

Appendix Table 1. *In vivo* hypoglycemic and hypolipidemic actions of fenugreek samples (*Trigonella foenum-graecum*)

Hypoglycemic action*				
Sample	Dosing method	Animal model	Outcome [◇]	Ref
Seed powder	Diet (0.25-12.3% [#] ; 10wk)	HF HS rat	↓FBG ↓GTT, ITT N.E. SI, HOMA-IR	1
	Diet (2.4%;12wk)	HF HS rat	N.E. FBG, ↓SI, HOMA-IR	2
	Diet (5%; 14d)	ALX rat	↓FBG	3
	Diet (5%; 21d)	ALX rat	↓FBG	4-14
		ALX rat	↓FBG, ↑SI	15-17
		ALX rat	↓FBG, HbA _{1C} , ↓polydypsia	18,19
	Diet (5%; 60d)	ALX rat	↓FBG/HbA _{1C}	20
	Diet (5%; 12wk)	ALX rat	↓FBG, blood urea, ↓serum creatinine	21
	Diet (5%; 4mo)	NT rat	↑SI, ↓FBG, HbA _{1C}	22
	Diet (5%; 8wk)	Obese (Ob) rat	N.E. FBG, SI	23
	"	Lean (Ln) rat	N.E. FBG, SI	
	Diet (0.1-0.5g/kg [#] ; 2wk)	STZ HF rat	↓FBG	24,25
	Diet (12.5%; 15d)	ALX rat	N.E. FBG	26
	Diet (6.25%; 28d)	STZ mice	N.E. FBG N.E. SI	27
	Diet (2g/kg; 30d)	ALX rat	↓FBG, HbA _{1C}	28
	"	Normal rat	↓FBG, HbA _{1C}	
	Diet (20%; 5-11wk)	Normal rat	N.E. FBG	29
	"	STZ rat 10wk post-	N.E. FBG	
	"	STZ rat 5wk pre- & 6wk post-STZ	↓FBG	
	Oral (0.5,1g/kg; 4wk)	ALX rat	↓FBG	30
	"	HC rat	↓FBG	
	Oral (1g/kg; 8wk)	STZ rat	↓FBG	31

	Oral (1g/kg; 30d)	STZ rat	↓FBG, ↑SI	32
	Oral (1g/kg; 8wks)	STZ rat	Normalize serum creatinine	33
	Oral (1.74g/kg; 2wk)	Normal rat	↓FBG	34
	"	ALX rat	↓FBG	
	Oral (2g/kg; 30d)	STZ rat	↓FBG ↑muscle and liver glycogen Normalized kidney glycogen	35
	Oral (2,8g/kg; 2wk)	Normal rat	↓FBG (8mg/kg)	36
	"	ALX rat	↓FBG (2 and 8mg/kg)	
	Oral (250mg; 1 dose)	Normal rat	↓PBG (only when glucose and powder fed simultaneously)	37
Seed powder (defatted)	Oral (1.25g/kg; 8d)	STZ rat	↓FBG	38
Seed powder (defatted)	Diet (1.86g/kg; 8d)	ALX dog	↓FBG ↓glycosuria	39
Seed powder (defatted)	Diet (1.86g/kg; 10d)	Normal dog	↓GTT, FBG ↓plasma glucagon, somatostatin, pancreatic polypeptide	40
	"	ALX dog (w/insulin)	↓FBG ↓glycosuria	
Seed powder (germinated)	Oral (125,250mg/kg; 7d-3wk)	Normal mouse, 7d	N.E. ITT N.E. FBG	41
	"	STZ mouse 7d pre-STZ	↓FBG	
	"	3wk post-STZ	↓FBG	
Leaf powder	Diet (0.5,1g/kg; 45d)	STZ rat	↓FBG, ↑SI, ↓HbA _{1c}	42
	Diet (0.5,1g/kg; 45d)	STZ rat	↓FBG	43
Hypolipidemic actions				
Seed powder	Diet (0.25-12.3%; 10wk)	HF HS rat	N.E. TC, TG ↓liver TC, TG	44

