**A hydrocolloid approach to food and health**

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To study the influence of hydrocolloids on human health, a multidisciplinary and comprehensive approach is necessary. In this talk, some examples are discussed.

1. A fundamental understanding is required for the treatment of cystic fibrosis using alginate containing a mixture of long and short chains, and to the problem of osteoarthritis with respect to interaction between short chain and long chain hyaluronan molecules in synovial fluids.

2. Although it is known that thickened fluids reduce the prevalence of aspiration, excessive thickening reduces the palatability leading to dehydration and malnutrition, and the residue at the oropharynx causes subsequent aspiration. It is therefore necessary to find the optimal condition for thickening and cohesiveness. The granular matter physics approach can be effective to understand the bolus rheology.

3. The application of capillary forces for reduced fat foods is expected to develop foods with reduced calories which can contribute to challenge the problem of obesity.

4. Understanding flavour release is the basis for salt reduction and studies should be carried out to find a better way to develop palatable and healthy foods.

Food hydrocolloids, therefore, make the ideal platform for enhancing collaboration among different fields and expertise.