Patent / Intellectual Property Registration

- '99. 07. 14  ●  New protease isolated from the polychaeta: Periserrula leucophryna
- '01. 04. 03  ●  Simple method for purifying and isolating protease from the polychaeta: Periserrula leucophryna
- '02. 03. 13  ●  Microflora producing oxidant and sds-stable protease
- '02. 06. 29  ●  Bacillus spp. I-52 producing massive amount of highly active alkaline protease
- '03. 11. 05  ●  Periserrula leucophryna serine protease having fibrinolytic activity and coding gene thereof
- '03. 12. 10  ●  Simple method for the decolorization and recoverment of the protease from the culture broth
- '05. 02. 18  ●  Bacillus Subtilis PL-1 and keratinolytic protease thereof
- '05. 02. 18  ●  Detergent and oxidant-stable halo-alkaliphilic protease and coding gene thereof
- '09. 02. 27  ●  Highly-expressed glutathione from Saccharomyces cerevisiae 54-8 wild type and uses thereof
- '09. 02. 23  ●  Saccharomyces cerevisiae mutants with enhanced production of glutathione to the high concentration and mass production method thereof

- '03. 12  ●  Periserrula leucophryna mRNA (PLCP) for cysteine protease, complete CDs
- Periserrula leucophryna trypsin-like serine protease (PLCP-2) mRNA complete CDs
- Periserrula leucophryna hemerythrin mRNA complete CDs

Core product

Extremozyme containing highly concentrated nutrition as dietary supplement for pigs and broilers / Extremozyme preventing Bovine mastitis / Reduction of somatic cell count / Meat tenderizing enzyme, Treatment of swine waste / Enzyme for odor reduction / Cosmetic enzyme, enzyme for fibrinolysis and associated products

Line of business

Development of new Korean sintoburi substance from marine and mudflat origin bacteria; Application and Commercialization
Method for eco-friendly and cost-saving + Extremozyme utilization

**Bacillus sp**

- **Milk cow** (Paju, Yecheon, Haeang, Ryongtark, An sung, etc.)
- **Pig manure** for organic water reduction (Paju, Yecheon, etc.)
- **Broiler chickens** (nationwide)
- **Farmed fish** (D feed CO., LTD)
- **Pig** (An sung, Paju, Yecheon, Eomseong, Yeon)
- **Cosmetic exfoliating enzymes**
- **Nutrients from soybean meal degradation**

- Maintaining somatic cell count limit
- Shortening of the shipping date
- Reducing feed cost
- Growth milk amount
- Preventing calf diarrhea
- Advanced nutritional factor from soybean meal degradation
Probiotics + Enzyme are the Global trends

**Authentic probiotic** enzyme containing the extremozyme, soybean meal degradation products, effective microorganisms, fermented products, Important factors, etc.

New concept **“Probiozyme”**

- Maintaining around 75% cure rates of Bovine mastitis (Performance results of the Rural Development Administration Agricultural Traits Project)
- Vitaly strong extremozyme fermented from special mudflat-origin bacteria of Incheon, Korea where has been polluted for half a hundred years
- Powerful anti-inflammatory and proteolytic ability of the extremozyme
- Quality (efficacy) and price are incomparable with manufactured imported enzymes
- Powder form (spontaneous mixing with the basal diet)
  Liquid form (easy feeding regimen, convenient use for all species, maximize purification capacity)
Good Milk Prote - IM

**Composition**
- Extremozyme, taurine, Res, yeast, Se-yeast, etc.
- Maintain adequate somatic cell counts by powerful anti-inflammatory action of the extremozyme
- Anti-inflammatory action, improvement of liver function and immunity by taurine
- Increase milk yield, milk protein, and stabilize pregnancy rate
- The only extremozyme having ability to reach digestive tract of the ruminants

**Standard**
- 10kg/paper bag

**Administration**
- Mix 30~40g with TMR per head/day

Good Mild Prote - DS (for dairy cattle ~ Korean native calves)

