

**MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA  
(MACFAST)**



**MACFAST**<sup>TM</sup>  
Igniting wisdom since 2001

**3.2.2.**

**Details of workshops/seminars conducted on Research Methodology,  
Intellectual Property Rights (IPR) and entrepreneurship from**

**2016-17 to 2020-21**

---

**Criteria 3: Research, Innovations and Extension**

**MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA (MACFAST)**

**Tiruvalla, Pathanamthitta, Kerala 689 101**

**2017-2018**



MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA  
(MACFAST)

MACFAST™  
Igniting wisdom since 2001

Details of workshops/seminars conducted on Research Methodology,  
Intellectual Property Rights (IPR) and Entrepreneurship

Sl. No.	Title of Workshop/Seminar	Number of participants	Start Date	End Date
B.	2017 - 2018			
Sl. No.	Title of Workshop/Seminar	Number of participants	Start Date	End Date
1	Hands-on training programme in Plant Tissue Culture techniques sponsored by Kerala Biotechnology Commission	42	8/2/2017	8/12/2017
2	Meet The Entrepreneur : How to start a startup company	62	9/20/2017	9/20/2017
3	Training programme in Chocolate Making for Prospective Entrepreneurs	6	11/10/2017	11/11/2017
4	A Day with an Entrepreneur by Dr. Majeed Founder & MD, SAMI's lab, Bangalore	95	10/30/2017	10/30/2017
5	Training Program in Cake Making for Prospective Entrepreneurs	8	12/7/2017	12/8/2017
6	The power of 7i for Successful start-ups Mr. Neelakantan Padmanabhan (Gm (India) &Head ) Global Operations LUCEP, Bangalore	98	12/13/2017	12/13/2017
7	Workshop on Research Methodology by Dr. Michael Sauer, Department of Biotechnology, BOKU University of Natural Resources and Applied Life Sciences, Vienna.	90	1/8/2018	1/8/2018
8	Training Program in Chocolate Making for Prospective Entrepreneurs	10	3/7/2018	3/8/2018
9	Entrepreneurship Development - Government Schemes and Support	92	5/4/2018	5/4/2018



Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL

Mar Athanasios College for Advanced Studies  
Tiruvalla-686011, Kerala

### 9<sup>th</sup> August 2017 (Day 7)

Time	Session title
09.00 – 10.30	<b>Theory – <i>In vitro</i> flowering</b> <b>Seeni S.</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Applications of <i>In vitro</i> flowering in crop improvement</b> <b>Seeni S.</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – <i>In vitro</i> flowering</b> <b>Biju Dharmapalan</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – <i>In vitro</i> flowering</b> <b>Biju Dharmapalan</b>

### 10<sup>th</sup> August 2017 (Day 8)

Time	Session title
09.00 – 10.30	<b>Theory – Protoplast culture</b> <b>K. K. Sabu, TBGRI</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Somatic hybridization</b> <b>K. K. Sabu, TBGRI</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Protoplast isolation and culture</b> <b>Biju Dharmapalan</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Protoplast isolation and culture</b> <b>Biju Dharmapalan</b>

### 11<sup>th</sup> August 2017 (Day 9)

Time	Session title
09.00 – 10.30	<b>Theory – <i>In vitro</i> germplasm conservation</b> <b>William Decruz, TBGRI</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Cryopreservation</b> <b>William Decruz, TBGRI</b>

12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Agrobacterium mediated transformation</b> <b>Blessan Santhosh George</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Agrobacterium mediated transformation</b> <b>Blessan Santhosh George</b>

### 12<sup>th</sup> August 2017 (Day 10)

Time	Session title
09.00 – 10.30	<b>Theory – Low Cost Tissue Culture Technic</b> <b>Hemanth Kumar, TBGRI</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Issues in Commercial Tissue Culture of Floriculture and Horticultural Plants</b> <b>Hemanth Kumar, TBGRI</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Screening techniques for transgenics</b> <b>Blessan Santhosh George</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Screening techniques for transgenics</b> <b>Blessan Santhosh George</b>

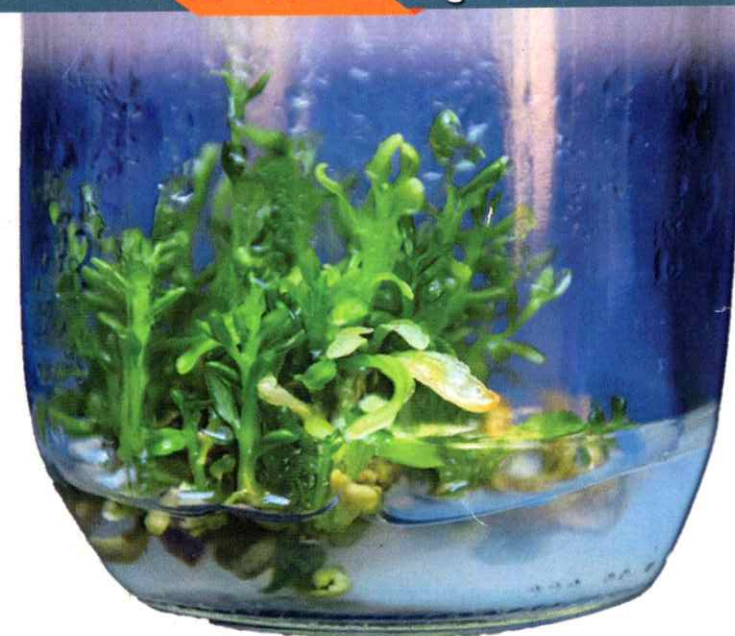
For Registration  
**Biju Dharmapalan**  
Co-ordinator

Hands-on training on Plant Tissue Culture techniques and Applications  
School of Biosciences,  
MACFAST, Kerala-689101  
Phone:9447121718  
E mail: [biju@macfast.org](mailto:biju@macfast.org)

Greeshma Designs. Kim.

# Hands-on training on Plant Tissue Culture techniques and Applications

02<sup>nd</sup> to 12<sup>th</sup> August 2017



Sponsored by



School of Biosciences  
Mar Athanasios College for  
Advanced Studies Tiruvalla,  
Kerala-689101  
[www.macfast.org](http://www.macfast.org)

The School of Biosciences MACFAST (Mar Athanasios College for Advanced Studies Tiruvalla) is organizing a Hands-on training programme in Plant Tissue Culture techniques sponsored by Kerala Biotechnology Commission from 2<sup>nd</sup> to 12<sup>th</sup> August 2017. Technical sessions will be handled by scientists from RGCB, Thiruvananthapuram, JNTBGRI, Palode and MACFAST. The programme is primarily meant for students and unemployed youth. Registration for the training programme is free and participation is limited to 30 members. Those interested in attending the workshop should send an email to the programme co-ordinator.

Rev.Fr.Pradeep Vazhatharamalayil  
Principal

## PROGRAMME SCHEDULE

### 2<sup>nd</sup> August 2017 (Day 1)

Time	Session title
09.00 – 10.30	<b>Theory – Introduction to Plant Tissue Culture</b> <b>Biju Dharmapalan</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Theory – Media components, their role and significance</b> <b>Biju Dharmapalan</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical I – Media preparation</b> <b>Biju Dharmapalan</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical I – Media preparation</b> <b>Biju Dharmapalan</b>

### 3<sup>rd</sup> August 2017 (Day 2)

Time	Session title
09.00 – 10.30	<b>Theory – Micropropagation</b> <b>Biju Dharmapalan</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Theory – Micropropagation of Banana</b> <b>Seeni S.</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Micropropagation</b> <b>Biju Dharmapalan</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Micropropagation</b> <b>Biju Dharmapalan</b>

### 4<sup>th</sup> August (Day 3)

Time	Session title
09.30 – 10.30	<b>Theory – Haploid Production</b> <b>Arun K. Das</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Applications of haploids in agriculture and biotechnology</b> <b>Arun K. Das</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Anther Culture</b> <b>Biju Dharmapalan</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Anther Culture</b> <b>Biju Dharmapalan</b>

### 5<sup>th</sup> August 2017 (Day 4)

Time	Session title
09.00 – 10.30	<b>Theory – Plant Secondary Metabolites and their Importance</b> <b>Sreekumar S. JNTBRI</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>In vitro synthesis of Plant Secondary Metabolites</b> <b>Sreekumar S. JNTBRI</b>

12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Suspension Culture</b> <b>Arun K. Das</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Suspension Culture</b> <b>Arun K. Das</b>

### 7<sup>th</sup> August (Day 5)

Time	Session title
09.00 – 10.30	<b>Theory – Organogenesis and embryogenesis</b> <b>T. S. Preetha, University College, Trivandrum</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Applications of Synthetic seeds</b> <b>T. S. Preetha, University College, Trivandrum</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Synthetic Seeds</b> <b>Biju Dharmapalan</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Synthetic seeds</b> <b>Biju Dharmapalan</b>

### 8<sup>th</sup> August 2017 (Day 6)

Time	Session title
09.00 – 10.30	<b>Theory – Basics in Transgenic Technology</b> <b>E. V. Soniya, RGCB</b>
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Transgenics in agribiotechnology</b> <b>E. V. Soniya, RGCB</b>
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – DNA Isolation</b> <b>Blessan Santhosh George</b>
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – DNA Isolation</b> <b>Blessan Santhosh George</b>



Workshop on “Plant Tissue Culture techniques and Applications”

Thiruvalla:

