



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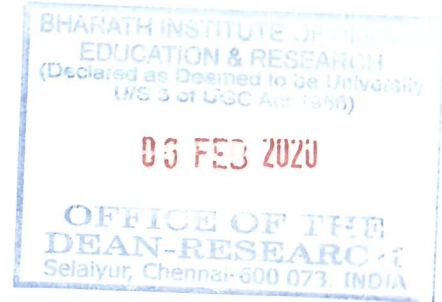
173, Agaram Road, Selaiyur, Tambaram,
Chennai - 600 073. Tamil Nadu.

Ref. No.SMS-2018-O-08

Date: 06.02.2020

TO

Mr. C. Naveen Kumar
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: Covid19 and Diabetes

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

Approved on: 03.02.2020

Payment details:

Voucher No.63

Dated: 12.02.2020

With Regards

Dean-Research

Sharath University

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

CASH / PAYMENT VOUCHER

Date 12/02/2020

V.No. 63

Debit _____ Amount _____

Rs.

PAID TO Dr. C. Naveen Kumar

RUPEES One Lakh only.

TOWARDS Seed Money Scheme - 2018



Authorised by [Signature]

Finance Manager

Cashier/Accountant

[Signature]

Payee's Signature

PROPOSAL SUBMISSION

1. Details of Principal Investigator

Name : Dr. C. Naveen Kumar
Designation : Associate Professor
Highest Qualifications : Ph.D.
Department : Microbiology
E-mail : navin.mmb@gmail.com
Contact no : 9047765601
Date of Joining : 13.04.2013

2. Details of Principal Investigator

Name : Dr. E. Prabhakar Reddy
Designation : Professor
Highest Qualifications : Ph.D.
Department : Biochemistry
E-mail : drpebyreddy@gmail.com
Contact no : 9159186879
Date of Joining : 21.10.2009

Technical details

1. Introduction:

The prevalence of diabetes for all age groups worldwide was estimated to be 2.8% in 2000 and 4.4% in 2030. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030 [1]. Diabetes mellitus is a group of metabolic disorders of carbohydrate characterized by hyperglycemia. Hyperglycemia of diabetes mellitus (DM) generates reactive oxygen species (ROS) which causes oxidative damage to lipids. Diabetes is associated with various micro vascular and macro vascular complications. This oxidative stress of diabetes is found to be associated with a depleted natural anti-oxidant reserve. The prevalence of diabetes is rapidly rising all over the globe at an alarming rate. According to the International Diabetes Foundation (IDF), the total number of diabetic subjects is to be around 40.9 million in India at present which is expected to rise to 69.9 million by the year 2025 [2]. People of all ages can be infected. For many (more than 80% of cases), COVID-19 is mild, with minimal flu-like symptoms. Some have not shown symptoms or only very mild symptoms, more like a common cold. The majority of people who have caught the virus have not needed to be hospitalized for supportive care. However, in up to 15% of cases COVID-19 has been severe and in around 5% of cases it has led to critical illness. The vast majority (around 98%) of people infected to date have survived. Older people and people with pre-existing medical conditions (such as diabetes, heart disease and asthma) appear to be more vulnerable to becoming severely ill with the COVID-19 virus. When people with diabetes develop a viral infection, it can be harder to treat due to fluctuations in blood glucose levels and, possibly, the presence of diabetes complications. There appear to be two reasons for this. Firstly, the immune system is compromised, making it harder to fight the virus and likely leading to a longer recovery period. Secondly, the virus may thrive in an environment of elevated blood glucose.

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

Anjali gupta, AK Tripathi, RL Tripathi, SV Madhu and BD Benarjee. Advanced glycosylated end products-mediated activation of polymorphonuclear neutrophils in diabetes mellitus and associated oxidative stress. *Indian J. Biochem. Biophys*, Vol 44, 2007, pp.373-378.

Older people and people with pre-existing medical conditions (such as diabetes, heart disease and asthma) appear to be more vulnerable to becoming severely ill with the COVID- 19 virus. When people with diabetes develop a viral infection, it can be harder to treat due to fluctuations in blood glucose levels and, possibly, the presence of diabetes complications. Patients with COVID-19 with diabetes have a worse prognosis, most probably because of the concurring effect of multiple factors. The prevalence of diabetes increases with age in both the general population and in patients with COVID-19. Diabetic patients should keep their blood sugar under control by doing frequent monitoring using digital appliance and to contact with their physician to remain in good glycemic control. Future research is urgently needed to provide a better understanding regarding potential differences in genetic predispositions across

populations, underlying pathophysiological mechanisms of the association between COVID-19 and diabetes, and its clinical management.