**Composition**
- Extremozyme, taurine, RES, effective Bacillus species, anti-SBTI factor
- Powerful extremozyme reaching calf gut (including Korean native calf), excellent anti-diarrheal effect
- Digestion, absorption, and preservation of intestinal microflora

**Standard**
- 500g / white container (measuring spoon included)

**Administration**
- Dilute ~30g with milk replacer per head/day (perfectly resolved by 2~3 times of administration)

Pig farming Pearlzyme (for piglet, weaning pig, breeder)

**Composition**
- Extremozyme, taurine, RES, effective Bacillus species, soybean meal degradation products, etc.
- Lowering ~2% of current feeding regimen increases degradation and absorption of the nutrients by adding extremozyme supplement (same breeding effect as CP 18% feed), reduced foul odor
- Increase growth rate of weaning pig and nursery pig, excellent anti-diarrheal effect, reduction of feeding cost, decrease mortality rate
- Substitution of extremozyme with various nutritional supplements and antibacterials proved an equivalent effect

**Standard**
- 5kg/silver foil packaging

**Administration**
- 1kg per 1 ton of feed

Poultry farming Pearlzyme (for broiler, breeder, laying hens)

**Composition**
- Extremozyme, taurine, RES, effective Bacillus species, dry yeast, Se-Yeast (0.1ppm organic selenium-yeast, product from All-tech Inc., US)
- An enzyme formulation optimized for broiler chickens and laying hens cure loose stools in young chicks, significant improvement of growth and immunity, shortens the shipping date
- Decrease mortality rate, distribution according to the energy yield, and deployment (Kiwoom livestock experiment)

**Standard**
- 100gm/silver foil packaging

**Administration**
- Mix enzyme with 0.5t formulated feed mixture, by Auto-feeding
Pearlzyme AQUA (for fish farming, aquaculture)

**Composition**
- Extremozyme, taurine, hydrophilic RES, effective Bacillus species, edible PPG, soybean meal degradation products, etc.

- Stress reduction by high-density stocking, increasing immunity, growth enhancement by the extremozyme

**Standard**
- 20L liquified enzyme/mixing tank

**Administration**
- Feed fish after high pressure spray coating of pelleted feed while in process of production

Good Milk Prote - SK (for dairy cattle)

**Composition**
- Extremozyme, taurine, hydrophilic RES, effective Bacillus species, edible PPG, soybean meal degradation products, etc.

- Maintain adequate somatic cell counts, stress reduction, preserve effective stains of intestinal microflora and immunity enhancement

**Standard**
- 10kg/paper bag

**Administration**
- Mix 30g with feedstuffs per head

Good Milk Prote - SK (for dry cows)

**Composition**
- Extremozyme, taurine, hydrophilic RES, effective Bacillus species, edible PPG, organic Se-Yeast (product from All-tech Inc., US), soybean meal degradation products, etc.

- Decrease growth retardation from heat and other stresses, improves circulation and indigestion etc.
- Decrease calf diarrhea and mortality after labor
- Decrease incidence of the loose stools

**Standard**
- 10kg/paper bag

**Administration**
- Mix 30g with feedstuffs per head

Good Milk Prote - SK (for Korean native cattle)

**Composition**
- Extremozyme, taurine, hydrophilic RES, effective Bacillus species, edible PPG, organic Se-Yeast (product from All-tech Inc., US), soybean meal degradation products, etc.

- Meat quality improvement by activation of intramuscular Oxy-Myoglobin
- Decrease incidence of the loose stools

**Standard**
- 10kg/paper bag

**Administration**
- Mix 30g with feedstuffs per head
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Type of Business | Research and Development (Korean sintoburi Extremozyme / production of protein fermented product) / Manufacturing / Trading
Line of business | Development of new Korean sintoburi substance from marine and mudflat origin bacteria; Application and Commercialization
Core product
- Extremozyme containing highly concentrated nutrition as dietary supplement for pigs and broilers
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