12th August 2017

The School of Biosciences MACFAST (Mar Athanasios College for Advanced Studies Thiruvalla) had organised a 10 day hands on training programme on *Plant Tissue Culture techniques and Applications* in collaboration with Kerala Biotechnology Commission. The hands on training is organised from 2nd to 12th August 2017. The technical sessions were handled by eminent scientists from RGCB, Thiruvananthapuram, JNTBGRI, Palode and MACFAST. The aim of the programme was to attract students and unemployed youth to the promising area of Tissue Culture. The registration was free and the participants were limited to 30 members. The programme started with the formal inauguration by Fr. Pradeep Vazhatharamalayil, Principal MACFAST. The programme in Day 1 was handled by Mr. Biju Dharmapalan. In the 2nd day, Dr. Seeni S joined along with Prof. Biju Dharmapalan to talk on the theory of Micro propagation. On 4th August Dr. Arun K. Das introduced the topic of Haploid Production along with Anther Culture by Mr. Biju Dharmapalan. Sreekumar S. of JNTBRI handled the theory on Plant Secondary Metabolites and their importance on Day 4. The Practical on Suspension Culture was taken by Dr. Arun K. Das. On 7th August, Theory of Organogenesis and embryogenesis was introduced by T.S. Preetha, University College Trivandrum. The Practical session on Synthetic Seeds tissue culture was handled on the 5th day by Prof. Biju Dharmapalan. The day 6 started with the session on the Transgenics in agribiotechnology by E.V Soniya, RGCB. The practical session on DNA Isolation was delivered by Mr. Blessan Santhosh George, MACFAST. In vitro flowering was the topic of flowers on Day 7 - 9th August 2017, which was



handled by Dr. Seeni S; practical sessions were handled by Mr. Biju Dharmapalan. On 10th August 2017, Protoplast culture was the topic of workshop by K. K. Sabu, TBGRI. The practical for the same was handled by Mr. Biju Dharmapalan. The 9th day started with the class on In vitro germplasm conservation by William Decruz, TBGRI. Cyropreservation and the practical sessions followed on the same date. In the final day Low Cost Tissue Culture Technique was handled by Mr. Hemanth Kumar, TBGRI. There were also sessions on Issues in Commercial Tissue Culture handled by Mr. Hemanth Kumar, TBGRI. Mr. Blessan Santhosh George handled the practical session on screening techniques for transgenics. A total of 55 participants attended the workshop and the registration was handled by Mr. Biju Dharmapalan.

*Handwritten signature: Holy Spirit*

*Handwritten signature in green ink*

Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Truvalla- 689101, Kerala



### 9<sup>th</sup> August 2017 (Day 7)

Time	Session title
09.00 – 10.30	Theory – <i>In vitro</i> flowering Seeni S.
10.30 – 11.00	Tea Break
11.00 – 12.30	Applications of <i>In vitro</i> flowering in crop improvement Seeni S.
12.30 – 01.30	Lunch Break
01.30 – 03.00	Practical – <i>In vitro</i> flowering Biju Dharmapalan
03.00 – 03.30	Tea Break
03.30 – 04.45	Practical – <i>In vitro</i> flowering Biju Dharmapalan

### 10<sup>th</sup> August 2017 (Day 8)

Time	Session title
09.00 – 10.30	Theory – Protoplast culture K. K. Sabu, TBGRI
10.30 – 11.00	Tea Break
11.00 – 12.30	Somatic hybridization K. K. Sabu, TBGRI
12.30 – 01.30	Lunch Break
01.30 – 03.00	Practical – Protoplast isolation and culture Biju Dharmapalan
03.00 – 03.30	Tea Break
03.30 – 04:45	Practical – Protoplast isolation and culture Biju Dharmapalan

### 11<sup>th</sup> August 2017 (Day 9)

Time	Session title
09.00 – 10.30	Theory – <i>In vitro</i> germplasm conservation William Decruz, TBGRI
10.30 – 11.00	Tea Break
11.00 – 12.30	Cryopreservation William Decruz, TBGRI

12.30 – 01.30	Lunch Break
01.30 – 03.00	Practical – Agrobacterium mediated transformation Blessan Santhosh George
03.00 – 03:30	Tea Break
03.30 – 04.45	Practical – Agrobacterium mediated transformation Blessan Santhosh George

### 12<sup>th</sup> August 2017 (Day 10)

Time	Session title
09.00 – 10:30	Theory – Low Cost Tissue Culture Technic Hemanth Kumar, TBGRI
10:30 – 11.00	Tea Break
11.00 – 12:30	Issues in Commercial Tissue Culture of Floriculture and Horticultural Plants Hemanth Kumar, TBGRI
12.30 – 01.30	Lunch Break
01.30 – 03.00	Practical – Screening techniques for transgenics Blessan Santhosh George
03.00 – 03.30	Tea Break
03.30 – 04.45	Practical – Screening techniques for transgenics Blessan Santhosh George

For Registration  
Biju Dharmapalan  
Co-ordinator

Hands-on training on Plant Tissue Culture  
techniques and Applications  
School of Biosciences,  
MACFAST, Kerala-689101  
Phone:9447121718  
E-mail: [biju@macfast.org](mailto:biju@macfast.org)

# Hands-on training on Plant Tissue Culture techniques and Applications

02<sup>nd</sup> to 12<sup>th</sup> August 2017



Sponsored by  
Kerala Biotechnology Commission  
Sponsored by



**MACFAST**

School of Biosciences  
Mar Athanasios College for  
Advanced Studies Tiruvalla,  
Kerala-689101  
[www.macfast.org](http://www.macfast.org)  
[www.macfast.in](http://www.macfast.in)



The School of Biosciences MACFAST (Mar Athanasios College for Advanced Studies Tiruvalla) is organizing a Hands-on training programme in Plant Tissue Culture techniques sponsored by Kerala Biotechnology Commission from 2<sup>nd</sup> to 12<sup>th</sup> August 2017. Technical sessions will be handled by scientists from RGCB, Thiruvananthapuram, JNTBGRI, Palode and MACFAST. The programme is primarily meant for students and unemployed youth. Registration for the training programme is free and participation is limited to 30 members. Those interested in attending the workshop should send an email to the programme co-ordinator.

Rev.Fr.Pradeep Vazhatharamalayil  
Principal

## PROGRAMME SCHEDULE

### 2<sup>nd</sup> August 2017 (Day 1)

Time	Session title
09.00 – 10.30	<b>Theory – Introduction to Plant Tissue Culture</b> Biju Dharmapalan
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Theory – Media components, their role and significance</b> Biju Dharmapalan
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical I – Media preparation</b> Biju Dharmapalan
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical I – Media preparation</b> Biju Dharmapalan

### 3<sup>rd</sup> August 2017 (Day 2)

Time	Session title
09.00 – 10.30	<b>Theory – Micropropagation</b> Biju Dharmapalan
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Theory – Micropropagation of Banana</b> Seeni S.
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Micropropagation</b> Biju Dharmapalan
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Micropropagation</b> Biju Dharmapalan

### 4<sup>th</sup> August (Day 3)

Time	Session title
09.30 – 10.30	<b>Theory – Haploid Production</b> Arun K. Das
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Applications of haploids in agriculture and biotechnology</b> Arun K. Das
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Anther Culture</b> Biju Dharmapalan
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Anther Culture</b> Biju Dharmapalan

### 5<sup>th</sup> August 2017 (Day 4)

Time	Session title
09.00 – 10.30	<b>Theory – Plant Secondary Metabolites and their Importance</b> Sreekumar S. JNTBRI
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>In vitro synthesis of Plant Secondary Metabolites</b> Sreekumar S. JNTBRI

12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Suspension Culture</b> Arun K. Das
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Suspension Culture</b> Arun K. Das

### 7<sup>th</sup> August (Day 5)

Time	Session title
09.00 – 10.30	<b>Theory – Organogenesis and embryogenesis</b> T. S. Preetha, University College, Trivandrum
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Applications of Synthetic seeds</b> T. S. Preetha, University College, Trivandrum
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – Synthetic Seeds</b> Biju Dharmapalan
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – Synthetic seeds</b> Biju Dharmapalan

### 8<sup>th</sup> August 2017 (Day 6)

Time	Session title
09.00 – 10.30	<b>Theory – Basics in Transgenic Technology</b> E.V. Soniya, RGCB
10.30 – 11.00	Tea Break
11.00 – 12.30	<b>Transgenics in agribiotechnology</b> E.V. Soniya, RGCB
12.30 – 01.30	Lunch Break
01.30 – 03.00	<b>Practical – DNA Isolation</b> Blessan Santhosh George
03.00 – 03.30	Tea Break
03.30 – 04.45	<b>Practical – DNA Isolation</b> Blessan Santhosh George

## **Dr. K K Sabu**

Senior Scientist

Biotechnology & Bioinformatics Division

+91-9895211299

sabu@jntbgri.res.in

### **Research details**

Dr. Sabu is educated in the field of Plant Sciences and has working experience in plant genetics, biotechnology and bioinformatics since 1995. He published several research articles in national/international journals. He has currently supervising five graduate students for their PhD programme and carrying out three externally funded research programmes.

### **Major Research Activities**

- Analysis of genetic diversity and phylogeny in Calamus L. (Arecaceae)
- Analysis of genetic variability, association mapping and microRNA diversity of wild cardamom populations
- Estimation of genetic diversity in Centella asiatica and regulation of secondary metabolite production using miRNAs

### **R & D projects**

#### **Ongoing**

- **Project Title:** Community plant-pollinator interactions at the landscape level.  
**Name of the PI & Co-PI(s):** Dr. B. Sabulal, Dr. Mathew Dan, and Dr. K. K. Sabu (JNTBGRI); Mr. Deepak Mundkinajeddu (M/s Natural Remedies Pvt Ltd, Bangalore).  
**Funding agency and amount sanctioned:** Department of Biotechnology, Government of India. 36.31 Lakhs.  
**Project period and date of commencement:** 3 years from 14.05.2015.

**Project Title:** Identification of elite lines of Centella asiatica and Bacopa monnieri for commercially significant constituents for standardization of their extracts  
**Name of the PI & Co-PI(s):** Dr. A. K. Sreekala, Dr. C. Anilkumar and Dr. K. K. Sabu (JNTBGRI); Dr. Hema Somanathan (IISER, Trivandrum), Dr. Deepak Barua (IISER, Pune), Prof. V. V. Belavadi (GKVK, Bangalore)  
**Funding agency and amount sanctioned:** Department of Biotechnology, Government of India. 59.23 Lakhs.  
**Project period and date of commencement:** 3 years from 14.05.2015

**Project Title:** Analysis of genetic variability and bioprospecting of wild cardamom populations.  
**Name of the PI & Co-PI(s):** Dr. K. K. Sabu.  
**Funding agency and amount sanctioned:** KSCSTE Plan (In-house). 24.84 lakhs (fund received till 4th year).  
**Project period and date of commencement:** 5 year programme started in April 2012.

