



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4th July 2002)



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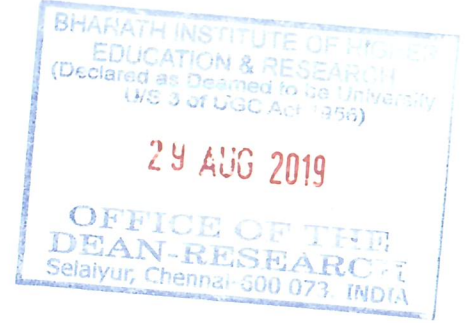
173, Agaram Road, Selaiyur, Tambaram,
Chennai - 600 073. Tamil Nadu.

Ref. No.SMS-2018-O-01

Date: 29.08.2019

TO

Mr. R. Srikumar
Assoc. Professor/Microbiology,
BIHER.



Thro: Concern Head of the Department

Greetings!!!

We are happy to announce that the Research Advisory Committee has approved your proposal for Seed Money Scheme-2018 which was presented by you. You are requested to complete the proposal and send the progress report to the Dean Research in the prescribed time period.

Title of the Project: To Explore the Root Cause for Steady Rise in Type 2 Diabetes

Seed Money Amount: Rs.1, 00,000/- (Rupees One Lakh Only)

Approved on: 22.08.2019

Payment details:

Voucher No.56

Dated: 03.09.2019

With Regards

Dean-Research

Shree University

SELAIYUR, CHENNAI - 600 073, TAMIL NADU, INDIA.

CASH / PAYMENT VOUCHER

Date 03/09/2019
V.No. 56

Debit _____ Amount _____

Rs. 1,00,000/-

PAID TO Dr. R. Sri Kumar

RUPEES One Lakh only

TOWARDS Seed Money Scheme - 2018



[Signature]

Authorised by

Finance Manager

Cashier/Accountant

Payee's Signature



PROPOSAL SUBMISSION

1. Details of Principal Investigator

Name : Dr. R. Sri Kumar
Designation : Associate Professor
Highest Qualifications : Ph.D.
Department : Microbiology
E-mail : rsrikumar_2003@yahoo.in
Contact no : 9442500300
Date of Joining : 02.01.2012

2. Details of Co-Principal Investigator

Name : Dr. Ravichandran. S
Designation : Professor
Highest Qualifications : MD
Department : Biochemistry
E-mail : dr.s.ravichand@gmail.com
Contact no : 9842781934
Date of Joining : 17.04.2017

Technical details

1. Introduction:

Diabetes is a non-communicable, chronic disease that occurs either when the pancreas does not produce enough insulin (Type 1 diabetes) or when the body cannot effectively use the insulin to make glucose into the cells (Type 2 diabetes). India is facing a challenge on diabetes, since more than 69 million people (8.7%) is suffering as on 2015 with 36 million people are undiagnosed. It is estimated to be 58% from 50 million people in 2010 to 87 million people in 2030. Globally it is estimated to escalate 438 million by 2030 from 285 million people. Medical experts feel that timely detection and right management can go a long way in helping patients to lead a normal life. All management on diabetes can only control and maintain the diabetes to prevent its complications, cannot be cured completely. The World Health Organization (WHO) estimated that 80% of diabetes deaths occur in low and middle-income countries and projects that such deaths will be double between 2016 and 2030.¹ Awareness and education is the key role especially in preventing, screening, control and better management for various diseases including diabetes. Various researches also focused on diabetes.^{2&3} Indian government also had taken various steps in controlling the diabetes by implementing National Diabetes Control Programme, National Programme for Prevention and Control of Diabetes, Cardiovascular Disease and Stroke etc.⁴ Moreover at present more than 80% of adult Indian population well aware about diabetes, but still India is the second largest, next to China in diabetes population and continue to escalate. It was noted that about 99% of the awareness studies and education based only on management aspect like symptoms, screening, complications etc but none of the studies highlighted the cause for rise in diabetes population and awareness on preventive aspects for which the people should be sensitized is very scanty. As diabetes is a preventable disease. Simple lifestyle measures have been shown to be effective in preventing the diabetes like engaging in regular physical activity and healthy diet will reduce the risk of diabetes which needs awareness and knowledge among the population especially in the high risk subjects. The present study was designed to explore the root cause for escalation of diabetes incidence by a structured questioner on physical activity based on its physical environment and dietary food habit were assessed.

2. Review of status of Research and Development in the subject

Valentino G, Bustamante MJ, Orellana L, Krämer V, Durán S, Adasme M, *et al.* Body fat and its relationship with clustering of cardiovascular risk factors. *Nutr Hosp* 2015; 31:2253-60.

