

**MoU Signed Between**

**EXPERTEZE**

**&**

**NATIONAL COLLEGE**

## **MEMORANDUM OF UNDERSTANDING**

This **Memorandum of Understanding** (herein after called as the 'MOU') is entered in to on **Dec 27, year Two Thousand Twenty One, ("27/12/2021")**

By and between PG & Research Department of Biotechnology and Microbiology, **National College (Autonomous)** (hereinafter referred as EDUCATIONAL INSTITUTION), and its office is located at Dindigul road, Tiruchirapalli, Tamil Nadu, India

and, Proactive Philanthropy, Inc. doing business as **EXPERTEZE** (hereinafter referred as EXPERTEZE) a USA 501(c)(3) non-profit organization and its office is located at Cambridge Massachusetts USA 02139.

(EDUCATIONAL INSTITUTION and EXPERTEZE are hereinafter jointly referred to as 'Parties' and individually as 'Party')

WHEREAS:

## 1. PREAMBLE

**About the PG & Research Department of Biotechnology & Microbiology of NATIONAL COLLEGE (Autonomous), Tiruchirappalli.**

**PG & Research Department of Biotechnology and Microbiology of National College (Autonomous)** was established in the year 2011 to offer M.Sc. Biotechnology and later came to be known as the Department of Biotechnology & Microbiology, to offer B.Sc. Biotechnology and B.Sc. Microbiology in the College. The Department has been recognized by the DBT, New Delhi under the STAR COLLEGE Scheme and PG-Teaching Scheme to offer MSc Biotechnology Programme and received grants from various funding agencies like UGC, MoES, DST, SERB, DBT etc. for research projects and schemes. National College is **Nationally Accredited at 'A+' Grade by NAAC** and is an institution with long history and reputation for its high academic standards and commitment, having their campus at Dindigul Road, Karumandapam, Tiruchirappalli and represented by its Principal **Dr. R. Sundararaman**, hereinafter called as **1<sup>ST</sup> PARTY**.

The goal of EXPERTEZE is to provide a nurturing environment to help young students become interested in science and technology. To support this cause, EXPERTEZE has created several unique programs that address tangible and intangible challenges experienced by students, with innovative solutions to engage students, universities and industry.

**EXPERTEZE & EDUCATIONAL INSTITUTION believe that collaboration and co-operation between themselves will promote more effective use of each of their resources, and provide each of them with enhanced opportunities.**

Both Parties, being legal entities in themselves desire to sign this MOU for advancing their mutual interests. AND WHEREAS, both the parties have expressed a common interest in providing industry relevant training to the students, enhance their awareness, expand their industry connect and, in the process, increase their employability.

**NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES SET FORTH IN THIS MOU, THE PARTIES HERE TO AGREE AS FOLLOWS:**

## **2.0 PURPOSE**

- a. The purpose this MOU is to create a collaborative academic environment and framework between the EDUCATIONAL INSTITUTION and EXPERTEZE for training students in the areas of bioinformatics, computational biology, genomics and systems biology and related areas (hereinafter referred to as "RESEARCH AREAS"), and provide opportunities for the students and participating staff to develop research skills and conduct independent projects of relevance to industrial research and development (hereinafter referred to "EXPERTEZE PROJECTS"), as defined in the following section ("Statement of Mutual Interests and Benefits").
- b. The cost and contributions of each parties to such activities will be decided on a case-by-case basis at the time of work or project being undertaken, mutually by both parties and in consultation with the concerned officials of the parties.

## **2.1 RESEARCH TRAINING**

- a. EXPERTEZE will offer training on topics within the scope of biosciences and related fields as specified in this MOU to the students of the EDUCATIONAL INSTITUTION. Mutual agreement for training with projects, internships and consultancy will be made between two parties based on the interest of the students in developing the skill sets.

## **2.2 TEAM BASED INDEPENDENT PROJECTS TO THE STUDENTS**

- a. EXPERTEZE shall offer an opportunity to participate in related projects to the students and staff members of EDUCATIONAL INSTITUTION for the duration mutually agreed upon by the parties.
- b. One Faculty member each from EDUCATIONAL INSTITUTION and EXPERTEZE shall guide the student's projects as and when required.

