato pathogen <i>Erwinia carotovora</i> subsp. <i>Atroseptica</i> (Eca) and the animal pathogen <i>Chlamydomydia abortus</i> (Ca)	Toth I
SCR/837/01	Biodiversity: taxonomy, genetics and ecology of Sub-arctic willow Scrub	Russell J