#### **Completed**

- **Project Title:** Assessment of Genetic Diversity and Identification of Gender Specific Markers of Important North-East and South Indian Rattan palms using SSR Analysis.  
**Name of the PI & Co-PI(s):** Dr. K.K. Sabu & Dr. A.S. Hemanthakumar.  
**Funding agency and amount sanctioned:** Department of Biotechnology, Government of India. 16.35 Lakhs.  
**Project period and date of commencement:** Nov 2011 to Nov 2014

**Project Title:** Analysis of genetic diversity in selected rattan palms (*Calamus* sp.) using microsatellite markers.

**Name of the PI & Co-PI(s):** Dr. K.K. Sabu.

**Funding agency and amount sanctioned:** Kerala Biotechnology Commission, KSCSTE, Fund received: 10.34 lakhs.

**Project period and date of commencement:** April 2012 to March 2014.

#### Major Achievements

- Organized a germplasm collection of *Andrographis paniculata* from South East Asia and analyzed intraspecific variations of the species.
- Six new rice varieties were developed and registered under PROTECTION OF NEW PLANT VARIETIES ACT 2004 in Malaysia in association with other researchers.
- Developed mapping population of rice and conducted molecular breeding.
- Genome size of cardamom was determined for the first time.
- Micro RNA and transcriptome sequencing cardamom was carried out for the first time.

#### Publications

1. Lakshmi Priya, P. M. and K. Sabu. 2015. *In Silico* Analysis of Transcriptomes of *Catharanthus roseus* and *Rauvolfia serpentina*, two potent medicinal plants using a pipeline developed from publicly available tools. *American Journal of Bioinformatics Research* 5(2) (Accepted).
2. Thomas, J. and K. Sabu. 2015. Development of a New Pipeline for Identification and Characterization of Micro RNAs from Plants. *International Journal of Computational Biology* 4(2) (Accepted).
3. Alireza Valdiani, Daryush Talei, Surrinder K. Lattoo, Jacqueline Batley, Rodomiro Ortiz, Mohd Yusop, Rafii, Mahmood Maziah, K. Sabu, Rambod Abiri, Suchirat Sakuanrungsirikul, Soon Guan Tan. 2015. Biotechnological and Conventional Advances of Plant Breeding in *Andrographis paniculata*: A Promising Breeding Platform for Autogamous Medicinal Plants. *Critical Reviews in Biotechnology* (Accepted).
4. Princy, P. S., A. Gangaprasad and K. Sabu. 2015. *In Vitro* Propagation and Evaluation of Genetic Fidelity of *Aegle marmelos* (L.) Correa, a Highly Sought After Sacred Medicinal Tree. *Phytomorphology* 65 (1&2): 1-10.
5. F., N. Anjali, A. Gangaprasad, K. K. Sabu. 2015. High quality RNA extraction from small cardamom tissues rich in polysaccharides and polyphenols. *Analytical Biochemistry* 485: 25-27. doi:10.1016/j.ab.2015.05.017
6. Anjali, N., Sowmya S. Dharan, F. Nadiya and K. Sabu. 2015. Development of EST-SSR markers to assess genetic diversity in *Elettaria cardamomum* Maton. *International Journal of Applied Sciences and Biotechnology*, Vol 3(2): 188-192. doi: 10.3126/ijasbt.v3i2.12380
7. Abdul Rahim H., Lim L.S., Sabu K.K, Saad A, Md. Atiqur Rahman B, Azhar M and Wickneswari R. 2012. Identification of quantitative trait loci for blast resistance in BC<sub>2</sub>F<sub>3</sub> and

- BC<sub>2</sub>F<sub>1</sub> advanced backcross families of rice. *Genetics and Molecular Research* 11 (3): 3277-3289 (Sept 2012).
8. Wickneswari R., M.A.R. Bhuiyan, K. Sabu, L.S. Lim, M.J. Thomson, N.M. Kairudin and Abdullah M.Z. 2012. Identification and Validation of Quantitative Trait Loci for Agronomic Traits in Advanced Backcross Breeding Lines Derived from *Oryza rufipogon* × *Oryza sativa* Cultivar MR219. *Plant Mol Biol Rep* 30(4): 929-939, DOI: 10.1007/s11105-011-0404-4 (Published on 17 Jan 2012)
  9. Ngu M.S., Sabu K.K., Lim L.S., Abdullah M.Z, Wickneswari R. 2010. Genetic structure of *Oryza rufipogon* natural populations in Malaysia: Implications for conservation and genetic introgression of cultivated rice. *Tropical Plant Biology* 3(4): 227-239.
  10. Sabu K.K., Abdullah M.Z., Lim L.S. and Wickneswari R. 2009. Analysis of heritability and environmental variances in a rice cross. *Agronomy Research* 7: 97-102.
  11. Sabu K.K., Abdullah M.Z., Lim L.S and Wickneswari R. 2006. Development and evaluation of advanced backcross families of rice for agronomically important traits. *Communications in Biometry and Crop Science* 1(2): 111-123
  12. Sabu, K.K., Padmesh and S. Seenii. 2001. Estimation of active principle content and isozymes of *Andrographis paniculata*, an important medicinal plant of India. *Journal of Medicinal & Aromatic Plant Sciences* 23: 637-647.
  13. Jacob, J.P., K.K. Sabu and T.K. Abraham. 2000. Genetic variability of mutant strains of *Pleurotus citrinopileatus* based on isozyme electrophoresis. *Mushroom Research* 9: 79-84.
  14. Padmesh, P., K. Sabu, S. Seenii and P. Pushpangadan. 1998. The use of RAPD in detecting genetic variability in *Andrographis paniculata* Nees: a potent hepatoprotective drug. *Current Science* 76: 833-835.
  15. Seenii, S., K. Sabu and P. Padmesh. 1998. Variable-Invariably: An introduction to intraspecific variations in medicinal plants. *Amruth* 2: 3-8.

#### Books/Book Chapters/Thesis

- Sabu, K. K., Nadiya. F., and N. Anjali. 2016. miRNA isolation from plants rich in polysaccharides and polyphenols. In: *Micro RNA Profiling: Methods and Protocols*. Sweta Rani (Ed). Springer, New York. (Accepted)
- Harinarayanan, P. & Sabu, K. K., (Eds.). 2009. *Proceedings of National Seminar on Coastal Ecosystem Management & Evaluation Workshop of South Indian ENVIS Centres*. ENVIS Centre, Kerala State Council for Science, Technology, & Environment, Thiruvananthapuram. 126 pages.
- Sabu, K.K., N.S. Pradeep and P. Padmesh. 2003. Application of molecular markers for the analysis of genetic diversity and systematics of fungi. In *Frontiers of Fungal Diversity in India* (Prof. Kamal Festschrift) Ed. by G. P. Rao, C. Manoharachari, D. J. Bhat. Published by: International Book Distributing (Lucknow), xxiv, 906p. ISBN: 8185860920.
- KK Sabu. 2002. *Intraspecific variations in Andrographis paniculata* Nees (PhD Thesis). Kerala University, Thiruvananthapuram, India
- Seenii, S. and K.K. Sabu. 1998. Conservation and economic utilization of plant genetic resources through Biotechnological means. In: *Conservation and Economic Evaluation of Biodiversity*. Vol. I. pp. 239-249. Oxford University press, New Delhi.

#### Conference Papers

- Binoy Kurian, Vishnu V. Nair, and K.K. Sabu. 2015. Paucity of genetic diversity in an important non-wood forest produce: *Calamus brandisii* Becc. – A dwindling species? Proceedings of the 27th Kerala Science Congress held at Alappuzha during 27th – 29th January 2015.

Sowmya S Dharan, Anjali N, Nadiya F and K K Sabu. 2014. Variation in lignin content and genetic diversity in *Elettaria cardamomum* Maton. Proc. of International Symposium on Plantation Crops – PLACROSYM XXI<sup>st</sup> from 10-12 December, 2014 at Kozhikkode.

Krishna R. Nair, Gangaprasad A. and K. K. Sabu. 2014. An efficient plant regeneration from nodal explant of Somalata [*Sarcostemma acidum* (roxb.) Voight] and assessment of genetic uniformity using ISSR markers. Proceedings of the 26th Kerala Science Congress held at Wayanad during 28th – 31st January 2014, pp. 316 (10-90).

Anjali N, Nadiya F and K K Sabu. Genome size estimation using flow cytometry in *Elettaria cardamomum* Maton. Proc. 16<sup>th</sup> All India Conference of Cytology and Genetics and National Symposium on 'Gene, Environment and Health'. October 22-24, 2013. Dept of Botany, Kerala University, Thiruvananthapuram. Page 83-84.

Binoy Kurian, Vanila Varghese, Vishnu V. Nair, Hemanth Kumar A.S. and K.K. Sabu. 2013. Analysis of genetic diversity in an economic rattan palm, *Calamus thwaitesii* Becc. using SSR and ISSR markers. Proc. National Seminar on Tree Biotechnology 2013 organised at the Institute of Forest Genetics and Tree Breeding, Coimbatore from 23-24 September 2013. (Eds.) Madhumita Dasgupta, Rekha R. Warriar and R. Yasodha. Page 226-228.

Ashitha J Prakash, Anija T Anto, Anjali, N and K K Sabu. 2013. Genetic diversity among cardamom germplasm accessions assessed by SSR and ISSR analysis. Proceedings of the 25th Kerala Science Congress held at Technopark at Thiruvananthapuram during 29th January to 1st February 2013, pp. 263-265 (03-27).

Sabu, K.K., M. Kamarudeenkunju, N. Anjali, J.P. Ashitha, A.S. Hemanthkumar and P.N. Krishnan. 2012. Analysis of genetic diversity and identification of gender-specific ISSR markers in *Calamus thwaitesii* Becc. International Conference on Advances in Biological Sciences (ICABS). March 15-17, 2012. Dept of Biotechnology and Microbiology and Inter University Centre for Biosciences, Kannur University, Kannur.

