

# Gopalakrishnan Kumar: beca Emilio Rosenblueth

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Gopalakrishnan Kumar is 25 years old and was born in India; he studied Master- MS in Biotechnology from VIT University, one of the top 8th University in India, and the PhD- Environmental Engineering and Science, Feng Chia University. His experience is based on biotechnology but at the same time he has experience as environmental engineer.

Kumar main field is environmental engineering and science, but he has experience on biofuel production from lignocellulose biomass, especially hydrogen and methane. Currently, in the Engineering Institute, UNAM, he is collaborating with Dr. German Buitrón on the project “Bioprospecting of Microalgae towards biorefinery concept” mean hydrolyzing marine algae to recover more sugars and later use it for the biofuel production such as hydrogen and methane, in addition he is working on the microbial fuel cells for the generation of electricity. Most of these experiments will be at LIPATA (Laboratory for Research on Advanced Processes for Water Treatment).

On the other hand, he has a good record of research performance and activities (10 SCI papers, 20 Conference proceedings, 1 book and 1 book chapter).

“The reason I´m working with Dr. Buitrón is because I won the Emilio Rosenblueth scholarship” based on the research he did for his PhD work on the renewable fuels (biohydrogen and biomethane production from solid and lignocellulose wastes). He would like to thank the board of the scholarship, since it´s a prestigious fellowship.

He explains that in the recent years, the biggest barrier to the lignocellulose conversion to biofuel is the hydrolysis of cellulose, which has been covered by the lignin and hemicellu-

lose moiety. Though, many pretreatment and hydrolysis methods have been developed for the pretreatment methods only one or two methods (Ammonia- fiber explosion, acid or alkali agents) have been industrialized. Therefore, with Dr. German Buitrón, he will trying to find some biological methods or alternatives for the cellulose hydrolysis. This research could be promising and brings a way to the biofuel production from the lignocellulose biomass.

Since he was a child he loves engineering, he mention “when I was little I got surprise watching at all the machines, like

tailoring´s one, the same as airplanes and wonder how all things has been made because of the technologies which are originated from engineers, so that´s why I was impress on engineering”. In his family, his mom has been a housewife of a long time and his father passed away when he was 13 years old and even if this was not an engineer, he used to work as a mechanical engineer. He has two siblings, his brother is a mechanical engineer and actually he is working in a company in India and his sister who got married 2 years ago with a daughter 7 months old.





He said: “Is funny how life has been changed; now I am living in Mexico in the other side of the world. I was born in a town called Chennai, in Tamilnadu, India but I grew up in a different environment from Mexico. On high school, I had to travel 20 km every day, because it was the closest one, my childhood was happy and enthusiastic, I used to like to play cricket after coming back from the school with my friends”.

He explains some many interesting points about India like the country is huge, with the population of 1.27 billion people, also is the second country in terms of human power. There are many similarities between India and Mexico, like the spices we used to cook, habits, public transportation and food. In comparison Mexico City is similar to New Delhi or Mumbai regarding the population and the way of living. Although the oil price is higher in India (\$1.5 USD per liter) but they like to use bikes which is convenient for one or two people.

*India is called “incredible India”, because it is united in diversity, culture, food habits*

*and people attitude. They have more than 1500 spoken languages, 30 official languages (for each province or state, they have 30 now, and still there are some new on the plan), Hindi and English are the most spoken ones, but every state maintains its own culture and heritage, like the habits, food, dressings, and everything is different from each other.*

*Talking about religion, we have thousands of them, but the most common is the Hindu, besides, Muslims and Christianity, they celebrate Christmas on 25th December.*

*This is the first time I've being in Mexico, I'm happy because here you can find various types of foods, and the dishes are so similar to the Indians. I'm more passionate about cooking than before, I would love to be a chef, but I don't forget that I like my profession. I love Mexico, this is a good opportunity for me to learn about a different culture and of another country. The people are very kind, helpful; especially, the researchers in LIPATA.*

*I have a lot of hobbies, one of them is the stamp and coins collection. So far, I have collected around 80-90 coins from different countries, the ones I have from India they were used in the 18th century and in the early 1900's.*

*If I have the opportunity to change something in my life, because I'm strong believer on Mahatma Gandhi's words I can mention Be the change that you want to change in the world. I would like to change the big gap between the poor and rich people, also make the education a free system in my country so it can become a developed one and finally try to provide free education (or pay their tuition fees) to at least 10 people in my life.*

*Finally, I can say, I will be in Mexico for 3 years but I could stay longer. I think the researchers in the IINGEN are hard workers; I made a good choice on my research knowledge in the field of engineering. As I could see most of the nation's technological development had a significant contribution from the IINGEN of UNAM. I feel proud to be a part of this institute. |*