Merck Serono and BSPED Award Winners 2010

Merck Serono BSPED Award (£25,000)
Dr Rod Mitchell, Edinburgh

The effect of exposure to the proposed endocrine disruptor di (n-butyl) phthalate on development of the human fetal testis using a xenograft approach

Male reproductive disorders including undescended testes, decreased sperm counts and testicular cancer are common and we are seeing more of them. The mechanisms causing these problems are unclear but may include exposure to environmental chemicals. Phthalates are chemicals used in plastics and exposure to phthalates has been proposed to cause reproductive abnormalities in men. In this project I will investigate the effect of phthalate exposure on testicular development. This research will help to determine whether these chemicals, to which we are all exposed, can affect human reproductive health.

BSPED Research Award (£15,000)
Dr Paul Dimitri, Sheffield

A study to develop novel ultrashort-time (UTE) MR sequence analysis of trabecular and cortical bone compartments in children and adolescents.

The long term study of bone mass in children in limited because obtaining images uses x-rays and therefore carries a radiation risk. It is vital that we develop new ways of imaging bones that are considered safe for use in children. Recently, new methods of imaging bones and also bone matrix have been discovered using Magnetic Resonance Imaging (MRI), which does not use x-rays. We plan to develop this novel technique further to help us study bone disease, fracture healing, and the effects of obesity on bone in children and adolescents.

BSPED Research Award (£15,000)
Dr Catherine Peters, London

Expression of TVA as a tool for targeting gene expression in pancreatic beta cells: establishing a transgenic mouse colony.

The ability to modify β-cell gene expression is useful in experimental studies of β-cell function, but most currently available methods are time-consuming and expensive. We have developed a transgenic mouse model in which we can specifically target gene delivery to the β-cells. We plan to use this model to investigate the regulation of β-cell growth and division, with the long-term aim of developing new therapies for diabetes that act by modifying β-cell mass and/or survival. We are requesting funding to establish this experimental model in our collaborative research group at King's College London for use in a number of projects.