Li Sze Lim; K. K. Sabu, Mee Siing Ngu; Md Atiqur Rahman Bhuiyan; Abdullah Mohammed Zain; Michael J. Thomson; Wickneswari Ratnam. 2009. Identification of quantitative trait loci for agronomic traits in an advanced backcross population between *Oryza rufipogon* Griff. and the Malaysian *Oryza sativa* L. cultivar MR219 and fine mapping. Proc. 8th Malaysia Congress on Genetics, 4-6 August 2009, Genting Highlands, Malaysia

Lim, L. S., Ngu, M. S., K. K. Sabu, Bhuiyan, M. A. R., Zain, A. M., Thomson, M. J., Wickneswari, R. 2009. Identification of quantitative trait loci for agronomic traits in an advanced backcross population between *Oryza rufipogon* Griff. and the Malaysian *Oryza sativa* L. cultivar MR219 and fine mapping. *Proceedings of 8th Malaysia Congress on Genetics*, 4-6 August 2009, Genting Highlands, Malaysia

Kokkal, K., P. Harinarayanan and K.K.Sabu. 2008. Wetlands of Kerala. In: *Proceedings of Taal 2007: 12th World Lake Conference* held at Jaipur. Pg.1889 to 1893

Ngu, M.S., Sabu K.K., Lim L.S. Abdullah M.Z., and Wickneswari R. 2007. Genetic structure of *Oryza rufipogon* Griff. in Malaysia. 6<sup>th</sup> Asian Crop Science Association Conference and 2<sup>nd</sup> International Conference on Rice for the Future. November 5-9, 2007. Queen Sirikit National Convention Center in Bangkok, Thailand.

Sabu K.K., Abdullah M.Z., Lim L.S. and Wickneswari R. 2005. Heritability and genetic variance estimates for yield and yield related traits in *Oryza rufipogon*/*O. sativa* F<sub>1</sub> and BC<sub>2</sub>F<sub>2</sub> families. 5<sup>th</sup> International Rice Genetics Congress held at International Rice Research Institute (IRRI), Manila in November 2005.

Lim, L.S., K.K. Sabu, R. Wickneswari and M.Z. Abdullah. 2005. Identification of QTLs for tillering ability in an inter-specific rice cross. *Plant & Animal Genomes XIII Conference*, January 15-19, 2005. Town & Country Convention Center, San Diego, USA.

Sabu, K.K. 2005. Using SAS Procedures to Estimate Genetic Variances and Heritability in a Rice Cross. Proc. of 19th Annual SAS User's Malaysia (SUM) Forum, Kuala Lumpur Convention Centre. 21 Sept 2005.

Geetha, B.S., K.K. Sabu and S. Seeni. 2003. Genetic variation in south Indian populations of *Phyllanthus amarus* Schum. & Thonn. (Euphorbiaceae) assessed using isozymes. Proceedings of the 15th Kerala Science Congress. 29-31 January 2003, Thiruvananthapuram, pp. 196-201.

Nadarajah, K., Song, B.K., Sabu, K.K. and Ratnam, W. 2003. The Use of microsatellite markers in physical and genetic mapping of Malaysian rice variety. *International Conference for Bioinformatics*, Penang Malaysia. Pg 111 (D003).

Lim L.S, Sabu K.K., Wickneswari R. and Abdullah M.Z. 2003. QTL identification of yield-related traits in a Malaysian rice cross. *Int Rice Conference*, 13-17 Oct 2003, Alor Setar, Malaysia

Wickneswari R., Lim L.S., Sabu K.K. and Abdullah M.Z. 2003. Improvement of grain yield using AB-QTL strategy in a Malaysian rice variety. Oral paper presented at the 14<sup>th</sup> National Biotechnology Seminar, 11-13 December 2003, Penang, Malaysia.

Wickneswari R., Sabu K.K., Lim L.S and Abdullah M.Z. 2003 Improvement of grain yield using advanced backcross QTL strategy in a Malaysian rice variety. *International Genetics Congress*, 6-11 Jul 2003, Melbourne, Australia.

Sabu, K.K. and Seeni, S. 2003. *In situ* and *ex situ* genetic diversity of *Andrographis paniculata* Nees populations from India. *Int Genetics Congress 2003*, 6-11 Jul 2003, Melbourne, Australia

Sabu, K.K. and S Seeni. 2001. PlantPack: a new software for analysis of diversity within *Andrographis paniculata*, an important medicinal plant, In: Proc. Kerala Science Congress (13th), January 2001, Thrissur pp. 688-690.

Sabu, K.K., S Seeni and G Sreekantan Nair. 2001. The application of Bioinformatics in bioprospecting of medicinal plant resources of Kerala. In: Proc. 13th Kerala Science Congress, January 2001, Thrissur. Theme Session: information Technology for Development - A Millennium Perspective, pp. 46-50.

Padmesh P., K.K. Sabu and S. Seeni. 1999. Analysis of genetic variations in *Andrographis paniculata* using isozyme and random amplified polymorphic DNA markers. Proc 11th Kerala Science Congress, 27 Feb.-1 Mar. 1999, Kasaragod- (India), pp. 95-100

Sabu, K.K. and S. Seeni. 1999. Development of a computer package for estimation of various plant molecules. *Symposium on Current Trends in Biology*, Indian Institute of Science, Bangalore. 27-28 Dec, 1999.

Sabu, K.K. and S. Seeni. 1998. Patterns of allozyme diversity in natural populations of *Andrographis paniculata* Nees. National Conference on Recent Trends in Spices and Medicinal Plant Research, Bose Institute, India, 2-4 April, 1998

Sabu, K.K. and S. Seeni. 1996. Biochemical characterization of intraspecific variations in *Andrographis paniculata* Nees. *International Symposium on Perspectives in Biochemistry and Molecular Biology*, Indian Institute of Science, Bangalore. 20-23 Nov, 1996.

#### Other Publications

- ENVIS Newsletter (Vol.1, Nos 1-4; Vol.2, Nos.1-2) (Member, Editorial Board)
- A handbook (in Malayalam) on water-related diseases prevalent in Kerala (Member, Project Team)
- Kalavastha Vyathianum (in Malayalam), a book on climate change (Member, Project Team)

- Proceedings of the ENVIS workshop held at Munnar on 2-3 April 2009 (Member, Editorial Board)

Home (index.php) > Research Programs (disease\_biology.php)  
> Transdisciplinary Biology (interdis.php)

---

Soniya E.V , PhD

Scientist G

-  [About Me \(scientist\\_bio.php?fid=43\)](#)
-  [Research \(scientist\\_research.php?fid=43\)](#)
-  [Publications \(scientist\\_publication.php?fid=43\)](#)
-  [Team \(scientist\\_team.php?fid=43\)](#)
-  [Alumni \(scientist\\_alumni.php?fid=43\)](#)
-  [Contact \(scientist\\_contact.php?fid=43\)](#)





## Profile

---

I am interested in understanding the molecular mechanisms working behind the interactions of plants with both biotic and abiotic factors, especially the plant-pathogen interactions and plant stress responses, and the molecular details of metabolic pathways for the production of secondary metabolites.

# Academic Positions

---

## Scientist G

Rajiv Gandhi Centre for Biotechnology

^

# Education

---

PhD Botany 1995

Department of Botany, University of Kerala

# Awards

---

2019

National Woman Bioscientist Award, DBT

Fellow, National Academy of Science India

2007-2008

INSA/DFG visiting Scientist in Max Planck Institute of Chemical Ecology, Jena, Germany

Fellow, National Academy of Biological Sciences

2017

Best Woman Scientist, National Academy of Biological Sciences

Fellow, Kerala Academy of Sciences

## Patents

---



Primers for developing genotype specific marker in *Piper nigrum*. 3377/DEL/2005



## Memberships

---



Member, *Indian Society of Cell Biology*



Member, *Society for Plant physiology and Biochemistry*



Member, *Kerala Academy of Sciences*



Member, *Society for Biotechnologists (INDIA)*



Member, *National Academy of Science India*

## CONTACT

Rajiv Gandhi Centre for Biotechnology (RGCB),  
Thycaud Post, Poojappura,  
Thiruvananthapuram - 695 014, Kerala, India

+91-471-2529400 | 2347975 | 2348753

+91-471-2348096

webmaster@rgcb.res.in

## RESOURCES

[GST \(gst.php\)](#)

[RTI \(rti.php\)](#)

[CVO \(cvo.php\)](#)

[Annual Report \(annualreports.php\)](#)

[IR@RGCB \(http://rgcb.sciencecentral.in/\)](http://rgcb.sciencecentral.in/)

[RGCB Brochure \(brochure.php\)](#)

[Gallery \(gallery.php\)](#)



## QUICK LINKS

[RGCB E-Learning \(moodle\)](#)

[Site Map \(sitemap.php\)](#)

[Help \(help.php\)](#)

[Terms & Conditions \(terms.php\)](#)

[Policies \(site\\_policies.php\)](#)

[Contact Us \(how-to-reach.php\)](#)



(<https://www.facebook.com/rgcbindia>) (<https://twitter.com/rgcbindia>) (<https://www.youtube.com/channel/UCQ831964606683>) (<https://plus.google.com/1045521128363964606683>) (<mailto:rgcb@rgcbindia.org>)

[india.gov.in/](http://india.gov.in/)



[\(http://makeinindia.com/home/\)](http://makeinindia.com/home/)

**Incredible India**

[\(http://incredibleindia.org/\)](http://incredibleindia.org/)

**data.**  
Digitally Empowering

Last Updated on: July 29, 2021

### CERT-In Certified Website


This website belongs to Rajiv Gandhi Centre for Biotechnology (RGCB), Department of Biotechnology, Government of India.

