

New study discovers more about brain tumours

A new in-depth study funded by Cancer Research UK has shown that medulloblastoma brain tumours have faulty genes underlying the disease.

According to the researchers, the latest discovery can be used to develop new, targeted treatments that are more personal for patients with this type of brain tumour.

Medulloblastoma is the most common brain tumour in children that can be divided into four groups, each differing in terms of patient survival and the type of brain cells that the disease starts in.

The scientists studied the DNA of approximately 500 people with medulloblastoma and compared samples from normal tissue and tumour tissue.

They also studied the data from a further 1,256 patients to find out how active different genes were.

The researchers discovered genetic changes or faulty molecular pathways in more than 75% of the tumour samples included in the analysis.

Two of the faulty genes were been linked with cancer before, and were found only in the least understood disease groups three and four.

Nanobody-based inflammatory disease treatments

Belgian biopharmaceutical company Ablynx has entered a research collaboration and global exclusive licensing agreement with French firm Sanofi to develop and commercialise nanobody-based therapeutics for the treatment of several immune-mediated inflammatory diseases.

The partnership will enable Sanofi to have access to certain nanobodies in Ablynx's existing portfolio, as well as to its scientists and its nanobody platform.

Under the licensing deal, Sanofi will receive exclusive global rights to certain multi-specific nanobodies against selected targets, with options for similar rights to additional targets, for a total of eight potential nanobody product candidates.

As part of the deal, Sanofi will be responsible for the development, production and commercialisation of any products resulting from the current agreement.

Neurodegeneration treatment for Parkinson's disease

Takeda Pharmaceuticals International has entered a new research collaboration to study the ability of Prana Biotechnology's investigational movement disorders compound, PBT434, to slow down or prevent neurodegeneration of the gastrointestinal system of a patient with Parkinson's disease.

PBT434 is the first of a new generation of small molecules from the quinazolinone class of drugs that was particularly designed to block the accumulation and aggregation of alpha-synuclein.

One of the most significant non-motor features of Parkinson's disease is the early presentation of severe and disabling impairment of gastrointestinal function, and results in the loss of neurons and their networks in the brain and in the gut.

In a recent publication, the company revealed the results with PBT434 that demonstrated a significant reduction of alpha-synuclein in various pre-clinical models of the disease.

PBT434 can reduce the formation of toxic alpha-synuclein fibrils and aggregates, rescue neurons burdened by such toxic forms of alpha-synuclein and restore motor function in animal models.

Later this year, the company is expected to start human testing of the compound in a Phase I trial.

Epithelial cells in eyes can prevent spread of Ebola

A team of researchers from Flinders University, CSIRO and Emory University have discovered a super cell in the eye that might have the potential to contain the virus responsible for the spread of Ebola.

The team found that scars on the eyes of an Ebola survivor led them to retinal pigment epithelial cells that can act as a 'reservoir' for Ebola disease and prevent it from spreading.

The examination was conducted on a physician and Ebola survivor, Dr Ian Crozier, whose eye harboured the Ebola virus in recovery when the team commenced its investigations in the laboratory.

The researchers found that the Ebola virus can multiply readily in the retinal pigment epithelial cells, but with the potential to be kept under control by an unexpectedly strong anti-viral response.

