for the growth of hematopoietic cells in culture. Bioreactors are provided in which diverse cell types are simultaneously cultured in the presence of appropriate levels of nutrients and growth factors substantially continuously maintained in the bioreactor while removing undesirable metabolic products. This simultaneous culture of multiple cell types is required for the successful reconstruction of hematopoietic tissue ex vivo. At least one growth factor is provided through excretion by transfected stromal cells, particularly heterologous cells. Means are provided for maintaining the stromal cells and hematopoietic cells separately, to allow for early removal of the hematopoietic cells.

5605826

24 KILODALTON CYTOPLASMIC PROTEASE ACTIVATING DNA FRAGMENTATION IN APOPTOSIS

Wright Susan C; Larrick James W Saratoga, CA, UNITED STATES Assigned to Panorama Research Inc

An apoptosis-associated protease having a relative mass of 24 kilodaltons and a defined amino acid composition is disclosed, together with a method for its purification from a cytoplasmic extract of mammalian cells treated with an apoptosis-inducing agent, such as tumor necrosis factor- alpha or UV irradiation, that comprises affinity chromatography with the serine protease inhibitor DK120 followed by heparin-sepharose chromatography. The protease has activity against the elastase-like substrate MAAPV and is capable of inducing apoptosis in isolated U937 cell target nuclei.

5605827

INFECTIOUS BURSAL DISEASE VIRUS VP2 FUSION PROTEIN EXPRESSED BY BACULOVIRUS

Jackwood Daral J; Jackwood Renee J; Henderson Kenneth S Wooster, OH, UNITED STATES Assigned to The Ohio State University Research Foundation

The present invention relates to the expression of the variable region of a VP2 protein from infectious bursal virus disease by recombinant baculovirus, diagnostic assays and vaccines containing the same.

5605834

COMPOSTING DEVICE

Eberthson Lars; Eberthson Rita S Goteborg, SWEDEN Assigned to Eberthson Rita

PCT No. PCT/SE93/00906 Sec. 371 Date Jun. 14, 1995 Sec. 102(e) Date Jun. 14, 1995 PCT Filed Oct. 29, 1993 PCT Pub. No. WO94/10103 PCT Pub. Date May 11, 1994. A composting device including a drum rotatably arranged about an axis slightly inclined to the horizontal, and having a feeding opening for composting material at the higher situated side of the drum and a discharge opening for finish composted material at the lower side of the drum, the interior of the drum being subdivided into a number of consecutive chambers arranged in the longitudinal direction of the drum, with intermediate sieve screens, whereby the adjacent chambers of the drum are entirely separated from each other by the sieve screens, whereby each sieve screen has the same size of meshes over its entire surface, and where each sieve screen has smaller mesh size in relation to the nearest preceding sieve screen.

5605835

BIOREACTOR DEVICE WITH APPLICATION AS A BIOARTIFICIAL LIVER

Hu Wei-Shou; Cerra Frank B; Nyberg Scott L; Scholz Matthew; Shatford Russell A Falcon Heights, MN, UNITED STATES Assigned to Regents of the University of Minnesota

A bioreactor apparatus comprising two chambers, a feed and waste chamber and a cell chamber separated by a selectively permeable membrane. Within the cell chamber, a biocompatible three-dimensional matrix entraps animal cells or genetic modifications thereof. Due to the presence of this biocompatible matrix, the cell chamber