



## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :Biovision Medical system Chennai

**About** :Signed MOU on 28.06.2018

1. Joint research and project work in developing innovative medical diagnostics products
2. Joint publication
3. Access to Research laboratories,equipments
4. In-plant training for Biomedical department students

**Outcomes as on date** :1.Training conducted for third year students

2.Industrial visit conducted for third year students 2018

3.Project work on Portable ventilators





## Department of Biomedical Engineering REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** Siemens Healthineer Chennai

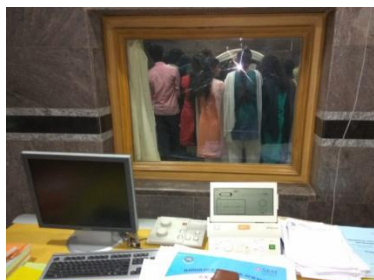
**About** :Signed MOU on 25<sup>th</sup> April 2018

1. Industry oriented training programs for final year students
2. Guest lectures on recent trends
3. Training for faculty
4. Industrial In-plant training for biomedical department students

**Outcomes as on date** :1. Training conducted for 3 different programs

2. Industrial visit conducted for final year BME students 2019

3. Inplant training for 10 students arranged





## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :Niranjan Ultrasound Pvt Ltd.

**About** :Signed MOU on 09.03.2017

1. Joint research and project work in developing innovative medical diagnostics product
2. Training the students
3. Access to their equipments
4. In-plant training for Biomedical department students

**Outcomes as on date** :1.Work shop was conducted on Knobiology

2.Training programme for Final year students 2017

3. Donated and ultrasound machine





## Department of Biomedical Engineering REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :SriSathyaSai Medical college and research center

**About** :Signed MOU on 20.07.2017

1. Joint research and project work in developing innovative medical diagnostics products
2. Training the students
3. Access to their equipments
4. Hospital training for Biomedical department students

**Outcomes as on date** :1.Hospital training programme for Final year students

2.Blood samples to conduct experiments





## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :Garuda

**About:** Joint research and project work in developing innovative  
Drones for carrying Medical organs and transplants

Access to Research laboratories,equipments

In-plant training for Biomedical department students

**Outcomes as on date** :

1.one project on transfer of blood transport and its effects on blood completed.

2.Disinfecting drones

**Photos**



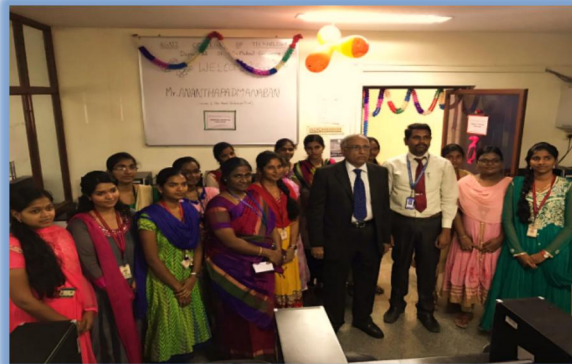




## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

|                       |  |
|-----------------------|--|
| Collaborating Company | :Tenx Health technologypvt LTD   |
| About                 | Joint research and project work in developing innovative IOT based Medical devices<br><br>In-plant training for Biomedical department students |
| Outcomes as on date   | :<br><br>Sstudents from biomedical and ECE to implement IOT based project for Tenx health  |





## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

|                       |   |
|-----------------------|---|
| Collaborating Company | :CSIR and LIT Academy   |
| About                 | Joint research and project work in developing oncomechanics (Cancer diagnostic project)<br><br>In-plant training for Biomedical department students |
| Outcomes as on date   | :Students from biomedical and CSE staff to implement Oncomechanics Project  |



## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

Collaborating Company :Kalam institute of Health Technology

About Joint research and project work in developing innovative Medical devices

2.Funding for Biomedical department students

Outcomes as on date :

1.Smart walker to be submitted as proposal

**Abstract:** A non-invasive method, which replaces the older method of usage of blood, can improve the diagnosis of glucose levels while reducing pain and complexity of testing. The correlation between the blood and saliva glucose levels helps in designing a non-invasive biosensor for diabetes test. The readings are sent via a Bluetooth module to the mobile. for further analysis and storage of results..



