



Government of India
Ministry of Micro, Small & Medium
Enterprises

Incubation



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Reference No. :- **IDEAKR007516**

1. Details of Incubatee:

1.1 Details of the Host Institute (HI)	PES College of Engineering, Mandya , PES College of Engineering, Mandya - 571401 , 08232220043 , principal@pesce.ac.in , 9986515835	1.2 Name of the Business Incubator (BI)	Dr. Padma M C , Professor and Head, CSE , incubator@pesce.ac.in , 9986515835
1.3 Category of the Incubatee	Student	1.4 Incubatee Name	CHANDAN M
1.5 State	KARNATAKA	1.6 District	MANDYA
1.7 Email Id	chandanchandan9616@gmail.com	1.8 Mobile Number	8660446703
1.9 Category	OBC	1.10 Gender	Male
1.11 Address	s/o mallikarjuna,57 lingayatha street, ikkadahalli (V), palya hobli , dodinduvadi (p), kollegal (Tq)		

2. Details of Idea:

2.1 Title of proposed idea/innovation	Clean and Healthy India through low cost light
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<p>2.2 Whether the idea involves use of existing intellectual property or not, give brief detail there of</p>	<p>They are now employing liquid base sanitization, which is expensive and inefficient, and UV-254 nm wavelength light to sanitize, which is dangerous to people Our innovation is using Ultraviolet light with a wavelength of 222nm to sterilize viruses and bacteria. This one-of-a-kind technology can sterilize a surface without damaging human skin and eyes. The novel idea has been published in Indian Patent and also presented and published in the journal 1). Published Indian Patent &#x201c;A NOVEL DESIGN OF UV DISINFECTION ROBOT&#x201c; application no -202241046175(Filed on 12 Aug 2022) 2). Published International ArticleChandan M, Umesha B C, Suraj R, Lakshmi Kanth D M, Siddesh Kumar N M, Vinay S &#x201c;DESIGN AND FABRICATION OF A NOVEL METHOD TO DISINFECT CORONAVIRUS THROUGH UV-C&#x201c; International Conference on. Sustainable Materials, Manufacturing, and Informatics(ICSMMI)(Scopus Indexed Q3 Journal) The potential to kill and reduce the spreading of viruses and bacteria by this and according to the research made the existing products successful in reducing more than 100 kinds of viral diseases like TB, chicken pox, mumps, Covid-19, Wards, ebola, norovirus and etc hence it as a worldwide market by the proof that scientifically the 90 percent of human prefers to be the healthy and hygienic</p>
<p>2.3 Briefly explain newness/uniqueness of the innovation</p>	<p>The novel idea has been published in Indian Patent and also presented and published in the journal 1). Published Indian Patent &#x201c;A NOVEL DESIGN OF UV DISINFECTION ROBOT&#x201c; application no -202241046175(Filed on 12 Aug 2022) 2). Published International ArticleChandan M, Umesha B C, Suraj R, Lakshmi Kanth D M, Siddesh Kumar N M, Vinay S &#x201c;DESIGN AND FABRICATION OF A NOVEL METHOD TO DISINFECT CORONAVIRUS THROUGH UV-C&#x201c; International Conference on. Sustainable Materials, Manufacturing, and Informatics(ICSMMI)(Scopus Indexed Q3 Journal) 3). Far-UVC light at a low cost possibly destroys microorganisms in populated public sectors. and reduce the growth of Viral desis in society Direct exposure to these wavelengths does not affect the same health hazards as standard germicidal UV lights (254nm). 222nm does not affect Living human cells or the eye is receptive to light of just a few micrometers. These bonds prevent the DNA from being unzipped, leading to the inability of the organism to reproduce. Replication leads to death. The CDC (Centers for Disease Control) reports that UV light can potentially kill all bacteria and viruses. In addition, we can also sanitize the infected surface. In contrast, Far-UVC light (207 to 222nm) is just as effective in killing microbes as conventional UV light (254nm) Our innovation is using Ultraviolet light with a wavelength of 222nm to sterilize viruses and bacteria. This one-of-a-kind technology can fix a surface without damaging human skin and eye</p>

