



# Technology Transfer Opportunity

## A Microwaveable Tasty and Healthy Cheese Product

### OPPORTUNITY:

A Microwaveable Tasty and Healthy Cheese Product

### Description of Technology:

**Summary:** Researchers at UCD have developed a proprietary formulation and method for producing a cheese product with enhanced organoleptic properties such as taste and mouthfeel.

The cheese product offers enhanced nutritional properties, such as increased fibre content and reduced fat content by comparison with conventional natural and imitation cheeses. Importantly, the naturally high protein content is also maintained.

**Background:** Natural cheese has excellent organoleptic properties, has high protein, moisture and fat content and no starch content. An alternative to natural cheese are imitation cheese products principally formulated by blending ingredients including non-dairy products, to produce a 'cheese-like' product. However, many imitation cheeses currently on the market have poor organoleptic properties particularly in relation to taste and texture.

(a)



(b)



Fig 1; Sample cheese product (a) pre microwave heating & (b) microwave heating; 100 mins. Storage at 4 days for (a) and (b). 1 Sq=1 cm actual size.

Microwave-expandable snack foods are receiving increased attention because of their convenience, ease of formulation, moulding and texture. Neither natural nor imitation cheese is considered to be particularly suitable for use in microwaveable snack foods, since the former tends to form a fatty, greasy mass with poor expansion properties and the latter tends to have poor taste and texture when subjected to microwave heating.

Snack manufacturers are focusing on "better for you" innovative offerings with a focus on fewer calories with an air-puffed format offering a seemingly more satisfying, less calorific option to the consumer. "Flexi-eating" is on the rise catering for hectic lifestyles and snacking habits of on-the-go consumer seeking a quick, convenient yet healthy snack. This microwaveable cheese product offers all of the above in conjunction with appealing to consumer control where consumers are seeking a desire to control "made just for me" products.

### Market<sup>1</sup>:

The multi-million Irish and multi-billion European savoury snacks markets grew by 4.3% and 2.4% respectively in 2007 and are forecasted to increase by 18.4% (Irish) and 10.1% (European) by 2012, with US & Mexico representing an increasingly sizeable global share by 2012.

### Inventors:

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### Patent Status:

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### Opportunity Sought:

Available for licensing and/or collaborative research.

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<sup>1</sup> Savory Snacks in Ireland/Europe/Brazil; Datamonitor (12/2007). Also Mintel and Datamonitor reports & Research Insights.