©2021 All Right Reserved by RGCB

## Research Programs

Home (index.php) > Research Programs (disease\_biology.php)  
> Transdisciplinary Biology (interdis.php)

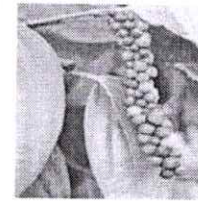
Soniya E.V , PhD  
Scientist G

-  [About Me \(scientist\\_bio.php?fid=43\)](#)
-  [Research \(scientist\\_research.php?fid=43\)](#)
-  [Publications \(scientist\\_publication.php?fid=43\)](#)
-  [Team \(scientist\\_team.php?fid=43\)](#)
-  [Alumni \(scientist\\_alumni.php?fid=43\)](#)
-  [Contact \(scientist\\_contact.php?fid=43\)](#)

## Research Summary

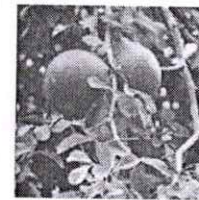
### Trans-Disciplinary Genomics Program

1. Plant Genomics and Metabolomics (plant-pathogen interactions, plant stress response and metabolic pathways for production of secondary metabolites.
2. India Genome Project (A Department of Biotechnology multi institute program on whole genome sequencing of Indian populations to create a detailed catalog of genetic variations.
3. Creation of an Indian DNA Fingerprint Database.



Characterization of the active molecular repertoire in the stress regulation of black pepper

Description of the study



Molecular characterization of plant type III polyketide synthase involved in the biosynthesis of medicinally important phenylpropanoids

Description of the study

## Current Research Grants

- |      |   |
|------|---|
| 2018 | Characterization of key structural genes involved in flavonoid synthesis in Indian Gooseberry, ( <i>Emblica officinalis</i> Gaertn) |
| 2015 | Kerala State Council for Science, Technology and Environment [KSCSTE]   |

2018 Cataloguing of micro RNAs and elucidation of its role in stress adaptation/response in  
black pepper  
2015  
Department of Biotechnology [DBT]

## Previous/ Completed Research Grants

1. Identification and functional validation of Type III PKS from *A. marmelos* involved in anthranilic acid derived alkaloid biosynthesis.  
Department of Science & Technology [DST] 2012-2015
2. Evaluation of differentially expressed miRNAs during biotic stress in black pepper.  
Council of Scientific and Industrial Research [CSIR] 2011-2014
3. A database of Type III Polyketide Synthase protein structures with specific catalytic function utilizing structural bioinformatic methods.  
Department of Information Technology, Government of India. 2008-2011
4. Genetic transformation of ginger to improve fungal resistance against *Pythium aphanidermatum*.  
Department of Science & Technology, Government of India 2007-2010
5. Isolation and full length cloning of abiotic stress induced CDPK gene and its promoter.  
Kerala State Council for Science, Technology and Environment [KSCSTE] 2006-2009
6. Tissue specific expression of antifungal gene in *Piper nigrum* L.  
Department of Biotechnology [DBT] 2005-2008
7. Genetic transformation studies in *Piper nigrum* L.  
Department of Biotechnology [DBT] 2002-2005
8. Expression of Hepatitis B surface antigen in *Cucumis sativus* L.  
Kerala State Council for Science, Technology and Environment [KSCSTE] 2002-2005
9. Improvement of spices crop by biotechnological intervention.  
Department of Biotechnology, Government of India (multi institutional)

10. Field evaluation of tissue cultured plants of spices and assessment of their genetic stability using molecular methods.

Department of Biotechnology, Government of India (Collaborative project with IISR)  
2000-2003

11. Developmental techniques for the mass multiplication of rare medicinal plants through in vitro methods.

NATP 2001-2004

### CONTACT

Rajiv Gandhi Centre for Biotechnology (RGCB),  
Thycaud Post, Poojappura,  
Thiruvananthapuram - 695 014, Kerala, India  
☎ +91-471-2529400 | 2347975 | 2348753  
📠 +91-471-2348096  
✉ webmaster@rgcb.res.in

### RESOURCES

[GST \(gst.php\)](#)  
[RTI \(rti.php\)](#)  
[CVO \(cvo.php\)](#)  
[Annual Report \(annualreports.php\)](#)  
[IR@RGCB \(http://rgcb.sciencecentral.in/\)](mailto:IR@RGCB)  
[RGCB Brochure \(brochure.php\)](#)  
[Gallery \(gallery.php\)](#)

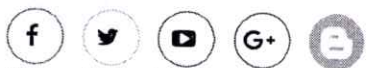
### QUICK LINKS

[RGCB E-Learning \(moodle\)](#)  
[Site Map \(sitemap.php\)](#)  
[Help \(help.php\)](#)

[Terms & Conditions \(terms.php\)](#)

[Policies \(site\\_policies.php\)](#)

[Contact Us \(how-to-reach.php\)](#)



(https://www.rajivgandhibiotechnologycentre.org/0158211288630640603)CQ)



(http://mygov.in/)



(http://pmnrf.gov.in/)

Last Updated on: July 29, 2021

**CERT-In Certified Website**

This website belongs to Rajiv Gandhi Centre for Biotechnology (RGCB), Department of Biotechnology, Government of India.

©2021 All Right Reserved by RGCB

preventive measures taken against the wide spreading of COVID 19, visitors will be permitted in JNTBGRI Garden.

## Biotechnology and Bioinformatics Division

Head of Division

### Mission and Vision



Conservation and sustainable utilization of plant genetic resources of the nation through biotechnological intervention, knowledge discovery and promoting lab-to-land programme.

[View Brochure](#)

Dr. William Decruze

Senior Scientist

### Major services offered

- Facility for *in silico* drug discovery
- Genetic diversity / phylogeny analysis
- Training / Project guidance / internships in Plant Tissue Culture, Bioinformatics, Molecular Bio
- Supply of quality planting materials including seeds of vegetables, coconut seedlings, and seeds of fruit plants etc.

### Scientists

Dr. S Sreekumar

Senior Scientist

Dr. K K Sabu

Senior Scientist

### Area of Research

- Conservation through biotechnology intervention mainly focusing on *in vitro* propagation, leaf restoration and/or cultivation of prospective medicinal plants, insect repellent plants, orchid, musa, cardamom, bamboos, etc; *in vitro*/cryobanking of endangered and endemic orchid medicinal plants of Western Ghats.
- Functional genomics and population genetics of rattans, cardamom, medicinal plants, etc. **More**
- Bioinformatics research focusing on validation of the efficacy of medicinal properties of selected plants through *in silico*, *in vitro* and *in vivo* screening and identification of lead molecules. **More>>**

Mr. M

Raveendran

Scientist

### Technical

#### Officers

Dr. A S

Hemanthakumar

Mrs. A

Shylajakumari

### List of important recent research findings

- The scientific validation of insect repellent properties of *Etingera fenellii* (an ethnobotanical repellent plant species of the Andaman Nicobar Islands) is being carried out.
- Accomplished chemical profiling of 12 accessions of 'sweet flag' (*Acorus calamus* L.) germ from the Western Ghats.
- Accomplished enhancement of anthocyanin production in suitable *in vitro* culture system (root) of *Ipomoea batatas* (L.) Lam.
- In vitro* regeneration studies and bio prospecting of all accessions of *Salacia* species across Western Ghats
- Established auxin induced root culture system in *Rubia cordifolia* Linn., an important medicinal plant.
- Secondary metabolite content in *Centella asiatica* has been enhanced through use of metabolic stimulants which resulted in around 6-fold increase in madecassoside levels whereas expression analysis showed an upregulation of approximately 50-fold. These findings were explored for better understanding of the regulation of terpenoid biosynthesis and biotechnological application for the increased production of these bioactive molecules.

### Supporting staff

Ms. V. S. Sindhu

Lab Assistant

Mrs. S.

Syamalakumari

Lab Attendant

- Developed database application packages and organised two database (1) "Plants, phytochemicals and medicinal plants", (2) Virtual herbarium of University of Kerala
- Evaluated anti-tuberculosis activity of *Anacardium occidentale*, *Passiflora edulis* and *Plectranthus vettiveroides* through *in silico* method.
- Identified leads against Dengue virus NS3 protease and host IMPDH2 from phytochemicals derived from 5 anti-dengue herbs. The results are communicated for publication.
- Studied the anti-hepatitis-C activity of selected medicinal herbs and identified lead molecules. Results are communicated for publication.
- Digitized 5000 herbarium specimens' images and data on the virtual herbarium database of the Department of Botany, University of Kerala as part of a joint herbarium digitizing programme between JNTBGRI and Department of Botany, University of Kerala.
- A total of 2374 phytochemicals from the selected nine plants viz. *Aegle marmelos* (L.) (L.) Merr., *Ananas comosus* (L.) Merr., *Annona squamosa* L., *Artocarpus heterophyllus*, *Carica papaya* L., *Limon* (L.) Osbeck, *Punica granatum*, *Syzygium aromaticum* (L.) Merr. & L.M.Perry, and *Tamarindus indica* L. were screened through *in silico* method against molecular targets of SARS-CoV-2 such as main protease (Mpro), spike protein, RNA dependent RNA polymerase (RdRp) and Angiotensin Converting Enzyme-2 receptor (ACE2) and identified potential lead molecules.

### Major programmes initiated/conducted recently

- In silico* evaluation of anti-SARS-CoV-2 activity in selected plant-derived nutraceuticals
- Virtual herbarium of the Department of Botany University of Kerala - A technology sharing programme initiated with the University of Kerala.
- Landscaping and gardening at G.V. Raja Sports School - An expertise sharing programme
- Species distribution modelling and bioprospecting of wild germplasm of *Salacia* species (highly medicinal plants) across the Western Ghats (National Medicinal Plant Board, Govt of India)
- Utility of Semicomplex and screening of ethno botanical insect repellent plant species from Andaman Nicobar Islands in pest/insect management and its popularization as an eco-friendly product (Plan funded program)
- Exploration of Banana Biodiversity and its Biotechnological Research in Nagaland (DBT, Govt of India)
- Enhancement of anthocyanin production in suitable *in vitro* culture system (cell / root) of *Ipomoea batatas* (L.) Lam. (PDF program, DST, Govt. of India)

### External funded projects on-going

Name of Project	Funding Agency	Amount
Species distribution modelling and bioprospecting of wild germplasm of <i>Salacia</i> species (highly medicinal plants) across the Western Ghats	NMPB, GOI	33.2304 (16.6152lakhs JNTBGRI and 16.6152lak for IIHR)
Exploration of Banana Biodiversity and its Biotechnological Research in Nagaland	Dept. of Biotechnology, Govt. of India	27.63
Population structure and genetic variability analysis of <i>Cullenia exarillata</i> populations in Western Ghats	Science and Engineering Research Board, DST, Govt. of India	32.18