### **2.3 RESEARCH & CONSULTANCY**

- a. EDUCATIONAL INSTITUTION<sup>1</sup> may take the skills and expertise from EXPERTEZE as necessary for carrying out the research and consultancy. Similarly, the EXPERTEZE may utilize the infrastructure and the expertise of the EDUCATIONAL INSTITUTION for carrying out the research and consultancy.
- b. The cost and contributions of each parties to such activities will be decided on a case-by-case basis at the time of work or project being undertaken, mutually by both parties and in consultation with the concerned officials of the parties.

### **3.0 DEFINITIONS**

**3.1 EXPERTEZE:** The line of business established by PROACTIVE PHILANTHROPY Inc., a 501(c)(3) non-profit organization, incorporated in Massachusetts USA, and located at Cambridge Massachusetts USA 02139.

**3.2 EDUCATIONAL INSTITUTION:** The academic institution participating in collaboration with EXPERTEZE to develop, implement and conduct the program for the benefit of the students consistent with the academic goals of the institution.

**3.3 RESEARCH AREAS:** Bioinformatics, computational biology, genomics and systems biology, artificial intelligence, machine learning, big data and related areas (as described in the website [www.experteze.org](http://www.experteze.org)) as well as other academic disciplines as deemed appropriate by EXPERTEZE.

**3.4 RESEARCH ORGANIZATIONS:** Public and private industrial research and development organizations engaged in research activities with EXPERTEZE. These organizations sponsor projects which are assigned to the students and student teams for performance at the EDUCATIONAL INSTITUTION.

**3.5 EXPERTEZE PROJECTS:** Independent projects of relevance to RESEARCH ORGANIZATIONS and assign to students at the EDUCATIONAL INSTITUTION.

**3.6 EXPERTEZE SCHOLARS, EXPERTEZE FELLOWS and EXPERTEZE RESEARCHERS:** Students and Staff participating in the EXPERTEZE projects.

**3.7 EXPERTEZE CIRCLES OF EXCELLENCE:** An Experteze initiative to facilitate collaboration and networking between students and researchers in targeted areas of research and learning.

**3.8 EXPERTEZE INCUBATOR:** An Experteze initiative to facilitate entrepreneurship, collaboration and networking between students and researchers to initiate start-up ventures.

#### **4.0 EXPERTEZE RESEARCH PROJECTS**

EXPERTEZE Research Projects will involve the collaboration between the EXPERTEZE organization and the EDUCATIONAL INSTITUTION. This shall include the following:

- c. Creation of a framework for establishing channels of research in the RESEARCH AREAS;
- d. Availability of resources and external relationships and intangible support, to EDUCATIONAL INSTITUTION to implement such channels of research at the college;
- e. Availability of relevant resources, mentorship, feedback support from RESEARCH ORGANIZATIONS to the student teams engaged in EXPERTEZE PROJECTS as appropriate;
- f. Making available academic materials and other mentoring support to facilitate the creation of favorable environment for conducting research and learning in the RESEARCH AREAS;
- g. Establishment of channels of communication and interfaces to enable students to engage with external (public and private) industrial research organizations currently performing activities in the RESEARCH AREAS;
- h. Designing, suggestions, proposals, planning and implementation of relevant topics of research programs in the RESEARCH AREAS of current interest to these RESEARCH ORGANIZATIONS;
- i. Providing the point of contact for interfacing between the industrial research organizations and EDUCATIONAL INSTITUTION;

- j. Obtaining and making available the funds to the EDUCATIONAL INSTITUTION as appropriate for the conduct of EXPELTEZE PROJECTS, and otherwise manage the financial transactions relating to the conduct of the independent projects undertaken as part of this initiative. It is the intent of EXPELTEZE to provide EXPELTEZE SCHOLARS appropriate financial support while working on EXPELTEZE PROJECTS, as well as appropriate Certificates of Merit, monetary rewards and other recognition of excellence to motivate them in this endeavor.
- k. The cost and contributions of each parties to such activities will be decided on a case-by-case basis at the time of work or project being undertaken, mutually by both parties and in consultation with the concerned officials of the parties.

