Case Study 5

Pharmaceutical applications of ABP ingredients

By carefully segregating by-products from cattle, pig and fish, high value components are converted into specialised niche pharmaceutical products for medical treatments and dietary supplements for humans. This helps to achieve maximum value from the animal.

Examples of this include production of active pharmaceutical ingredients such as Heparin, a blood thinner and bone, skin and joint health supplements such as Chondroitin Sulphate, Glucosamine, Hyaluronic Acid and Collagen.

Heparin saves the lives of over 100 million people each year and is one of the World Health Organization's essential medicines. It is the most commonly used coagulant to treat and prevent thrombosis and is widely used as a blood thinner during most surgery.

Heparin is exclusively found in the intestinal gut mucus of pigs and is harvested as a by-product during intestinal casing processing for sausages. Companies such as Swiss Nutrivalor AG and Van Hessen quickly and carefully extract and preserve the mucosa after slaughter and deliver it to their pharmaceutical partners such as Bioiberica in Spain to produce pharmaceutical grade Heparin.

Companies such as Centravo AG in Switzerland process the windpipes and larynges of pigs and

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cattle and the derived cartilage is supplied to the pharmaceutical industry for chondroitin sulphate manufacture. This dietary supplement also plays an important role in the treatment of arthritis and other joint diseases.

Collagen supplements are manufactured by companies such as Ten Kate in the Netherlands and are used to boost natural collagen levels in humans. Collagen is an abundant protein in humans and is the major component of connective tissues found in tendons, ligaments, skin, and muscles.

Undenatured collagen is the natural type of collagen that is carefully extracted from chicken cartilage and it acts as an immune modulator to maintain natural renewal and rebuilding of strong, flexible joint cartilage.

Hydrolysed collagen is a denatured collagen produced through enzymatic hydrolysis of collagen derived from bovine hide, bone, pigskin or fish. These bioavailable peptide building blocks are rapidly absorbed by the body and promote the synthesis of new collagen to help rebuild connective tissue.

Control of supply chain