Gene variations contribute to aggression and anger in women

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Ever wonder why some women seem to be more ill-tempered than others? University of Pittsburgh researchers have found that behaviors such as anger, hostility and aggression may be genetic, rooted in variations in a serotonin receptor gene.

Indrani Halder, Ph.D., of the Cardiovascular Behavioral Medicine Program at the University of Pittsburgh, will present the findings today at the American Psychosomatic Society's Annual Meeting, held in Budapest, Hungary.

Previous studies have associated the hormone serotonin with anger and aggression in both humans and animals and have shown that increased serotonin activity is related to a decrease in angry and aggressive behaviors. In the study being presented today, researchers sought to determine if this relationship was genetically determined. The study is the first to look at the relationship between variations in the serotonin receptor 2C gene and anger and hostility.

Completed at the University of Pittsburgh's Behavioral Physiology Laboratory, the study looked at 550 unrelated women of European descent. In order to find normal variations in genes and behavior, the women were not prescreened for behavioral type. Researchers found that those who had one or both of two alterations in the promoter region of the serotonin receptor 2C gene were more likely to score lower on two common tests for anger, hostility and aggression.

These findings may aid in establishing a potential marker for certain conditions associated with aggression and anger.

"Aggression and hostility are predictors of hypertension, glucose metabolism and heart diseases," said Dr. Halder. "The genetic marker we found for hostility also may be useful for predicting a person's predisposition to such diseases."

Source: University of Pittsburgh Schools of the Health Sciences