Cardiovascular diseases (CVDs) are one of the major causes of deaths worldwide and have fueled the already escalating costs of health care.^[1] Dawning with the Framingham Heart Study, risk factors for the development of CVDs have gained importance in clinical as well as in the public health practice.^[2] Further, the risk of CVDs and its mortality increases exponentially when diabetes mellitus (DM) and obesity coexist.^[3]

2.1. International Status:

Globally, diabetes is one of the four priority non-communicable diseases targeted for action because of its higher burden and complications. The prevalence of diabetes among adults in 2019 is estimated to be 9.3% (463 million); the second-largest contributor is India (77 million). It is projected that India's diabetes population is expected to cross 100 million by 2030, and diabetes mellitus is expected to be the seventh leading cause of death. The death rate due to diabetes increased in India from 1990 to 2016 by 131%, and the age-standardized DALY rate increased by 2016 was 39.6%. However, evidence from public sector tertiary care hospitals on PWDs medication adherence and its relationship with glycemic control status from the south Indian population are limited. Hence in this study, we aimed to assess the medication adherence and glycemic control status among PWDs seeking care from a public sector tertiary care hospital, Puducherry, south India.

2.2. National Status:

NIL

3. Progress/ achievement so far, if any

- a). Reference papers was collected.
- b). Literature survey was studied.
- c). Materials and methods were designed.

4. Work plan

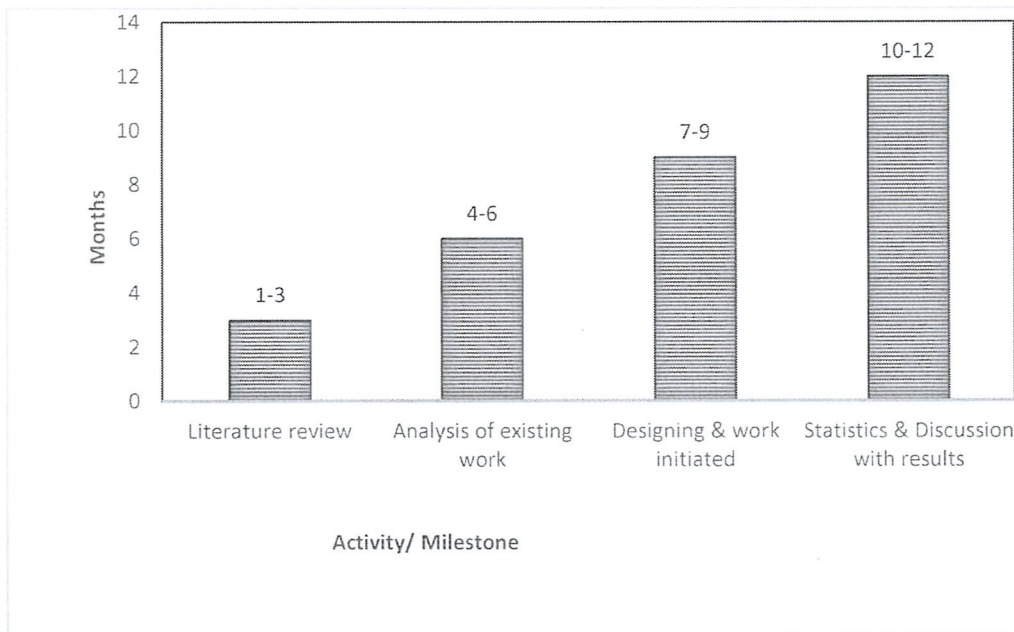
4.1 Methodology

The study was carried between January and June 2017 from in and around Pondicherry and study was approved by Institutional Ethics Committee approval. The study was conducted among 824 adult population who voluntarily participated. A briefing was given to the participants about the objective of this study and assured confidentiality in collection of their personal data's. A well structure validated and pretested questionnaire on physical activity and food habits were assessed.

4.2 Time Schedule of activities giving milestones through BAR diagram. (Maximum of 1/2 pages)

S. No	Activity/ mile stolen	1 st Year			
1	Literature review	1-3 month			
2	Analysis of existing work	-	4-6 month		
3	Designing & work initiated	-	-	7-9 month	

4	Statistics & Discussion with results	-	-	-	10-12 month
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4.3 Expected outcome within the time period of See Money Scheme

The present study was designed to explore the root cause for steady increase in the diabetes incident in the country by assessing the daily physical activity and dietary food habits. Physical activity is a key element in the prevention and also management of diabetes. The study recommends that the levels of sugar, saturated fats, transform of unsaturated fatty acids in manufactured food products should be limited and warrants awareness on consuming omega 3 essential fatty acids rich food and importance of low glycemic index food. The importance of physical activity also warrants awareness among the studied population to maintain blood glucose level and utilization of glycogen by the muscle cell. Academic institution should also make effort to aware the importance of physical activity and food habits by the children. Steps should also be taken on preventive aspect of awareness, apart from screening, management and treatment of diabetes. Overall the present study result explored that less physical activity with switching towards western style of food habits are major cause for steady rise in diabetes incidence observed. As the study limits with in Pondicherry, India, still similarly study warrants across the Nation to control the incidence of diabetes among the health population.

5. Suggested Plan of action stating the name of funding agency where the project will be communicated for financial support within the time period of project.