## **5.0 INTERNSHIP TRAINING**

- a. Expekteze will provide appropriate training and initiation programs (including classes, demonstration sessions and coaching sessions) for students to become familiar and proficient with the processes and steps necessary to engage in EXPELTEZE related activities, as well as provide resources to help select the appropriate students to the teams based on the criteria defined by EXPELTEZE AND EDUCATIONAL INSTITUTION in consultation with each other.
- b. The internship programs of the EXPELTEZE are designed to help students to work collaboratively in teams which may include students or staff members from other (including third party) organizations. Therefore, the EXPELTEZE may apply certain screening criteria at its discretion, and also in consultation with the faculty member of the EDUCATIONAL INSTITUTION, to select the right candidates for such internships.
- c. The working model developed by the EXPELTEZE, including but not limited to the nature of the projects, duration of the project etc., shall govern the performance criteria of such internships.
- d. During the initiation of the internship, the student and the designated representatives (e.g., a faculty member from the EDUCATIONAL INSTITUTION) from both the parties will define the scope of the project work to be completed by the student. During the period of internship, the performance of the intern will be monitored jointly by representatives of both parties.

- e. Upon satisfactory completion by the intern of all the requirements and upon the recommendation of EXPERTEZE, the EDUCATIONAL INSTITUTION shall provide to the student a certificate of completion.
- f. The activities engaged by the interns shall be governed by the Intellectual property guidelines set forth in this MOU.
- g. The EXPERTEZE, being a research facilitation institute, does not guarantee placement of any interns for subsequent employment.
- h. The cost and contributions of each parties to such activities will be decided on a case-by-case basis at the time of work or project being undertaken, mutually by both parties and in consultation with the concerned officials of the parties.

#### **6.0 TECHNICAL AND ORGANIZATIONAL CO-OPERATION**

- a. Whenever desirable, both the parties may seek each other's technical co-operation with a view to promote the development of collaborative activities in the field of common interest.
- b. EXPERTEZE may organize new initiatives consistent with the overall mission of the organization, and upon request from EXPERTEZE, the EDUCATIONAL INSTITUTION will provide the support technical and organizational (including infrastructures, if any) resources requested to facilitate these initiatives.
- c. The cost and contributions of each parties to such activities will be decided on a case-by-case basis at the time of work or project being undertaken, mutually by both parties and in consultation with the concerned officials of the parties.

#### **7.0 MENTORING SERVICES BY EXPERTEZE**

- a. The academic institution seeks the collaboration with EXPERTEZE to develop, implement and conduct the program for the benefit of the students consistent with the academic goals of the institution including: training students in the areas of bioinformatics, computational biology, genomics and systems biology and related areas (hereinafter referred to as "RESEARCH AREAS"), and consequently, EXPERTEZE will provide the mentoring services to the students when feasible.

- b. The EDUCATIONAL INSTITUTION will have access all activities under the EXPELTEZE branding (including, but not limited to: EXPELTEZE Research program in bioinformatics, Circles of Excellence, EXPELTEZE Incubator, EXPELTEZE Institute and EXPELTEZE Internship and Independent Projects Program) provided by the EXPELTEZE and all the students associated the EDUCATIONAL INSTITUTION will have access to these programs without any discrimination. However, the EXPELTEZE may place certain access restrictions due to purely logistical reasons (such as limitations of space availability in the programs), but such action shall not be directed against any individuals of a particular class or group.
- c. The EXPELTEZE encourages active participation of the students and staff of the EDUCATIONAL INSTITUTION in all its programs.
- d. The cost and contributions of each parties to such activities will be decided on a case-by-case basis at the time of work or project being undertaken, mutually by both parties and in consultation with the concerned officials of the parties.

## **8.0 RESPONSIBILITIES OF THE PARTIES:**

### **8.1 EXPELTEZE SHALL:**

- a. Create a framework for establishing channels of research in the RESEARCH AREAS;
- b. Provide resources and external relationships and intangible support, to EDUCATIONAL INSTITUTION to implement such channels of research at the college;
- c. Provide resources, mentorship, feedback support from RESEARCH ORGANIZATIONS to the student teams engaged in EXPELTEZE PROJECTS as appropriate;
- d. Make available academic materials and other mentoring support to facilitate the creation of favorable environment for conducting research and learning in the RESEARCH AREAS;
- e. Establish channels of communication and interfaces to enable students to engage with external (public and private) industrial research organizations currently performing activities in the RESEARCH AREAS;
- f. Design, suggest, propose, plan and oversee relevant topics of research in the RESEARCH AREAS of current interest to these RESEARCH ORGANIZATIONS;

- g. Provide the point of contact for interfacing between the industrial research organizations and EDUCATIONAL INSTITUTION;
- h. Obtain and make available the funds to the EDUCATIONAL INSTITUTION as appropriate for the conduct of EXPELTEZE PROJECTS, and otherwise manage the financial transactions relating to the conduct of the independent projects undertaken as part of this initiative.
- i. It is the intent of EXPELTEZE to provide EXPELTEZE SCHOLARS appropriate financial support while working on EXPELTEZE PROJECTS, as well as appropriate Certificates of Merit, monetary rewards and other recognition of excellence to motivate them in this endeavor.