Analysis of genetic diversity, development of sex linked SCAR markers and marker-assisted selection of Asian Palmyra palm ( <i>Borassus flabellifer</i> L., Arecaceae)	Dept. of Biotechnology, Govt. of India	22.34
Digitization of Botanical Herbarium of the Department of Botany, University of Kerala	University of Kerala	10
Landscaping and Gardening in the G.V. Raja sports school campus	Directorate of Sports & Youth Affairs, Govt. of Kerala	49.98

## Recent Papers in Journals

1. Sreeja Devi P S, Neethu S Kumar, K K Sabu. 2021. Phytochemical profiling and antioxidant activity in different parts of *Artocarpus heterophyllus* Lam. (Moraceae): A review on current status of knowledge. *Future Journal of Pharmaceutical Sciences* 7, Article number: 30. Springer Nature Publishers. Publ 28 January 2021. <https://doi.org/10.1186/s43094-021-00178-7>
2. Shefin Basheera, S. Sivanandan\* and B. C. Kamalan (2021). Anti-Tuberculosis Activity in *Punica granatum*: *In silico* Validation and Identification of Lead Molecules. *Indian J Pharm Sci* 2021;83(2): 321, DOI: 10.36468/pharmaceutical-sciences.778. IF 0.721
3. Goh W L, S Sungkaew, A Teerawatananon, D Ohrnberger, E A Widjaja, K K Sabu, B Gopakumar, K Koshi, N-H Xia, K M Wong. 2020. The phylogenetic position and taxonomic status of the Southeast Asian bamboo genera *Neohouzeaua* and *Ochlandra* (Poaceae: Bambusoideae). *Phytotaxa* 4 (2): 107–122. <https://doi.org/10.11646/phytotaxa.472.2.2>
4. Gouri, P. R., Jisha, S., and K. K. Sabu. 2020. Dataset on Discovery of MicroRNAs in *Centella asiatica* (L.) Urb. Data in Brief 106451. Available online 22 October 2020. <https://doi.org/10.1016/j.dib.2020.106451>
5. Arun R P, C T Riyas, K K Sabu. 2020. A review on the unexplored and underutilized *Arenga* species in India. *Current Botany*. 11: 226-232. Published online: 2 December 2020. <https://doi.org/10.25081/cb.2020.v11.6252>
6. Sreeja Devi P S, Neethu S Kumar and K K Sabu. 2020. Total phenolics, flavonoid contents and antioxidant potential by DPPH scavenging activity in different varieties of *Artocarpus heterophyllus*: (Jackfruit) from southern districts of Kerala. *Journal of Advanced Scientific Research* 11 (4) Suppl
7. Siju S. and K. K. Sabu. 2020. Genetic resources of Asian Palmyrah palm (*Borassus flabellifer* L.): comprehensive review on diversity, characterization and utilization. *Plant Genetic Resources*. Published online: 08 January 2021. <https://doi.org/10.1017/S1479262120000477>
8. Seeja G and Sreekumar S (2020) A review on cybrids: An approach for plant improvement. *Crop Science* 55(1&2):48-56. DOI:10.31830/2454-1761.2020.011. IF:1.2
9. Seeja G and Sreekumar S (2020) Doubled haploids in genetic improvement: A review. *International Journal of Recent Scientific Research* 11(1):36941-36949. DOI: 10.36468/ijrsr.2020.1101.5029. IF: 7.383

<http://dx.doi.org/10.24327/ijrsr.2020.1101.5029>. IF: 7.383

## Recent Book chapters published:

1. Shefin B, Sreekumar S and Biju C.K. *In silico* Evaluation of Anti-SARS CoV-2 Activity of *Punica granatum* L. *Phytochemicals Chukwuebuka Egbuna* (ed) in *Coronavirus Drug Discovery*, Elsevier press)
2. *In Vitro* Multiplication and Conservation of Threatened Medicinal Plants of Western Ghats of India (RADHA RK). 2020. In: Rajasekharan PE., Wani S. (eds) *Conservation and Utilization of Threatened Medicinal Plants* Springer, Cham. [https://doi.org/10.1007/978-3-030-39793-7\\_7](https://doi.org/10.1007/978-3-030-39793-7_7)
3. Satheesan, J., & Sabu, K. K. (2020). Endophytic Fungi for a Sustainable Production of Major Bioactive Compounds. In *Plant-derived Bioactives* (pp. 195-207). Springer, Singapore.
4. Anjali N & Sabu K K (2020). Role of miRNAs in biotic and abiotic stress management in crop plants. In: *Sustainable Agriculture in the Era of Climate Change*. Edited by R. Roychowdhury (Springer Nature USA). Pp. 513-532. [https://doi.org/10.1007/978-3-030-45669-6\\_22](https://doi.org/10.1007/978-3-030-45669-6_22)
5. Jisha S & Sabu K K (2020). Endophytic Fungi for a Sustainable Production of Major Plant Bioactive Compounds. In: *Plant-derived Bioactives: Production, Properties and Therapeutic Applications*. Edited by Dr. Mallappa Kumara Swamy. [https://doi.org/10.1007/978-981-15-1761-7\\_8](https://doi.org/10.1007/978-981-15-1761-7_8). First Online May 2020.
6. Nadiya F & Sabu K K (2020). Small RNA manipulation in plants: Techniques and recent developments. In: *Plant Small RNA: Biogenesis, Regulation and Application*. <https://doi.org/10.1016/B978-0-12-8170001-8-3>

## Recent Awards/Honours:

Keerthi Sugathan has bagged the best poster presentation award in Biotechnology for the paper titled "*In silico* evaluation of anti-SARS COV-2 activity in *Aegle marmelos*." in the 33rd Kerala Science Congress held from 25 to 30 January, 2021.

## Recent Ph. Ds. awarded

Name of Candidate	Title of Thesis	University
Anju Sudhakaran	<i>Ex situ</i> conservation and Chemical characterization of <i>Etilingera fenzlii</i> (Kurz) Skronick & M.Sabu (Zingiberaceae) - The honey bee repellent endemic plant species of the Andaman Nicobar Islands	University of Kerala
Deepa V	Bioprospecting of selected medicinal plants for viper anti-venom drug	University of Kerala

You are here: Home > Research > Biotechnology and Bioinformatics Division



2020 © KSCSTE - JNTBGRI

## Contact

[www.linkedin.com/in/dr-preetha-ts-5a02071b9](https://www.linkedin.com/in/dr-preetha-ts-5a02071b9) (LinkedIn)

# Dr Preetha TS

Assistant Professor at University College, Thiruvananthapuram  
Thiruvananthapuram

## Experience





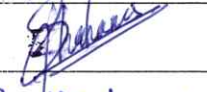
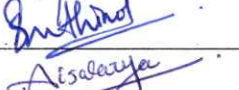
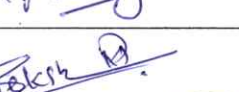
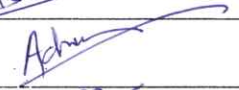
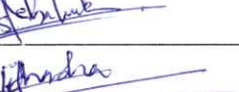
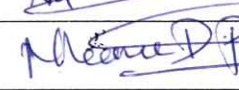
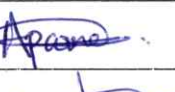






University College, Thiruvananthapuram  
Assistant Professor

---

Kerala Biotechnology Commission Sponsored  
Hands-on training on Plant Tissue Culture techniques and Applications  
2<sup>nd</sup> to 12<sup>th</sup> August 2017

Attendance Sheet

Date : 8-8-2017

Sl.No	Name	Signature
1	Deepak v	
2	Saikrishna	
3	Sona S	
4	Krishna Priya	
5	Neeraja Suresh	
6	Shahanas Basheer	
7	Sruthimol C Bhasi	
8	Aiswarya S	
9	LekshmiSanthosh	
10	Aswathy Mohan	
11	Surya B S	
12	NehaLukose	
13	NidhisaSali S	
14	Meenu D Pillai	
15	Aparna K V	
16	Greeshma Radhakrishnan	
17	C Charankumar	
18	V Prabhu	

19	Chandhni Jagadeesan	<u>Chandni</u>
20	Dinu P S	<u>Dinu</u>
21	Melna E S	<u>Melna</u>
22	ShriramNath V L	<u>Shriram</u>
23	Sreelakshmi R	<u>Sreelakshmi</u>
24	Lekshmi R	<u>Lekshmi</u>
25	Amal Anand	<u>Amal</u>
26	Parvathy Nandakumar	<u>Parvathy</u>
27	Lekshmi S Kumar	<u>Lekshmi</u>
28	Parvathy J	<u>Parvathy</u>
29	Athira Rajan	<u>Athira</u>
30	Anaswara Syam	<u>Anaswara</u>
31	Anjumol K P	<u>Anjumol</u>
32	Maria Joy	<u>Maria</u>
33	Gayathri U	<u>Gayathri</u>
34	Litty Thomas	<u>Litty</u>
35	Elma Susan Reji	<u>Elma</u>
36	Ambili M Thomas	<u>Ambili</u>
37	Aleena T Mathews	<u>Aleena</u>
38	Boby George	<u>Boby</u>

39	Athira Krishnan R	<u>Athira</u>
40	Kavya Krishna	<u>Kavya</u>
41	Preena S Parvathy	<u>Preena SP</u>
42	Swathika Ajith	<u>Swathika</u>
43	Remya L	<u>Remya</u>
44	Sneha S Nair	<u>Sneha</u>
45	Rahmath Khadin	<u>Rahmath</u>
46	Veniraj	<u>Veniraj</u>
47	Krishna R Pillai	<u>KRPillai</u>
48	Likhitha L	<u>Likhitha</u>
49	Neema R Soman	<u>Neema</u>
50	Aswathy Viswam	<u>Aswathy</u>
51	Athira K S	<u>Athira</u>
52	Semina Haneef	<u>Semina</u>
53	Anu Sathyan	<u>Anu</u>
54	Arya S Vijayan	<u>Arya</u>
53	Fathima Beevi S	<u>Fathima</u>
55	Gayathri R Chandran	<u>Gayathri</u>



GN Ramachandran Science Club,  
School of Biosciences, MACFAST organizes



## Meet The Entrepreneur: How to start a startup company

Resource Person

**Dr. C.N Ramachand**  
CEO, Saksin Lifesciences Pvt. Ltd,  
Chennai, Tamilnadu

20<sup>th</sup> September 2017  
TIME: 10 AM





MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALA

(MACFAST)

Thiruvalla - 689101

**GN Ramachandran Science club, School of Biosciences**

**Report on Seminar on Meet the Entrepreneur**

**Dr. C.N. Ramchand**

**20<sup>th</sup> September 2017**

The G N Ramachandran Science Club, MACFAST organized a seminar "Meet the entrepreneur" by Dr. C.N. Ramchand, CEO, Saksin Lifesciences Pvt. Ltd, Chennai, Tamilnadu, on 20<sup>th</sup> September 2017 at 10 am IST at MACFAST auditorium. Rev. Fr. Pradeep Vazhatharamalayil welcomed the resource person. The resource person gives a description on how to start a startup company. The talk highlighted the importance of starting a business and being a young entrepreneur. It was a highly participatory event in which 63 individuals participated and were able to get answers to their queries and concerns. Dr. Ramchand appreciated the awesome response received from the participants for this seminar. Prof. Biju D, HoD, School of Biosciences expressed vote of thanks to the resource person and appreciated this mind blooming session.

