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Dipeptides; the future of amino acids

The use of free amino acids in various applications suffers from several limitations in the bioavailability, which depends largely on the absorption rate, uptake capacity, and competition for the same transporters between the different amino acids. Dipeptides are scientifically known to solve these problems, and thus have been considered as the next generation of amino acids. Although several amino acid producers are actively researching methods for an economic production of dipeptides, their use is still limited to research purposes and special applications due to the currently high production costs. Cysal has developed a biotechnological process that allows the production of aspartyl-arginine and aspartyl-lysine dipeptides on an industrial scale at unprecedented low cost. Arginine and lysine are essential amino acids and are popular additives in numerous industries. Cysal's technology platform also allows the cost-effective production of several other dipeptides, which are currently in the development pipeline. Each dipeptide has several potential application fields, and thus large global markets, including cosmetics and skin care, dental hygiene, clinical nutrition, nutritional and dietary supplements, immunomodulation, as well as animal feed production, especially for aquaculture.