**8.2 EDUCATIONAL INSTITUTION SHALL:**

- a. Create an academic environment to facilitate formation and performance of EXPELTEZE PROJECTS by participating EXPELTEZE SCHOLARS at the campus;
- b. Provide logistic and organizational support to EXPELTEZE to make this effort a reality and successful, including making available resources for ongoing consultation and collaboration with EXPELTEZE and RESEARCH ORGANIZATIONS;
- c. Create structures and make available facilities for the conduct of EXPELTEZE PROJECTS by EXPELTEZE SCHOLARS at the campus facilities, including laboratory (e.g. "wet labs"), computer facilities, library facilities, as well as facilities for field work outside campus as appropriate.
- d. Provide facilities for the establishment of an EXPELTEZE Office as a resource to students on
  - i. campus for obtaining ongoing information about EXPELTEZE and conduct of EXPELTEZE
  - ii. related administrative activities within the campus;
- e. Provide logistical, tangible and intangible resources (including faculty, post-doctoral and post graduate student support) for mentorship to the EXPELTEZE SCHOLARS engaged in EXPELTEZE PROJECTS;

- f. Provide necessary support and guidance such as time for conducting research and balancing the needs of the students between conducting independent research and other academic responsibilities;
- g. Collaborate with EXPERTEZE organization as needed in the smooth and focused conduct of the relationship to accomplish mutual goals, including periodic evaluation and assessment of the program effectiveness, financial matters and development of appropriate reward schemes;
- h. Collaborate with EXPERTEZE and provide support for promoting and creating a positive impression and visibility to the public, as well as support the effort towards extension of the program to other organizations in India and around the world, and to facilitate interactions and engagement of EXPERTEZE SCHOLARS with others in other participating organizations;
- i. Create appropriate training and initiation programs (including classes, demonstration sessions and coaching sessions) for students to become familiar and proficient with the processes and steps necessary to engage in EXPERTEZE related activities, as well as provide resources to help select the appropriate students to the teams based on the criteria defined by EXPERTEZE AND EDUCATIONAL INSTITUTION in consultation with each other.

## **9.0 INTELLECTUAL PROPERTY**

### **9.1 OPEN ACCESS OF RESEARCH:**

- a. It is anticipated that during the course of the conduct of the MOU, researchers from the EDUCATIONAL INSTITUTION will work closely with the EXPERTEZE and other participating institutions on technologies of contemporary interest and value. The intent of the EXPERTEZE is to disclose and publish the results of the work of the researchers in open literature such as arXiv and bioarXiv, which are industry standard forums for sharing the research output with the larger scientific community. Likewise, the EXPERTEZE encourages the researchers to make available all supporting materials through public Github repositories. The EXPERTEZE believes that, in addition to formally establishing ownership of their contributions, this mode of sharing established the credibility of the researchers in the community. The publications will include, in the

title page of the published reports, the name(s) and the current affiliations of the researchers, as well as the attribution of support of the various organizations involved in the research activity. EXPELTEZE will also publish these articles in EXPELTEZE website, again providing the credit and acknowledgement of support from the participating organizations for the research.

## **9.2 PROPRIETARY TECHNOLOGY**

- a. While the intent and focus of the EXPELTEZE is to encourage open sharing of the discovery, there are certain situations when such open disclosure is not feasible. One such instance is when the researchers wish to hold off open sharing due to their wishing to conduct additional experiments or analysis prior to publication. The EXPELTEZE will honor such requests and will support the researchers' decision in this regard. Another situation where such open disclosure will be deferred is when all parties (including all authors) believe that the invention has commercial value, and the invention is then transferred to a group in the EXPELTEZE incubator for facilitating the startup activities based on the Intellectual Property, including filing of any patents or copyright protection. In all such cases, the EXPELTEZE will be the sponsoring agency for the incubator team and will ensure that the Intellectual Property rights of all researchers and participating institutions are protected through the commercialization process. In these circumstances, the publication of the research results in open literature may be delayed by mutual concurrence, and efforts will be taken to publish the results in the open literature at the earliest feasible opportunity. In the case of any differences of opinion in any of the above steps, EXPELTEZE will mediate the process and seek to arrive at the best possible compromise.

