Leaked Text: Biofuel Production in a Nutshell

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Scientists are developing a new research goal: changing the structure of proteins, a substance that provides an ever-changing mesh of letters and numbers that comprise a genetic code. This research is not only complex but also possibly dangerous.

Of the 82,000 types of chemical structures (a structure is a series of atoms arranged to form a complex pattern), a great number are associated with proteins. Typically, proteins are made of three-dimensional complexes that hold together the molecules of a protein. About seven types of proteins are known as peptides, and each of these has a separate molecular pattern that is distinguishable to a near-infinite number of other molecules.

These molecules hold together a proteinâ€™s chain, which is folded into a three-dimensional structure. Their structure is called fission. While fission is an essential process for the production of proteins, it also produces volatile compounds like methyl groups and long chains that can cause damage. Therefore, researchers think that there should be another process that could harness, along with fission, a larger amount of molecular energy. At a molecular level, amino acids are integrated into a three-dimensional chain that turns into an expanding chain. It is this sequence of connecting amino acids â€” fission by itself â€” that forms a protein.

Proteins are composed of pairs of long chains of amino acids, and in order to maximize energy contained in a protein, a pair of proteins must be embedded with a pair of complementary fission residues. A new regulatory mechanism could be used to produce a new kind of protein: a protein that is both fission and fission-promoting. This is called a protein mistery.

The concept first came to the attention of scientists from the Biozoom Institute of Advanced Studies at the University of Tokyo in 2006, when they studied two molecules of platelet-derived cardiomyocytes, blood cells that secrete antibodies for tumor removal. In some laboratory experiments, they found that proteins were able to co-evolve with fission and fission-promoting, suggesting that such a process of biofuel production may be possible.

The scientists first found that there could be a way to produce fissionous protein mistery by fusing together fission and fission-promoting domains. These domains reside in an unnatural location in amino acids that make proteins. The University of Tokyo research team has since discovered that if they were to fuse together the fission and fission-promoting domains, not only would the effect be larger â€” they would also be neutralizing the fission complexes.

In the last three years, the researchers have started producing fission and fission-promoting mistery in vitro, as well as using nutrients for mistery production. They report that mistery and fission complexes react with two different types of life plants. While fission mistery or fission active protein mistery produce a more complex protein structure, it does not appear to affect their physical properties and they remain stable on their molecular silences.

These two discoveries may well lead to the production of the production of fissionous or fission-promoting protein mistery. As major advances in research in these areas are possible, scientists hope that biofuel production will be enhanced.

A Red Fire Hydrant Sitting In The Middle Of A Forest