			↓WAT, BAT ↑fecal TG ↑fecal TC ↑fecal bile acids N.E. AST/ALT	
	Diet (0.5,0.75%; 6wk)	HC HF hyper-lipidemic rat	↓TC, LDL, MDA ↑HDL ↑AST,ALT (0.75%)	45
	"	Normal rat	↑HDL, BW ↓MDA ↑AST,ALT (0.75%)	
	Diet (2.4%; 12wk)	HF HS rat	↓TG N.E. TC, FFA, HDL	2
	Diet (2.5%; 16wk)	HC rat	↓TC,TG,LDL,AI,oxLDL ↑HDL	46
	Diet (5%; 21d)	ALX rat	↓TL,TC,TG Kidney & liver: ↓TL,TC,TG	7
	Diet (5%; 4mo)	NT rat	↓TC,TG,VLDL,LDL ↑HDL	22
	Diet (5%; 8wk)	Ob rat	↓Liver & kidney wt ↓TC,↑TG ↓Liver fat,TG ↓ω-9, ↑ω-6 liver FA	23
	"	Ln rat	N.E. Liver & kidney wt, TC,TG, N.E. Liver fat,TG	
	Diet (5-15%; 10wk)	HC HBS mouse	↓TC,LDL,PL N.E. TG,HDL Liver: ↓TC,PL,TL ↓Biliary TC,TL ↑Regression preestablished cholesterol gallstones	47,48
	Diet (6,12%; 5-10wk)	HC HBS mouse	Liver:↓AST,ALT,LDH, LPO	49
	Diet (10%; 8wk)	HC normal rat	↓FeS-induced <i>in vivo</i> oxLDL, ↓LPO Heart & liver: ↓LPO	50
	Diet (10%; 8wk)	ISP-induced		51

	"	normal rat: Normal diet	↓TC,LDL,TG, AI N.E. HDL	
	"	HC-fed	↓TC,LDL,TG N.E. HDL, AI	
	Diet (15-60%; 4wk)	HF HC rat	↓TC ↑excretion bile acids & cholesterol	52
	Diet (30%,8wk)	HF HC rat	↓TC N.E. TG	53
	Diet (20%; 5- 11wk)	Normal rat	↓TG, N.E. TC	29
	"	10wk post- STZ	N.E. TC,TG	
	"	5wk pre- & 6wk post-STZ	↓TC,TG	
	Diet (2g/kg; 30d)	ALX rat	↓TL,TBARS	28
	Diet (2g/kg; 6wk)	Pig	↓TC	54
	Oral (500mg/kg; 4wk)	HC rabbit	↓TC,LDL ↑HDL	55
	Oral (500mg/kg; 4wk)	HC rabbit	↓TC,TG,LDL,VLDL ↑HDL	35
	Oral (0.5,1.0g/kg; 4wk)	ALX rat	↓TC,TL,TG,AI ↓ALT,AST	30
	"	HC rat	↓TC,TL,TG,AI ↓ALT,AST	
	"	Normal rat	↓TC,TG,AI	
	Oral (1g/kg; 30d)	STZ rat	↓TC,TG	32
	Oral (1g/kg; 8wk)	STZ rat	↓TC,LDL,TG ↓↑HDL	31
Germinated seed powder	Oral (125,250mg/kg; 3wk)	STZ rat	↓TC,TG	41

Defatted seed powder	Diet (1.86g/kg; 8d)	ALX dog	↓TC,liver LPO	39
Leaves	Diet (0.5-1g/kg; 45d)	STZ rat	↓TC,TG,FFA Liver/kidney/heart: ↓TC,TG,FFA	27,56

*Abbreviations: AI=atherogenicity index, ALT=serum alanine aminotransferase, ALX=alloxan treated, AST=serum aspartate aminotransferase, BAT=brown adipose tissue, BG=blood glucose, BW=body weight, FBG= fasting blood glucose, HBS=high bile salt-fed, HC=high cholesterol diet-fed, HDL=blood high density lipoprotein cholesterol, HF=high fat diet-fed, HOMA-IR=homeostasis model assessment of insulin resistance, HS=high sucrose diet-fed, ISP=isoproterenol, ITT=insulin tolerance test, LDL=blood low density lipoprotein cholesterol, LPO=lipid peroxides, MDA=serum MDA level, NT=nitrate-treated, SI=serum insulin, STZ=streptozotocin-treated, TBARS=thiobarbituric acid reactive substances, TC=blood total cholesterol, TG= blood triglycerides, TL=blood total lipids, WAT=white adipose tissue, wt=weight.

#Dietary levels expressed as % w/w. g/kg=g sample/kg body wt

◇Fenugreek-treated compared to respective controls (normal or diabetic or obese).