2.1. International Status:

Now the Fastest culture in the cities develops and moves from traditional to modern living life style in the diet and physical activity. Diet and exercise are important components of the treatment strategy for adults with type 2 diabetes. Both are important factors for treatment to adults with type 2 Diabetes and it improves the insulin sensitivity and glycemic control and it decreases the medications and insulin. Faulty diet makes the best of medicine in effective. Based on our study we focused on dietary habits and exercise behaviour of type 2 diabetes. Causes of increase in incidence of diabetics include, improved nutrition, better hygiene, and control of many communicable disease. It improve access to quality healthcare and the main drivers of diabetes epidemic in India are fast food culture and sedentarinism.

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

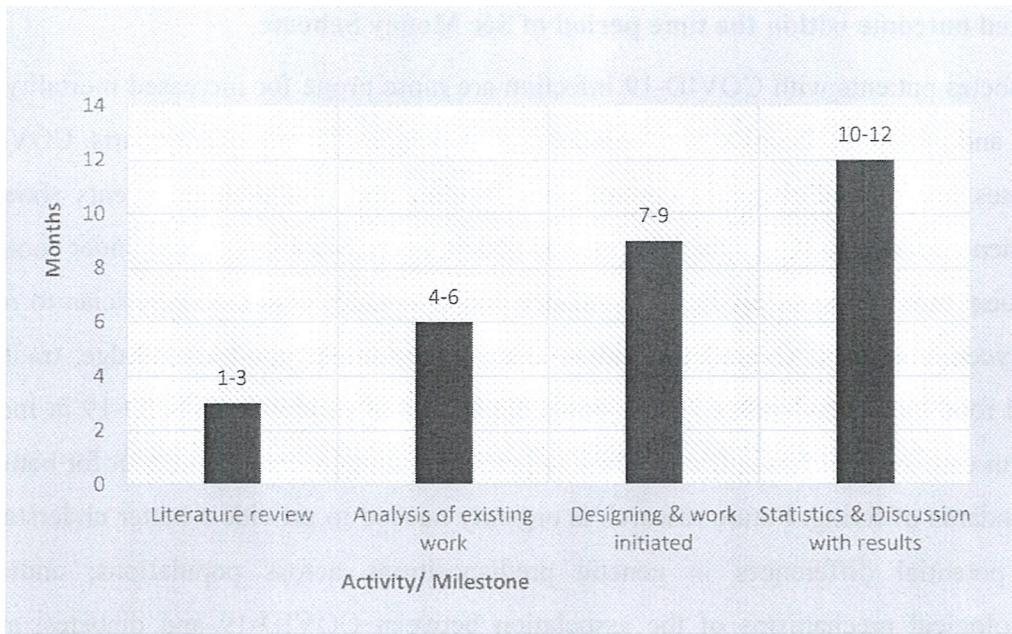
4.1 Methodology

Many foreigners were wondered that South Indians have great respect for the therapeutic value of food as followed in Ayurvedic principles in their everyday eating like served food on a banana leaf, daily intake of Pepper, Tamarid and turmeric powder added as an ingredients in most of the recipe in the South Indian dishes like Pongal, Rasam and Sambar recipes which showed antiviral property by inhibiting the viral replication [3-5]. To give information to the diabetics to not to take foods like rich in carbohydrate, fat and other fleshy foods. 50% of the people were had family history of diabetes and most of them were in allopathic treatment. They were well known of the foods to be restricted hypoglycemic foods and other special foods beneficial for diabetes progression of the management. 60% of the people were exercise mostly in the form of walking and formers are working regularly in the fields. As eating healthy foods not only regulate the immune system but also protect against infection. Further Ginger and garlic added in most of the South Indian recipes also reported to have antiviral property by increase the body temperature. An increase in body temperature has been known since ancient times to be associated with infection and inflammation. Elevated body temperature stimulate more number of CD8 or cytotoxic T-cell" which capable of destroying the intracellular parasite [6]. In the

present study 86% of studied population had ancient style of traditional food. Traditionally 88% of population use to light oil lamp and 62% of population use Benzoin resin smoke after Sun set which will act as an air purifier, remove moisture content and act as organic disinfectants that drive away insects and many pathogenic microbes of airborne [7].

