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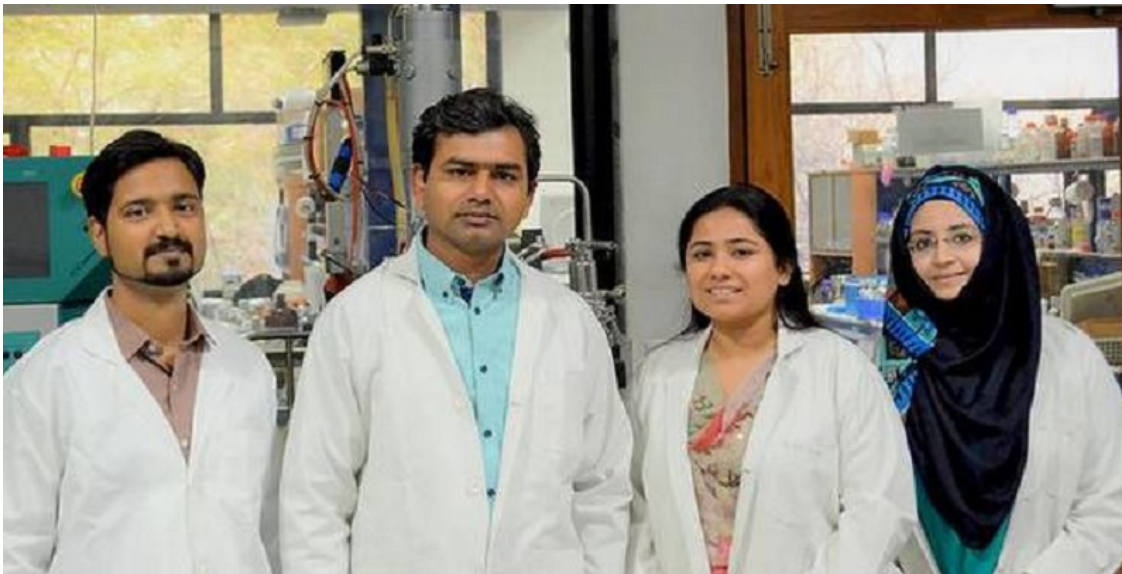
Action. Research. Documentation. Aggregation of Accomplishments & Positive News of Indian Muslims and the Community – both at Home and Overseas.

Tag Archives: Dr. Syed Shams Yazdani

## Indian Scientists Led by Muslim Woman Succeed in Making Hydrocarbons with Microbes

🕒 April 3, 2018   📁 Education, Science & Technology, World Opinion   ✍️ Dr. Syed Shams Yazdani, Syed Shams Yazdani, Syed Shams Yazdani - Scientist, Tabinda Shakeel, Tabinda Shakeel - Scientist, Zia Fatma, Zia Fatma - International Centre for Genetic Engineering - New Delhi, Zia Fatma - Scientist

All India, NEW DELHI :



From left — Scientists Shriessh Srivastava, Syed Shams Yazdani, Zia Fatma and Tabinda Shakeel studied the phospholipid pathway of *E. coli*. (Photo – The Hindu)

New Delhi :

A team of scientists at the International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi has successfully experimented with the use of microbes in making hydrocarbons.

The scientists “have succeeded in engineering the metabolic pathway of *Escherichia coli* in such way that it would synthesise hydrocarbons of carbon chain length 15 and 17, which are the fundamental components of diesel,” says a report in *The Hindu*.

The results of the study, conducted by four researchers of microbial engineering – Shriessh Srivastava, **Syed Shams Yazdani, Zia Fatma and Tabinda Shakeel** – were recently published in the *Journal of Metabolic Engineering*.

“Few cyanobacteria are known to produce a low quantity of alkane. So we put the genes responsible for this production into the laboratory bacteria. But then the production was very minimal. So we took the approach of in-silico metabolic pathway, and finally over-expressed a gene (zwf gene) and removed few genes from E. coli which resulted in significantly high hydrocarbon production,” explained **Zia Fatma, Postdoctoral researcher and first author of the paper**.

**Dr Syed Shams Yazdani, from Microbial Engineering group** and corresponding author of the paper said: “Currently, most of our need for fuels is met by non-renewable crude petroleum. Few countries have commercialised biodiesel made via transesterification of vegetable oil, but they can only be blended in the proportion of 5-20% with diesel and are not compatible with the supply chain,” says per. “The production is currently only at the lab level. We have to integrate the engineered plasmid into the genome and go for mass production. We are working to bring about a ten-fold increase in the production and at the same time bring down the cost of the new product.”

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