Nil

6. Bibliography: Nil

Nil

7. List of Projects submitted/implemented by the Investigators (Separate for Pi and Co-PI)

7.1 Details of Projects submitted to various funding agencies:

S.No	Title	Cost in Lakhs	Month of Submission	Role as PI/Co-PI	Agency	Status
1	NA	NA	NA	NA	NA	NA

7.2 Details of Projects under implementation

Sl. No.	Title	Cost in lakhs	Duration	Role as PI/ Co-PI	Agency
1	NA	NA	NA	NA	NA

7.3 Details of Projects completed during the last 5 years

Sl. No.	Title	Cost in lakhs	Duration	Role as PI/ Co-PI	Agency
1	NA	NA NA	NA	NA	NA

8. List of publications published by the Investigators, if any:

a) Principal Investigator

S. No	Author names	Title of paper	Name of Journal	Vol (Issue)	Page No.	Year
1.	Prabhakar Reddy E1; Manigandan S2, Srikumar R3 ; Vijayakumar R4; Manoharan A5; Naveen Kumar C3; Ramesh S6	Existing Knowledge on COVID-19 Pandemic and Hygienic Practice Among South Indians	Indian Journal of Public Health Research & Development	11(11)	141-147	2020
2.	E. Kavitha a, b R. Srikumar c	High-Level Mupirocin Resistance in Staphylococcus spp. among Health Care Workers in a Tertiary Care Hospital	Pharmacology	103	320–323	2019
3.	S. Latha, R Venkataramanan, R Srikumar , RV Kumar	Effect of Triphala on noise stress induced alteration in glucocorticoid and carbohydrate metabolism.	International Journal of Pharma and Bio Sciences	6(2)	1-15	2015
4.	Manikandan Sundaramahalingam, Srikumar Ramasundaram , Sheela Devi Rathinasamy, Ruvanthika Pulipakkam Natarajan, Thangam Somasundaram	Role of Acorus calamus and alpha-asarone on hippocampal dependent memory in noise stress exposed rats.	Pakistan journal of biological sciences	16(16)	770-778	2013

9. Budget

SI. No	Head	Amount (Rs.)
1	BP Apparatus, Stethoscopes, Body weight weighing machine, SPSS version 16 Chicago, IL, USA, ECG machine	45000
2	Consumables (gels bottles, cotton, sprit, testing charges, tools, etc.)	10000
3	Travel support for the purpose of research work.	10000
4	Contingency	25000
5	Others consumables	10000
	Total	1,00,000

*In case of any joint proposal for purchasing a same equipment, each of the associated PLs is also required to give separate budget (without any clubbing) to avoid any ambiguity, if all the associated projects are not awarded by committee.

10. Name of at least two subject experts from the Institute and one from the outside Institute with their contact details:

1. Dr. Dr. G. Muthu Research Scientist, ICMR, Thirunelveli Mobile No: 98843 04202 E-mail id: gopalmuthukrishnan@gmail.com	2. Dr. Manikandan Associate Professor in Physiology Tagore Medical College and Hospital, Chennai Mobile No: 9444434725 E-mail id: manikandanphysio@gmail.com
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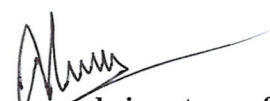
CERTIFICATE FROM THE INVESTIGATOR

Project Title: TO EXPLORE THE ROOT CAUSE FOR STEADY RISE IN TYPE 2 DIABETESIN AND AROUND PONDICHERRY, SOUTH INDIA

It is certified that

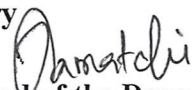
1. I do hereby agree to submit a complete proposal for financial support to the external funding agency within the time period of SMS-2018.
2. I undertake that spare time on equipment procured in the project will be made available to other users.
3. I agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, GOI would be followed in to.
5. I agree to abide by the terms and conditions of SMS-2018, BIHER, and Chennai.
4. I agree to submit ethical clearance certificate from the concerned ethical committee, if the project involved field trails/experiments/exchange of specimens, human & animal materials etc.


Name and signature of
Principal Investigator



Name and signature of
Co-Principal Investigator

Date: 03.07.2019

Place: Pondicherry

Forwarded by  Head of the Department

Signature of the Head


DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KOODAPAKKAM POST,
PUDUCHERRY - 605 502

PROJECT EVALUATION FORMAT

Recommendation sheet

Name of the Principal Investigator	Dr. R. Srikumar
Name of the Co-Principal Investigator	Dr. Ravichandran. S
Name of the Department	Microbiology
Title of project	To explore the root cause for steady rise in type 2 diabetes in and around pondicherry, south india
Recommendation of the evaluation committee (Recommended/Revision/Not Recommended)	Recommended
Financial allocation recommended	Rs. 1,00,000/-

SI. No.	Head	Amount
1	BP Apparatus, Stethoscopes, Body weight weighing machine, SPSS version 16 Chicago, IL, USA, ECG machine	45000
2	Consumables- Gel bottles, cotton, sprit, testing charges, tools, etc.	10000
3	Travel support for the purpose of research work.	10000
4	Contingency	25000
5	Others consumables	10000
	Total	1,00,000

Name and Signature of the Research Advisory Committee members with date.




(Dr. G. Jayalalitha)