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

S. No	Activity/ milestone	1 st Year			
		1-3 month	4-6 month	7-9 month	10-12 month
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



4.3 Expected outcome within the time period of See Money Scheme

Diabetes patients with COVID-19 infection are more prone for increased mortality, ICU admission, and prolonged hospital stay compared to their non-diabetic counterparts. COVID-19 with diabetes need strict glyceemic control with insulin, and oral diabetic agents should be avoided when admitted to ICU. Diabetic patients should keep their blood sugar under control by doing frequent monitoring using digital appliance and to contact with their physician to remain in good glyceemic control. Overall the Indian climatic condition, good knowledge, traditional culture and food habit may reduce / slow down the spread of pandemic COVID-19 in India by which health care systems has sufficient time to prepare and assimilate the impact for better and healthy standards of living. Future research is urgently needed to provide a better understanding regarding potential differences in genetic predispositions across populations, underlying pathophysiological mechanisms of the association between COVID-19 and diabetes, and its clinical management.

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
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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.	Sandhya Rani T, R. Srikumar, E. Prabhakar Reddy, S. Latha, Naveenkumar	Virulence factors of Candida species isolated from pulmonary tuberculosis with Diabetes mellitus	Indian Journal of Public Health Research & Development,	10(5)	333-338	2019
2.	Naveenkumar C1 , Swathi S2, Srikumar R3, Sairavikiran B4, Prabhakarreddy E5	Comparative Study on Normal Symptomatic Medication with Andrographis Paniculata (Nila-Vembu) Extract on Platelets Count in Thrombocytopenia Patient affected from Dengue Fever	Indian Journal of Public Health Research & Development	9(8)	16-20	2018
3.	Naveen kumar C1 , Srikumar R2, Swathi S3, Chidambaram R4, Muthukrishnan G5, E Prabhakar Reddy6	Phytochemical Analysis and Antifungal Activity of Ganoderma lucidum	Indian Journal of Public Health Research & Development	9(120)	130-135	2018
4.	Naveen Kumar C , Sri Kumar R, Swathi R, Prabhakar Reddy E, Chidambaram R.	Role of Ganoderma lucidum against trizole drugs resistant Aspergillus species	International Journal of Research Pharmaceutical Sciences	9(4)	1189-1195	2018
5.	S Ayyappan, Sachu Philip, N Bharathy, V Ramesh, C Naveen Kumar , S Swathi, A Arun Kumar	Antioxidant status in neonatal jaundice before and after phototherapy	Journal of pharmacy & Bioallied sciences	7(1)	S16-19	2015
6.	KP Shiva Govindan,	A comparative study on serum	Journal of	7(1)	S22-25	2015

	Saleem Basha, V Ramesh, C Naveen Kumar , S Swathi	lipoprotein (a) and lipid profile between rheumatoid arthritis patients and normal subjects	Pharmacy & Bioallied Sciences			
7.	Jayaranjani.K Jayarani.K, Sandhyarani.T, Naveen Kumar.C , Swathi.S	Detection of MBL Producing Pseudomonas aeruginosa in Tertiary Care Hospital, Pondicherry	International Journal of Recent Scientific Research	5(8)	1460-1463	2014
8.	Janani.S Sandhyarani T, Jayarani.K, Sai Ravikiran B, Naveenkumar. C	Microbiological Profile and Spectrum of Drug Susceptability In Asymptomatic Bacteriuria Among Antenatal Women	Universal Research Journal Of Medical Sciences	1(1)	13-16	2014

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	Other's 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:**


<p>1. Dr. Florida, Research Scientist, Sree Balaji Medical College and Hospital, Chennai Mobile No: 9940027169 E-mail id: biozonediagnostics@gmail.com</p>	<p>2. Dr. Suba, Professor in Microbiology, Rela Transplantation Institute, Chennai Mobile No: 9962526457 E-mail id: subamicro@gmail.com</p>
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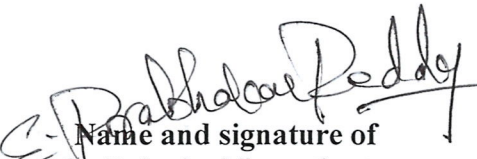
CERTIFICATE FROM THE INVESTIGATOR

Project Title: Covid 19 and Diabetes

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.
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.
5. I agree to abide by the terms and conditions of SMS-2018, BIHER, and Chennai.


Name and signature of
Principal Investigator



Name and signature of
Co-Principal Investigator

Date: 20.01.2020

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. C. Naveen Kumar
Name of the Co-Principal Investigator	Dr. E. Prabhakar Reddy
Name of the Department	Microbiology
Title of project	Covid 19 and Diabetes
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. C. BACAGURUNATHAN)