Scientific studies of HSL

S.No.	Database/ Accession Number	Focus	Compounds	HSL Activity/ Expression	Function of the compounds	Disease/Disorder (to be treated/ associated with)	Dolcera summary
1	BIOSIS / 2006:632054	Variation in the HSL gene (promoter variant C-60G)	N/A	The G-allele showed reduced transcription in HeLa cells and primary rat adipocytes.	N/A	Type 2 diabetes, and obesity	Article is focused on investigation of the role of the HSL gene promoter variant C-60G, a polymorphism which previously has been associated with reduced promoter activity in vitro, in obesity and type 2 diabetes. Study concluded that HSL C-60G polymorphism is associated with increased waist circumference in non-obese subjects.
2	BIOSIS / 2006:93908	Inhibition of lipolysis	N/A	Inhibition	N/A	Type 2 diabetes	Hormone-sensitive lipase (HSL) is a critical enzyme involved in the hormonally regulated release of fatty acids and glycerol from adipocyte lipid stores, and its inhibition may thus improve insulin sensitivity and blood glucose handling in type 2 diabetes. Article supporting a connection between adipose tissue lipolysis and plasma glucose levels.
3	BIOSIS / 2004:279615	Hormone sensitive lipase (review)	N/A	Altered expression	N/A	Type 2 diabetes, obesity, and atherosclerosis	Article is review, saying that altered expression of HSL in different cell types may be associated with a number of pathological states, including obesity, atherosclerosis and Type II diabetes.
4	BIOSIS / 2003:317841	Islet hormone-sensitive lipase during long-term high-fat feeding	N/A	Down-regulation	N/A	Type 2 diabetes	This study focuses on role of hormone sensitive lipase for islet dysfunction during the development of type 2 diabetes. In conclusion results support the notion that HSL plays a critical role in the regulation of intracellular triglyceride levels in beta-cells, and that down-regulation of the enzyme may serve to protect against fatty acid-induced islet dysfunction.
5	BIOSIS / 2001:508352	Variation in the HSL gene	N/A	Allele 5 of the HSLi6 polymorphism is associated with a decrease in the lipolytic rate of abdominal fat cells	N/A	Diabetes, and obesity	A polymorphism in the hormone sensitive lipase (HSL) gene is associated with obesity and diabetes.
6	BIOSIS / 1999:49004	Variation in the HSL gene	N/A	N/A	N/A	Type 2 diabetes, and abdominal obesity	Article suggesting the putative role of hormone sensitive lipase in the pathogenesis of type II diabetes mellitus and abdominal obesity. A marker in the HSL gene is in linkage disequilibrium with an allele which increases susceptibility to abdominal obesity and thereby possibly to Type II aiabetes.
7	BIOSIS / 1998:497819	Hormone sensitive lipase (review)	N/A	Alteration of HSL activity	N/A	Diabetes, hyperlipidemia, and insulin resistance syndrome	Article is a review, saying that alteration of hormone sensitive lipase activity and of catecholamine induced lipolysis have been reported in obesity, familial combined hyperlipidemia, insulin resistance syndrome and diabetes.
8	EMBASE / 1998055910	Variation in HSL gene	N/A	N/A	N/A	Type 2 diabetes, and obesity	A new dinucleotide repeat in hormone sensitive lipase is in association with obesity and NIDDM.
9	DISSABS / 2006:175	Consequences of a targeted disruption of the HSL gene in the mouse	N/A	N/A	N/A	Type 2 diabtes, and obesity	Article is saying HSL is potentially a new drug target for the treatment of obesity and type II diabetes. Article focused

							on consequences of a targeted disruption of the HSL gene in the mouse with focus on the effects in skeletal muscle and white adipose tissue. Results presented in this thesis suggest an important role of HSL in lipid signalling and adipogenesis.