Javid Hussain, J Fundam Renewable Energy Appl 2017, 7:7 (Suppl)
DOI: 10.4172/2090-4541-C1-038

Microbial based biofuel production: Potential impact on the control of global warming

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Environmental pollution and global warming is one of the biggest issues of world today. Environmental pollution is mainly due to anthropogenic way, mostly caused by human daily activities, usage of fossil fuels. In turn these are causing an increase in global warming. Although there are advantages of the fossil fuels in industry, but on the other hand the same fuels are also contributing the biggest amount of pollutants to the environment e.g., particulate matters, greenhouse gases which are involved in acid rain. For the last decade the world big economy pillars i.e., US, China, Brazil, Australia and some other European Countries have been giving great attention to solve the issue by increasing the production of biodiesel which are derived from various organic resources such as oleaginous fungi, microalgae, plants and animal fat. Biodiesel production is presently based on edible vegetable oils. The commercialization is challenged by high production cost and has been of the great concern regarding food vs. fuel competition. The proposed study is focused on finding non-edible oil sources such as algae. These microorganisms minimize competition with conventional agriculture, have fast growth rates, utilize a wide variety of water source, recycle stationary emissions of carbon dioxide and have high areal productivity. If we do commercialize it in market then the only option left is to produce microbial-based biodiesel, which have very good fuel properties and reduce the CO_2 concentration in atmosphere. Moreover, this talk will outline recent progress made in understanding and optimizing the use of microorganisms such as algal, fungus which act as producers and decomposers in ecosystem. If scientifically and adequately explored, it will play an important role in energy sector, environmental sustainability and natural socio-ecological systems.

Biography

Javid Hussain graduated (PhD) in 2016 from the UFBA and MSU, United States and where his supervisors were Drs. Iracema Nascimento and Dr. Wei Liao. In 2010, He received a Master's degree in Environmental Chemistry from the Institute of Chemical Sciences, University of Peshawar, Pakistan and in 2011 was admitted to MPhil program at the same institute. During his MPhil year, He received PhD offers from three countries (Australia, Brazil and South Korea). He accepted The World Academy of Sciences Award for PhD study.He has been published more than 12 papers in international peer-reviewed journals. He received grants from The World Academy of Sciences (TWAS) to attend bioenergy conferences and events held in South America, North America, and Europe, and he delivered lectures at international events in four continents.

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