<p>2.4 Concept & Objective</p>	<p>To reduce, 1). 4.13 to 5.39 million people died due to air pollution and air injection 2). 5.7 million health workers, including doctors, in India because of the health risk. 3). 420 000 people lose their lives per year as a direct result of consuming food that is tainted or sick. 4). Promoting and creating awareness of a clean environment and 5). promoting through social media 6). Providing affordable service 7). Promoting the tagline Make in INDIA, Made in MANDYA 8). By promoting the Swachh Bharat ideology 9) By projecting the importance of health and hygiene Vision To maintain a clean and healthy India from the micro bacterial level Mission Effective utilization of UV technology to immaculate bacteria and harmful viruses in an easy and effective way About idea The current idea has the potential to solve the problems of various sectors like medicine, agriculture, food processing, commercial and industrial sectors, etc. concept Most diseases are caused due to bacteria and fungus infections. The product has the capability to clean viruses and bacteria. UV light can kill various viruses, bacteria, and fungi using UV technology. Viruses, fungi, and microorganisms are killed by ultraviolet light and their wavelength ranges from 100 to 280nm</p>
<p>2.5 Specify the potential areas of application in industry/market in brief</p>	<p>As a result of primary and secondary the current idea has the potential to solve the problems of various sectors like Medical Science, Agriculture, food processing, commercial and industrial sectors, etc. Virus disinfection is essential for public places. Target- 1 There are 722 government district hospitals and 1,685 primary health care centers in KARNATAKA Target- 2 There are 26,000 govt sector hospitals and 43,000 private sector hospitals across India Target- 3 The current products are designed which can offer by middle and upper-class people Target - 4 The current product has the potential to kill and reduce the spreading of viruses and bacteria by this and according to the research made the existing products as successful in reducing more than 100 kinds of viral diseases like TB, chicken pox, mumps, Covid-19, Ward s, ebola, norovirus and etc hence it as a worldwide market by the proof that scientifically the 90 percent of human prefers to be the healthy and hygienic</p>
<p>2.6 Briefly provide the market data for the potential idea/ innovation</p>	<p>Marketing 1). TAM (Total assessable market)-Everyone who prefers to be healthy 2). SAM (Service assessable market)-To save the green environment and improve the healthiness among people we need this technology 3). SOM (Serviceable obtainable market)-Domestic users like middle-class groups 4). EVG(Early vange lists)-Hospital, schools, conference halls, lodges. Market strategy 1). Promoting and creating awareness of a clean environment and promoting through social media 2). Providing affordable service 3). Promoting the tagline Make in INDIA, Made in MANDYA 4). By promoting the Swachh Bharat ideology 5). By projecting the importance of health and hygiene 6). Is an immense pleasure to take this pandemic situation as an opportunity to work for the surveillance of the human creature by fighting with Pandemic situation Marketing Target Target-1 1). health care centers in KARNATAKA ---Govt Health care centers-722 district hospitals ---Rapid Health Sector-1,685 primary health care centers Target-2 2).health care centers in INDIA ---26,000 govt sector hospitals ---43,000 private sector hospitals 3). Commercial domestic areas ---PUBLIC COMMERCIAL BODIES ---social and economic Bodies strength Peoples conciseness towards health and the current technology has effectively utilized To address the current pandemic situations and other health issues. An effective method of virus sterilization, in an easy and cost-effective way.</p>

2.7 Name and details of Mentors	(Electrical Modelling Fabrication) D M Srinivasa Asst. Professor Department of Electrical and Electronics Engineering Srinath M S Asst. Professor Department of Electrical and Electronics Engineering (Mechanical Modelling Fabrication) Siddesh Kumar N M Asst. Professor Department of Mechanical Engineering Dr Mohammed Rafi H Kerur Asst. Professor Department of Mechanical Engineering	2.8 Experience and Qualification of Mentors	BE,M-tech,Phd
2.9 Contact Details of Mentors	Ph.8892261462	2.10 Current Development Status of innovation	At present as per the field research, market survey, and secondary research on the patent and article we published the patent and article with the prototype models and also sell to the nearby stakeholders and took the review. now we are working to convert the prototype and product into an industry end product and lunch the product in next upcoming month
2.11 Expected time of completion of idea	At this time, we have published patents and articles with prototype models and sold them to nearby stakeholder groups in accordance with field research, market research, and secondary research on patents and articles. We have also gathered reviews. We are now trying to turn the prototype into an industry-ready product so that we can launch it in the following 8 months.	2.12 Idea Theme	Low-cost Indigenous Digital Healthcare System
2.13 Idea Sector	Healthcare & Life sciences, Medical Devices, Pharmaceuticals, Biotech, AYUSH and any related sub-sector		

