

SK Innovation's Green Crude Platform  
– Year in Review

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Microalgae have recently received attention as a potential renewable energy source and high-value products producer[1]. A tremendous amount of capital has poured into the traditional phototrophic platform, however, it yields very low aerial growth rate and necessitates enormous land and capital investment for commercialization. [2]. Therefore SK Innovation has focused on our internal effort to develop heterotrophic platform directly converting sugar to biomass. SK Innovation has perfected a heterotrophic platform that blends the high growth of a proprietary strain with highly efficient lipid extraction technology. To our knowledge, this is the first report to isolate heterotrophic microalgae in South Korea. In addition, patent-pending wet extraction technology reduces a major economic and energetic roadblock in the downstream process including dewatering and drying prior to lipid extraction. The economics of this technology platform allows us to enter markets rapidly and drive revenues to our business from commodities to high-value niche chemicals.