



Session	Start-ups/SMEs looking for Finance: Series A and Series B/C Funding
Title	Harnessing fermentation for the production of affordable natural algal astaxanthin
Company	Kuehnle AgroSystems
Speaker	Dr Claude Kaplan
Keywords feedstock (max 2)	Acetic Acid
Keywords technology (max 2)	Microalgae Fermentation
Keywords End-Product (max 2)	Astaxanthin Carotenoid
Abstract:	
Astaxanthin is one of the most sought after carotenoids for human dietary supplements and an essential ingredient in many aquaculture feeds. The current market is worth around \$2bn and set to double by 2030. However the traditional production of natural algal astaxanthin, which dominates the supplements market, uses open ponds or photo-bioreactors and is a slow and costly process resulting in a very expensive product (\$8000-\$9000 / kg). Kuehnle AgroSystems (KAS) has uniquely developed the ability to use fermentation to produce the identical high quality product using the same microalgae. Our patented 'dark fermentation' process, together with our proprietary non-GMO strains, enables the production of natural astaxanthin in 4 days v 6 weeks compared to the traditional technology. This reduces the COGS by over 80%, while using less energy, water or land. Working with an algal CMO, Biorea in France, and our strategic partner, the Dutch multinational Corbion, we are currently scaling the technology to industrial scale. As part of the future optimisation of the technology we are seeking \$4.5M investment to build the world's first dedicated commercial demonstrator for the production of algal astaxanthin using fermentation.	