## **10.0 AMENDMENTS**

- a. Both parties may request for an amendment of the present Memorandum of Understanding. Any such amendments shall be adopted by mutual consent. Whenever required, an exchange of letter will detail the implementation of the article.

## **11.0 TERMINATION**

- a. The terms of this MOU will begin when both parties have signed the document and will continue indefinitely, until terminated by either party by giving a written statement to that

effect to the other party. Upon termination, both parties will ensure that the termination of this agreement is properly disseminated to the third parties, without cause, and refrain from any activity that would imply such association as continuing thenceforth. Upon termination of the MOU, both parties will identify any areas of mutual concern (including but not limited to Intellectual Property etc.) and work to find a common and mutually beneficial resolution.

#### **12.0 FORCE MAJEURE**

- a. In the event of non-fulfillment of the contract terms and conditions due to any reason of force majeure namely fires, wars, riots, strikes, natural calamities, pandemic etc., neither the EDUCATIONAL INSTITUTION nor EXPERTEZE shall be held responsible for any loss or consequential loss.

#### **13.0 INDEMNITY**

- a. EXPERTEZE hereby agrees jointly and severally to indemnify/ compensate EDUCATIONAL INSTITUTION, their representatives, administrators and properties from and against all action, demands, proceedings, prosecutions, attachments, and the like arising out of its liabilities and all charges, taxes, etc.
- b. The EDUCATIONAL INSTITUTION hereby agrees jointly and severally to indemnify/ compensate, EXPERTEZE and their representatives, administrators and properties from and against all action, demands, proceedings, prosecutions, attachments, and the like arising out of its liabilities and all charges, taxes, etc.

#### **14.0 BREACH OF AGREEMENT**

- a. Both parties shall have the right to terminate the agreement, in case either fails to provide the services successfully as mentioned in the agreement, or violates any of the clause mentioned in the MOU, or exploits the students or misuses the partnership in any way. The termination shall be done after the successful completion of all obligations to the batch running at that point in time.

#### **15.0 ARBITRATION**

- a. Both parties shall attempt to settle all disputes through mutual discussions and negotiations. If the negotiations fail, then both parties will submit the dispute to an Arbitrator appointed jointly by both parties. The decision of the arbitrator shall be

binding and final to both parties. Both Parties will designate a representative from its side who will be the primary Contact on behalf of that party. Both Parties shall not use name of the other in any advertisement or make any public announcement unless as per agreed manner.

b. This MoU shall be construed and governed by Indian Law.

## 16.0 SPOC Particulars

### 16.1 SPOC\* for EXPELTEZE:

**Name of the Person:** Dr. Mohan Venkataramana  
**Designation:** President  
**Communication Address:** Cambridge Massachusetts, USA 02139  
**Email:** [mohan@experteze.org](mailto:mohan@experteze.org)  
**Mobile:** +1 6263991843

### 16.2 SPOC\* for EDUCATIONAL INSTITUTION:

**Name of the Person:** Dr. R. Sundararaman  
**Designation:** The Principal  
**Communication Address:** National College, Dindigul road, Tiruchirappalli- 620001  
**Email:** [principal@nct.ac.in](mailto:principal@nct.ac.in)  
**Mobile:** +91-9443187019

16.3. It is agreed to, in case of change of address, change of Email, change of SPOC person, the complete details should be conveyed to the other party within a week through either official email or courier to the official communication address.

Each party hereby confirms its agreement to the terms contained in this MOU on this day of 27-12-  
2021.

For and behalf of

NATIONAL COLLEGE

Signature

  
**Principal**  
National College (Autonomous)  
Tiruchirappalli - 620 001.

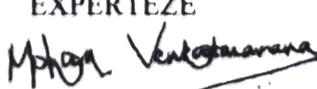
Name : Dr. R. Sundararaman

Designation : Principal

For and behalf of

EXPELTEZE

Signature



Name : Dr. Mohan Venkataramana

Designation : President, EXPELTEZE