### Non-invasive measurement of glucose from saliva

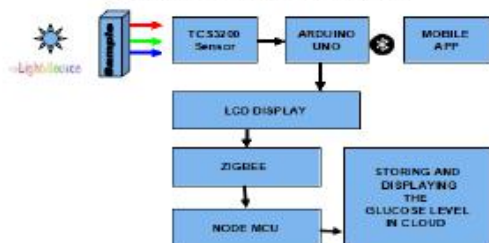


Nithiya.R, S.Mahashruthi, K.Pragatheeswaran and M.Kousalya  
Agni college of technology, Department of Biomedical Engineering  
Thalambur, Chennai 600130

#### Product Features and Characteristics

Traditional invasive blood glucose monitoring systems are expensive, inconvenience, and painful. In this work, a promising multisensory non-invasive blood glucose monitoring system is proposed. The proposed approach is based on the principle of optical spectroscopy. Zigbee, Colour sensor was used. An application is developed using Eclipse software. The simulation results are compared with results from previous studies and cross validated with actual glucose concentration to justify the proposed NIBGM system.

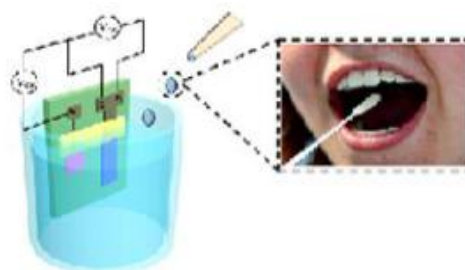
##### FUNCTIONAL FLOW DIAGRAM



#### Need and Demand

- According to World Health Organization (WHO), diabetes will be the 7th leading disease cause of death in 2030. Diabetes and its complications are responsible for early death, where 1 person dies in every 7 seconds. With regards to economics, cost of diabetes covers 6 to 15% of the budget of National Health System in the European Union.

- non invasive gluco monitoring can lead to flexibility in lifestyle. It will reduce the complication also.







## Department of Biomedical Engineering REPORT ON INDUSTRY COLLABORATION

Collaborating Company :Radical Medical Equipments

About : Training for Biomedical students

➤ Critical care equipments

Outcomes as on date :

Hands on experience on medical equipments



## Department of Biomedical Engineering REPORT ON INDUSTRY COLLABORATION

Collaborating Company : Ge Healthcare

About : Seminars ,lectures

Outcomes as on date :

Better Knowledge onRadiology equipments





## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :Sunshive Electronics Pvt LTD

**About :** Implant training for Biomedical students

- Creating drawings & schematic diagrams
- Live demonstration of Electronic components
- PCB Designing
- Trouble shooting
- Circuit creation - fundamentals
- Reverse Engineering Technology – Creating circuits from existing product
- PIC& PLC programming introduction - I/O ports
- Individual Three industrial Products – with PCB & Components

**Outcomes as on date :**

1.Students working on Mini Project







## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :Aaranya Biosciences Private Limited Chennai

**About** :Signed MOU(7<sup>th</sup> May 2018 ) on sharing of knowledge, data, skills and the resource power available in both organizations through

- 1.Research Motivated Training during Even semester
- 2.Consultation
- 3.Guest lectures
- 4.Industrial visits
- 5.Research projects

**Outcomes as on date** :1.Donated Spectroscopy devices and Elise reader during Annauniveristy practical exams

2.Training programme scheduled for 4 th semester students

3.Research Project scheduled to start in the month of December



Vivarium-Infrastructure at AARANYA BIOSCIENCES



FACILITIES TO BE USED BY AGNI STUDENTS



## Department of Biomedical Engineering

### REPORT ON INDUSTRY COLLABORATION

**Collaborating Company** :Madras ENT Foundation Chennai

**About** :Signed MOU on 30.12.2016

1. Joint research and project work in developing innovative medical diagnostics products
2. Joint publication
3. Access to Research laboratories, equipments
4. In-plant training for Biomedical department students

**Outcomes as on date** :1. Students visited the lab as an industrial Visit  
2. One collaborative project on noise cancellation