3. Financial requirements:**3.1 Activity-wise break**

Particular/Item	Total idea project cost (Rs. In lakh)	Amount GOI assistance (Rs. In lakh)	Incubatee share (Rs. In lakh)
Technology related Expenditure towards machine usage charges etc., Electricity charges, Procurement of raw material , testing/Calibration charges, other charges essential for development of idea Max (10.00) lakh.	10.000	10.000	0.000
Charges for mentor/handholding supporting team Max (3.00) lakh.	3.000	3.000	0.000
Travelling Expenses or any other item not covered as above may be allowed as per need for development of the idea Max (2.00) lakh.	2.000	2.000	0.000
Total	15.000	15.000	0.000

4. Other students/Entrepreneurs associated with this project/idea

Name	Aadhar No/Udhyog Aadhar No/Udyam Registration
BheemKumar Haloor	508881XXXXXX
SURAJ R	429782XXXXXX
Jagadish V K	813413XXXXXX
NANDAN V H	312049XXXXXX
ANVIKA	578817XXXXXX
Swathi K S	805229XXXXXX

<p>Ref. No.</p>	<p>INC22BKR008844</p>	<p>5. Summary of the idea. This is the section reviewers read to understand the technical solution. Please state the solution clearly. Reviewers may ask: What is the actual technical advancement or improvement provided by this solution?</p>	<p>UV radiation kills viruses, fungi, and bacteria, and its wavelength spans from 100 to 280 nanometers (222 nm). All bacteria and viruses are susceptible to UV radiation and accordingly UV light with a wavelength of 222 nm is substantially safer than UV light with 254 nm. Although 222nm far-UV was found, it disinfects 14 bacterial species, 9 bacterial spores, 5 fungi, and 23 pathogens. The effective way of utilizing ultraviolet 222 nm wavelength light to eliminate bacteria, and viruses at different sectors. Disinfecting bacterial and virus development to kill and reduce the spreading of viruses and bacteria by this and according to the research made the existing products as successful in reducing more than 100 kinds of viral diseases</p>
<p>6 (a) Is it a new concept?</p>		<p>YES</p>	

<p>(b) Prior art on the concept, if any</p>	<p>Far-UVC light destroys microorganisms. Direct exposure to these wavelengths does not affect the same health hazards as standard germicidal UV lights (254nm). 222nm does not affect Living human cells or the eye is receptive to light of just a few micrometers. hence its safe to use</p>	<p>7. Main Problem Being Addressed in the Project (Every solution targets a certain problem. Please use this section to highlight the specific problem the solution addresses. This section can be as short or as long as needed to describe the precise problem the solution addresses)</p>	<p>The current product has the potential to kill and reduce the spreading of viruses and bacteria by this and according to the research made the existing products as successful in reducing more than 100 kinds of viral diseases like TB, chicken pox, mumps, Covid-19, Ward s, ebola, norovirus and etc hence it as a worldwide market by the proof that scientifically the 90 percent of human prefers to be the healthy and hygienic and increases the annual GDP about 8 percentage of India.</p>
<p>8. Background for getting the idea?</p>			
<p>a. Who is it for?</p>	<p>The current product has succeeded in reducing more than 100 kinds of viral diseases like TB, chicken pox, mumps,Covid-19, Ward s, ebola, norovirus, etc hence it is a worldwide market. By proof that scientifically 90 percent of human prefers to be healthy and hygienic this target the worldwide market</p>	<p>b. What will it do?</p>	<p>The current idea which UV -222nm light deactivates viruses and bacteria by breaking their DNA of them without affecting humans the product has succeeded in reducing more than 100 kinds of viral diseases like TB, chicken pox, mumps, Covid-19, Wards, ebola, norovirus, etc and reduces the health risk</p>

