Flask to Fork: The Earthrise Experience
“The need of the world for additional sources of high-protein food is so great, especially in overpopulated areas, that serious effort in tracking down every promising lead is certainly warranted. Such great advances in technology have already come from the coupling of engineering with biology that it seems inevitable that the production of food, at least in certain areas, will eventually be carried out by "process" industries. The large-scale culture of algae may well become the first of them. In regions of the world where population is especially dense, and fertile land is limited, it is entirely possible that process-industry methods of producing food may furnish a respite from the threat of famine and so contribute toward more salutary conditions for civilized living. If algal culture can serve”

V. Bush, 1953
EARTHRISE: The Merger of Two Visions - Thousands of Miles Apart

**DIC Corporation (Japan)**
- CO2 mitigation from Single-cell protein facility in Romania
- Pigment for DIC’s ink industry (Core business)
- Combat protein malnutrition
- Production facility in Bangkok since 1978

**Proteus Corporation (USA)**
- Combat protein malnutrition
- Make business (UN)
- Research in Spirulina production in Imperial Valley, California since 1977?

Earthrise was incorporated in 1982 wholly owned by DIC
2004 – GRAS with FDA Review
Blue is one of the primary colors, besides blue it is also used for making green and purple shades.
Approved in USA (FDA) and in compliance with the EU guideline

Approved in USA (FDA) and in compliance with the EU guideline

Approved in USA (FDA) and in compliance with the EU guideline

Clorophyll is not approved in the USA

All shades of green, approved in the USA and EU
Brand New HUE

New York Times Magazine
October 9, 2016
# of Publications

Source: PubMed
The Potential

- Only a handful of microalgae have been subjected to mass culture so far for one reason or other

- Thousands of species of algae and hundreds of novel compounds for various uses
Drivers for Future Progress

- Increasing world population
- Dwindling wild catch putting pressure on finding alternative fish feed sources
- Dwindling arable land
- Climate change and water use
- Rising medical and insurance cost: focus on prevention rather than cure: Lifestyle changes
- Sustainability issues; clean label
- Alternatives to conventional foods: plant proteins instead of meat proteins – e.g. Impossible Foods: meat and milk replacements
- Nutrigenomics