  
Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Tiruvalla- 689101, Kerala



Breesa  
Breesa Varghese  
coordinator  
G.N. Ramachandran  
science club.





**Change in Dr CN Ramchand talk reg**

1 message

**Biju Dharmapalan** <biju@macfast.org>

Sat, Sep 16, 2017 at 2:54 PM

To: faculty <faculty@macfast.org>, bioscience <bioscience@macfast.org>, Abraham Mulamoottil <principal@macfast.org>, Abraham Mulamoottil <a.mulamoottil@gmail.com>, Sanesh Pv <sanesh@macfast.org>

Dear Sir/Madam

The invited talk of **Dr CN Ramchand**, Chief Executive Officer, Saksin Lifesciences Pvt Ltd organized by **G N Ramachandran Science Club MACFAST** is rescheduled to 20th September 2017 at MACFAST auditorium from 2pm to 4 pm.

All are cordially invited

Biju

--

**Biju Dharmapalan**

**Head**

**School of Biosciences**

**Mar Athanasios College For Advanced Studies Tiruvalla (MACFAST)**

**(Accredited (First Cycle) by NAAC with 'A' grade)**

**Kerala, India-689 101**

www.macfast.ac.in / www.macfast.in

E-mail: biju@macfast.org / biju\_dharmapalan@yahoo.co.uk

**Mob: 09447121718**

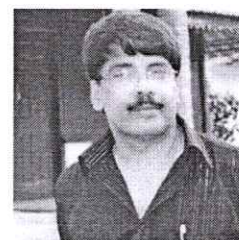
**Office : 0469 2730310**

**Fax : 0469 2730317**

## Photograph

### Name: Dr. CN Ramchand

- **CEO**, Saksin lifesciences Pvt. Ltd. Chennai, San Francisco and MagGenome technologies Pvt. Ltd., Cochin, Kerala
- **Advisor**, Scigenom labs Pvt. Ltd, Cochin, Kerala, Medgenome Inc., Bangalore, Karnataka, Theragen Biologics, Chennai, India, Theragen LifeSciences, Chennai, India
- **Director**, Thejo Engineering Limited, Accel Transmatic Limited, Accel Limited, Accel Media Ventures Limited



### Title of the talk:

- Drug discovery with special reference to NCE and Biologics (10 minutes)
  - Development of Anti VEGF antibodies Fab for Age related Macular dystrophy (20 minutes)
  - Development of magnetic nanoparticles based technologies for biomedical applications (20 minutes)
- How to start a “start-up” (10 minutes)

### Drug discovery with special reference to NCE and Biologics

Developing a new drug (NCE) from original idea to the launch of a finished product is a complex process. Typically it takes about 12–15 years and costs in excess of \$1 billion. The process for development of NCE is complex and time taking. However the recent advancements in Biotechnology based products has become a potent source of new drugs. These drugs include Biologics and Biosimilars.

### Development of Anti-VEGF antibodies Fab against Age related Macular dystrophy

Age-Related Macular Degeneration, often called AMD, is the leading cause of vision loss and blindness among people with age 60 and above. Age-related Macular Degeneration (AMD) affects an estimated 14 million people worldwide. We are developing an Anti-VEGF antibody Fab for treatment of AMD. Our approach for includes selection of high affinity Fabs using Phage display Technique. Phage display technology enables displaying of antibody libraries on phage particles that also encapsulate the encoding DNA.

### Development of naked magnetic nanoparticles based strategies for industrial applications

Magnetic nanoparticles have generated considerable research and commercial interest due to their unique properties and wide applicability. The unique properties include susceptibility to external magnetic field and biocompatibility. We have developed a number of technologies specifically with bare magnetic nanoparticles which are technically proficient and industrially viable.

## **How to start a “startup”**

Scientific and technical discoveries can reap rich dividends if they are executed wisely in the commercial space. Current market promotes young entrepreneurs and scientists to start ventures. However it is advisable to follow certain paths to success to attain higher efficiency. Various aspects like team building, seeking right advisers and looking for sources of funding are some crucial aspects herein. Having been associated with several startups; we can explain several critical aspects of “How to build a startup.

### **Dr. CN Ramchand: Brief CV**

Dr CN Ramchand, a British Citizen, is currently the President and CEO of Saksin life Sciences Pvt Ltd, a start-up biotech company as well as MagGenome labs Pvt. Ltd, Cochin. He is also a key Adviser to several companies including Scigenome labs, Medgenome Inc, Theragen lifesciences/Biologics and Director in Thejo Engineering and Accel Limited, Chennai. He earlier was the Director, at KEMIN Pharma, India (A subsidiary of Kemin Pharma Belgium BVBA) and was holding a simultaneous position as Director of Research and Development, Kemin Industries South Asia Pvt. Ltd., a part of Kemin Industries Inc, Des Moines, USA. Dr.Ramchand also was a WW executive team member at Kemin Industries. Prior to the assignment at Kemin Industries, Dr Ramchand was with Sun Pharmaceuticals, currently the largest Pharma company in India (as per OR G marg) as its Vice President and Head of Drug Discovery Research (Biological Research Programme) (1999-2004). He was closely involved in the setting up of a multimillion Drug Discovery centre including design and development of laboratories. Currently, Dr Ramchand is an Honorary Visiting Professor to European Nanotechnology consortium at University of Newcastle, UK. He is also an adjunct faculty, Visiting Professor and PhD guide at Swinburne University of technology, Australia along with Prof. Ajay Kapoor. Dr. Ramchand is currently also involved in development of a extensive PhD programmes for students in collaboration with Swineburne University and IIT Chennai through Scigenom labs, Cochin.

Dr.Ramchand is a PhD in Biochemistry from MS University Baroda. He also served as assistant professor (1982-84) at MS University. He has also obtained his M Phil from the same university. He did his Bachelors degree in Chemistry at S.D College, Alleppey from 1972 -75. He holds a Masters degree in Chemistry from the University of Kerala. He has also won the Young Scientist award from Charing Cross and Westminster Medical School, UK for 3 times, for the work in the role of membrane pathology in schizophrenia and the development of EPA as a therapy for schizophrenia. He has extensive experience in basic research activities, having handled prestigious projects in the US&UK, both Universities and in the Pharma Industry. He has over 25 years of rich experience in the areas of teaching, basic research, Drug discovery programme and disease mechanisms, guiding M Sc. / Ph D. students and setting up Research facility.

Dr.Ramchand has published over 70 peer-reviewed papers in international journals, edited 5 books, has 3 patented products and has applied for over 15 patents. He has done over 100 research presentations at International conferences worldwide and was also a senior Visiting fellow at University of Sheffield and University of New Castle Upon-Tyne, UK, and at Slovakian Academy of Sciences, Slovak Republic. He has a very close research association with State University of New York at Buffalo, USA, Florida International University and also is an adjunct faculty and PhD guide at the MS University of Baroda. Dr Ramchand was the special invitee at the Vibrant Gujarat

organized by Chief Minister Narendra Modi, to give a special lecture on nano biotechnology to over 2000 select CEOs and business leaders(2006) and later on 2008 on role of nutrition in disease prevention . He was an invitee to chair and present a plenary talk at the 11th International conference on magnetic fluid at Slovak Republic. He was a special invitee to give a talk at IIM Ahmedabad on Nanotechnology in September 07 and has been invited again by IIM to give a talk during the workshop on Strategic Management of Intellectual Capital and Organisational Knowledge in September 10.

