Docket #: S98-083

Beta 1 Adrenergic Receptor Gene Disruption Mouse (Beta1 ARGDM)

Adrenergic receptors are plasma membrane proteins that mediate cellular responses to the hormone/neurotransmitters adrenaline and nonadrenaline which are released from sympathetic nerve terminals or the adrenal gland. The three closely related subtypes of beta adrenergic receptors (beta 1, 2 and 3) are found in humans and mice. These receptors mediate a wide variety of physiologic functions including: regulation of heart rate, cardiac contractility, blood pressure, and regulation of smooth muscle tone in several tissues. Beta receptor agonists are used for the treatment of asthma, premature labor and acute heart failure. Beta receptor antagonists are used for the treatment of hypertension and chronic heart failure.

The beta 1 ARGDM will provide an experimental animal model to identify the functions mediated by the beta 1 AR subtype. Furthermore, these mice will be valuable for testing the in vivo selectivity of new drugs for the beta 1 AR subtype.

For more information about Dr. Kobilka's research, click http://www-med3.stanford.edu/frd/frd.lasso?-database=bluebook2.fmp&-layout=profile&-response=profile.lasso&-recid=32971&-search.

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