

ANNEXURE-XI

UNIVERSITY GRANT COMMISSION
Bahadurshah JafarMarg,DelhiASSESSMENT /EVALUATION REPORT UGC MRP (F.NO.36-191/2008 (SR))
CARRIED OUT AT
PONDICHERRY UNIVERSITY
PUDUCHERRY

A	DETAILS OF PROJECT	
	Title of the Project	Studies on the protective effects of <i>Trigonellafoenumgraecum</i> (Fenugreek) seeds on the endoplasmic reticulum stress mediated damage in type II Diabetic rats
	Total duration of the project	3 years and six months (1.5.2009 to 1.10.2012)
	Project status	Completed
	Subject	Biochemistry
	File NUMBER:UGC Reference No.& Date	F.NO.36-191/2008 (SR)
	Grant Approved	Rs. 7, 36,000/-
B	EVALUATION REPORT OF EXPERT MEMBER	
1.	Name of the Principal Investigator	Dr. S. Sudha Rani
2.	Designation	Assistant Professor
3.	Address with e-mail and Mobile No.	Dept. of Biochemistry and Molecular Biology, Pondicherry university-605014 Email:sadrassudha@gmail.com; sadrassudha@yahoo.com Mobile:9443768726
4.	Whether work is focused on the title of the project	Yes, the work is focused on the title of the project
5.	Whether original work is done	Yes, the work is original
6.	Whether significant contribution made by the principal Investigator	Yes, the work has highlighted the protective effects of fenugreek seed extract (FSE) in insulin target tissues- muscle, adipose and liver in Type 2 diabetic animals. The effects exhibited individually by FSE and two of its phytoconstituents-trigonelline and diosgenin on lipid and carbohydrate metabolism, oxidative stress, ER stress and PPARs are noteworthy. The antidiabetic potential of FSE could be attributed to the synergistic effects of various compounds present and thereby emphasizing its therapeutic value.
7.	Whether proposed work have relevance to the society/scientific community	Yes, the work has relevance to the society as there is an increasing trend in the incidence of Lifestyle diseases like T2DM. Th data obtained in this study emphasizes the therapeutic potential of Fenugreek seeds against Type 2 diabetes and Fenugreek seed with its bioactive compounds may serve as a potential source for developing new anti-diabetic drugs with less side effects

8.	What type of contribution found in the final report.Theoretical/Practical.If there are Theoretical contribution given by the Principal Investigator,Whether real applications are given	Both Theoretical and Practical contributions are made in this work. Theoretical contributions showed the basis of protective effects of FSE against pro-inflammatory, oxidative stress and ER stress mediated tissue damage in T2DM rats Practical contributions shows the biomedical applications of FSE and its phyto-constituents against the pathological changes in T2DM
9.	Whether Theoretical /Practical contributions And their results and finds are published	Yes, the results are published in Journals with good impact factor and the list is given
10.	Whether results and findings are significant	Yes, the results and findings are significant
11.	Whether the significant Publications are made by Principal Investigator,Peer reviewed Journal	Yes, The list includes: <ol style="list-style-type: none"> 1. S. Sudha Rani, S. Subhashree and R. Murugesan (2012). Lipid lowering effect of fenugreek seed powder in diabetic rats fed with high fat diet. Biomedicine 32 (1):67-71 2. P. Sankar., S. Subhashree and S. Sudha Rani (2012). Effect of <i>Trigonellafoenum-graecum</i> seed powder on the antioxidant levels of high fat diet and low dose streptozotocin induced type II diabetic rats. European Review for Medical and Pharmacological Sciences 16 (3 Suppl):10-17 (IF 1.09) 3. M. Tharaheswari, J. Syam Praveen Kumar, N. Jayachandra Reddy, S. Subhashree, and S. Sudha Rani. (2014). Fenugreek seed extract stabilize plasma lipid levels in Type 2 Diabetes by modulating PPARs and GLUT4 in Insulin target tissues. American Journal of Phytomedicine and Clinical Therapeutics. [2][5] 587-602 4. M. Tharaheswari N. Jayachandra Reddy R. Kumar K. C. Varshney M. Kannan S. Sudha Rani (2014).Trigonelline and diosgenin attenuate ER stress, oxidative stress-mediated damage in pancreas and enhance adipose tissue PPAR-γ activity in type 2 diabetic rats. Molecular and Cellular Biochemistry. 396:161-174; (IF 2.561) 5. Tharaheswari Mayakrishnan, Jayachandra Reddy Nakkala, Syam Praveen Kumar Jeepipalli, Kumar Raja, VarshneyKhub Chandra, Vasanth Kumar Mohan, Sudha Rani Sadras (2015). Fenugreek seed extract and its phytochemicals trigonelline and diosgenin arbitrate their hepatoprotective effects through attenuation of endoplasmic reticulum stress and oxidative stress in type 2 diabetic rats. Eur Food Res Technol. 240:223–232 (IF 1.919)
12.	The number of Publications made by Principal investigator in standard reputed journal	5 (FIVE)
13.	Whether the contribution made by Principal Investigator is sufficient	Yes, the contribution made by Principal Investigator is sufficient

14.	The findings and results of the sanction major Research projects are justifiable	Yes, findings and results of the sanction major Research projects are justifiable
15.	Whether completed project work meet the Proposed objectives	The objectives have been achieved
16.	Give your brief comments on the overall Work of the project	The work has relevance to the current situation in India wherein the incidence of T2DM is increasing alarmingly. This work highlights the therapeutic potential of Fenugreek seeds against T2DM and hence can find its application in creating awareness in the society based on dietary intervention studies
17.	Any specific comments	This study is a good research work that benefits scientific community and also has social
18.	Indicate your overall assessment of the Project Poor /Good/ Excellent	Good

Date: 25.03.2019

Place: Chennai

Name and Address of the Expert: Dr. Elangovan Vellaichamy
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[Handwritten Signature]
**PROFESSOR AND HEAD
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