<p>c. Any unique features? Explain?</p>	<p>Far-UVC light destroys microorganisms. Direct exposure to these wavelengths does not affect the same health hazards as standard germicidal UV lights (254nm). 222nm does not affect Living human cells or the eye is receptive to light of just a few micrometers.hence its safe to use</p>	<p>9. How simple or complex will the idea's execution or implementation be? What are the risk factors involved in executing the idea?</p>	<p>There are no available laboratories locally hence its difficult in testing of product and at the starting level its difficult to reach the worldwide market but by the hard work and effect of our team and company it can be manageable. and in the next find days make it into India made in Mandya quote will circulate worldwide.</p>
<p>10. How soon could the idea be put into operation? (TRL of prototype)</p>	<p>From the hard work over the past 2 years, the prototype and low-fidelity product is made and sold to local bodies. in the next few days, the products need to develop at the industrial end product.</p>	<p>11. How much investment would you need for prototyping of the idea?</p>	<p>At present we have constructed the prototype and product in order to enhance the quality and feasibility of the product we need financial assistance of around INR 1,00,000</p>

<p>12. (a) How do you intend to protect your idea (i.e. your intellectual property or IP)? Status of IPR (If any)</p>	<p>Indian Patent "A NOVEL DESIGN OF UV DISINFECTION ROBOT" application no -202241046175(Filed on 12 Aug 2022) International Article Chandan M, Umesha B C, Suraj R, Lakshmi Kanth D M, Siddesh Kumar N M, Vinay S " DESIGN AND FABRICATION OF A NOVEL METHOD TO DISINFECT CORONAVIRUS THROUGH UV-C" (Q-3).</p>	<p>(b) Related Background This section is used to highlight information that can be used by the reviewers or patent attorney to help put the solution in proper context. You can think of this section as something similar to the introduction section of an academic publication. This section is specifically reserved for other people's work (please include competitive work) as well as your past work that you believe will aid the reviewers in understanding the technical landscape. Data related to or supporting your solution should NOT be in this section, it should be in Section III: "How is this Solution Made and Used."</p>	<p>The team has been working on this concept for the last two years and has conducted field research, completed primary and secondary literature searches, develop the products and, published a research paper, and applied for an Indian patent. Additionally, market targeting and stakeholder mapping are carried out, and client feedback is collected.</p>
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<p>13.How is This Project Made and Used: Please describe in as much detail as possible how the innovation is implemented. This includes details on how you actually make, assemble, synthesize, or build the solution and details on how the solution is used once it is made. Reviewers will ask: How does the technical innovation actually work – or – what is the detailed process to achieve the technical innovation? Please help convince the reviewers with supporting statements using as much of the following that is available: your thoughts, logic, supporting literature, and/or experiments.</p>	<p>The product is made up of UV -222nm and novel light at low Cost. which the light deactivates viruses and bacteria by breaking their DNA of them without affecting humans the product has succeeded in reducing more than 100 kinds of viral diseases like TB, chicken pox, mumps, Covid-19, Wards, ebola, norovirus, etc, and reduces the health risk</p>
<p>Upload Block diagram/ flow chart/ Circuit Diagram/Pictures</p>	<p>View/Download</p>
<p>Uploaded Minutes of the Selection Committee</p>	<p>View/Download</p>
<p>Student Id / bonafide certificate duly certified by HI</p>	<p>View/Download</p>

I declare that:

1. I have read the entire scheme guidelines and shall abide by all the requirements stipulated therein for seeking financial assistance.
2. I hereby declare that information given above is true to the best of my Knowledge and that I have not withheld/distorted any material fact.
3. Any information/ documents that may be required to be verified shall be provided immediately before the concerned authority.
4. I hereby declare that I have not availed any financial assistance for this purpose from any other scheme from any Central/ State govt. agency.
5. In case the Idea is approved, Host Institute would undertake to make facilities available to carry out the development arrange for the submission of periodic progress reports and other information that may be required by the Ministry.
6. I certify that the accounts of the funds received and spent will be kept and made available on demand, as per scheme guidelines
7. I certify that the funds will be used only for Idea development as per activities defined in Scheme Guidelines & no funds out of this grant will be utilized for any other activity/production purposes.

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