20/09/17


63

Seminar by Dr CN Ramchand on the topic  
"How to start start-up companies"

1	Elma Susan Reji	S <sub>3</sub> BT	Elma
2	Bhavya Xavier	S <sub>3</sub> BC	Bhavya
3	LEKSHMI DEVI J.C	S <sub>3</sub> BC	Lekshmi
4	Syifa S.P	S <sub>3</sub> BC	Syifa
5	Sora Treasa Mathew	S <sub>3</sub> FST	Sora
6	Ammu Bejoe	S <sub>3</sub> FST	Ammu
7	Ancha V.L	"	Ancha
8	Jesla John	"	Jesla
9	Renu John	"	Renu
10	Priya Elizabeth Francis	"	Priya
11	Teena Joseph	"	Teena
12	Ammu George	S <sub>3</sub> BI	Ammu
13	Nadiya Nazee	S <sub>3</sub> FST	Nadiya
14	Albira Krishnan R	"	Albira
15	Mercy Jose	S <sub>3</sub> FST	Mercy Jose
16	Varsha S S	S <sub>3</sub> BC	Varsha
17	Lekshmi Kumar	S <sub>3</sub> PBT	Lekshmi
18	Vinitha Francis	S <sub>3</sub> BC	Vinitha
19	Anjumol K.P	S <sub>3</sub> BT	Anji
20	Grace Samuel	S <sub>3</sub> BIF	Grace
21	Chinju Varghese	S <sub>3</sub> BC	Chinju
22	Binsu Bose	S <sub>3</sub> BC	Binsu
23	Reshma Shaji	S <sub>3</sub> BC	Reshma
24	Gayathri V	S <sub>3</sub> BT	Gayathri
25	Anju C Anand	S <sub>3</sub> BC	Anju
26	Daliya Simon	S <sub>3</sub> BIF	Daliya
27	Parvathy Nandakumar	S <sub>3</sub> PBT	Parvathy
28	Parvathy J	S <sub>3</sub> PBT	Parvathy
29	Maria Joy P	S <sub>3</sub> BT	Maria
30	Anaswara Syam	S <sub>3</sub> PBT	Anaswara
31	Kesiya Joy	S <sub>3</sub> BI	Kesiya

32.	Dilna T	S <sub>3</sub> BI	Dilna
33	Swaya. B. S	S <sub>1</sub> PBT	<del>Swaya</del>
34	Neha Lukose	S <sub>1</sub> PBT	<del>Neha</del>
35	Bhagya Vijayan	S <sub>3</sub> FST	<del>Bhagya</del>
36	Ria Elka Varghese	S <sub>3</sub> BC	<del>Ria</del>
37.	Dhanu. S. Lakshmi	S <sub>3</sub> FST	<del>Dhanu</del>
38.	Jain Sarah Jacob	S <sub>3</sub> FST	<del>Jain</del>
39.	Abhisami. S. Nair	S <sub>3</sub> FST	<del>Abhisami</del>
40.	Ansu. Mary George	S <sub>3</sub> FST	<del>Ansu</del>
41.	Denna Mary Tom	S <sub>3</sub> FST	<del>Denna</del>
42.	Athira Rajan	S <sub>3</sub> PBT	<del>Athira</del>
43.	Rakursath. A. S	S <sub>3</sub> BC	<del>Rakursath</del>
44.	Arathi Ben	S <sub>3</sub> FST	<del>Arathi</del>
45.	Sonja philip	S <sub>3</sub> BC	<del>Sonja</del>
46.	Aswin Sajeev	S <sub>3</sub> FST	<del>Aswin</del>
47.	Abhyth. M. Anandhan	S <sub>3</sub> BI	<del>Abhyth.</del>
48	Sibin Babu	S <sub>3</sub> BI	<del>Sibin</del>
49	Muhammad Jasir	S <sub>3</sub> FST	<del>Muhammad</del>
50	BINIL ANAS	S <sub>3</sub> FST	<del>Binil</del>
51	MATHAI MATHAN	S <sub>3</sub> FST	<del>Mathai</del>
52.	Jubis. J. Kanchigil	S <sub>3</sub> PMT	<del>Jubis</del>
53.	VISHNU. C.	S <sub>3</sub> FST	<del>Vishnu</del>
54.	AMALANAND.	S <sub>3</sub> PBT	<del>Amalanand</del>
55	Nikhil. A. N	S <sub>3</sub> FTQA	<del>Nikhil</del>
56	Litty Thomas	S <sub>3</sub> BT	<del>Litty</del>
57	Bigy. D		<del>Bigy</del>
58.	Dr. Arun K. Das		<del>Dr. Arun</del>
59	Dr. Jenny Jacob		<del>Dr. Jenny</del>
60	Ms. Pinchu		<del>Ms. Pinchu</del>
61	Ms. Tresa		<del>Ms. Tresa</del>
62	Ms. Sini		<del>Ms. Sini</del>
		63. Sherry.	<del>Sherry</del>

Dr. C. N. Ramchand is the CEO of  
Saksin Life Sciences Pvt. Ltd.  
Chennai.

  
20/2/17



# A Day with an Entrepreneur



Resource Person

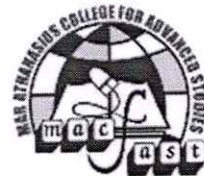
**Dr. Muhammed Majeed**

Founder and Managing Director  
Sami Labs Limited, Bangalore

---

**Date : 30<sup>th</sup> October 2017**

Organised By  
GN Ramachandran Science Club,  
School of Biosciences, MACFAST



## GN Ramachandran Science club, School of Biosciences

### Report on "A Day with an Entrepreneur"

Dr. Muhammed Majeed

30 October 2017

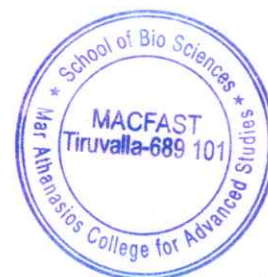
The G.N Ramachandran Science club conducted an invited lecture on "A Day with an entrepreneur" on 30<sup>th</sup> October 2017 at the college auditorium. Dr. Muhammed Majeed, Founder and Managing Director of Sami Labs Limited, was the distinguished speaker of the day. Sami Labs Ltd, is a research oriented multinational health science company, which is a leading producer of nutraceuticals, cosmeceuticals, standardised herbal extracts, fine chemicals, specialty chemicals and probiotics, based in Bengaluru and having many International patents to their credit.

Dr. Muhammed Majeed was born and raised in the state of Kerala. His desire to establish himself not just as a scientist but also as an entrepreneur drove him to venture outside of his home country. So in 1975, after obtaining his degree in pharmacy, he proceeded to USA where he completed his MS in Industrial Pharmacy from Long Island University, New York after which he took his doctorate in the same field from St John's University, New York. Then he gained valuable experience working in Pfizer Inc, Carter-Wallace and Paco Research.

Dr. Muhammed Majeed's talk was attended by approximately 95 students. The talk emphasised the necessity of starting a business and being an entrepreneur. He also guided students to the subject of medicines and fine chemicals research. It was a highly participatory event in which individuals were able to get answers to their questions and concerns.

*Bless*  
*Tareesa Vasghere*

  
Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Tiruvalla- 689101, Kerala







## **Resource Person Profile**

**Dr. Muhammed Majeed**

**Founder and Managing Director**

Dr. Muhammed Majeed Founder and Managing Director of Sami Labs Ltd. was born and brought up in Kerala (India) till his undergraduate studies in pharmacy. He earned B.Pharm. in 1975, and proceeded to U.S. for higher studies. He earned M.S. in Industrial Pharmacy from Long Island University, NY, U.S.A. and doctorate from St. John's University, NY, U.S.A. After working for some leading companies in U.S. like Pfizer Inc., Carter-Wallace and Paco Research, he became an entrepreneur in 1988 by establishing Sabinsa Corporation in U.S.A.

Dr. Muhammed Majeed realized the importance of manufacturing Nutraceuticals and Cosmeceuticals and started Sami Labs Ltd. in Bangalore, India in 1991 to fulfill this ambition. While this company was growing up as a global leader, he started Organica Aromatics in Bangalore, India in 1999 for manufacturing Fragrance and Flavors.

Dr. Muhammed Majeed set up world class R&D laboratories in Peenya Industrial Area, Bangalore in 1998 to make innovative products in Nutraceuticals, Cosmeceuticals, Aroma chemicals and Specialty chemicals.

Synthetic chemistry, Phytochemistry, Cosmetics R&D, Analytical R&D, Bioresearch, Tissue culture, Biotechnology, Food technology, Nanotechnology and Formulation labs support these product development efforts.

Having established our expertise in Extractions, Purification of natural products, Total synthesis of natural products and their analogues, Chiral intermediates, Biotransformations, new Analytical and Bio-analytical method developments, we now float Sami Specialty to cater to the needs of customers all over the world to supply compounds of their interest from our library of compounds.

G N Ramachandran Science Club Invited lecture by Dr Muhammed Majeed

Biju Dharmapalan <biju@macfast.org>  
to Faculty @biotechnology, beemakunimamad@, yaseen@rediffmail.com; Blessant, Jenifer

Mon, Oct 15, 2017, 10:29 AM

Dear Sir/Madam,

The G N Ramachandran Science Club MACFAST is organizing an invited lecture by Dr. Muhammed Majeed, Founder & Managing Director of Sami Labs Limited on 30th October at MACFAST auditorium from 10am onwards.

Dr Majeed is heading Sami Labs which has presence and strategic alliances in USA, Europe, Japan, Australia, Middle East, South Africa, China, Vietnam, and Philippines. The global revenue of the company stood at USD 65 million (for 2009), with an employee strength of 150 people Internationally, more than 750 in India and over 110 scientists worldwide.

His lecture will be mainly targeting Biosciences and MBA students.

We cordially invite all of you for the lecture.

Warm regards,  
Biju

30°C Light rain 14:22 13-07-2021

30/10/17.

Invited Lectures by Dr. Muhammed Nazeem  
on 'A Day with an Entrepreneur.'

1)	Elina Susao Reji	S <sub>3</sub> BT	<del>Elina</del>
2)	Ambili M Thomas	S <sub>3</sub> FST	<del>Ambili</del>
3)	Litty Thomas	S <sub>3</sub> BT	<del>Litty</del>
4)	Anju C. Anand	S <sub>3</sub> BC	<del>Anju</del>
5)	Gayathri V	S <sub>3</sub> BT	<del>Gayathri</del>
6)	Binsu Bax.	S <sub>3</sub> BC	<del>Binsu</del>
7)	Preshma Shaji	"	<del>Preshma</del>
8)	Chinju Varghese	"	<del>Chinju</del>
9)	Archa U.L	S <sub>3</sub> FST	<del>Archa</del>
10)	Sara Theasa	"	<del>Sara</del>
11)	<del>Archa</del> Anoush Bejee	"	<del>Archa</del>
12)	Jeta John	"	<del>Jeta</del>
13)	Maria jey	S <sub>3</sub> BT	<del>Maria</del>
14)	Jenya jey	S <sub>3</sub> BIF	<del>Jenya</del>
15)	Dina T	S <sub>3</sub> BIF	<del>Dina</del>
16)	Alena T. Mathews	S <sub>3</sub> FST	<del>Alena</del>
17)	Manija Madhu	S <sub>3</sub> FST	<del>Manija</del>
18)	Teena Joseph	S <sub>3</sub> FST	<del>Teena</del>
19)	Nadiya Nazeem	S <sub>3</sub> FST	<del>Nadiya</del>
20)	Boby George	S <sub>3</sub> FST	<del>Boby</del>
21)	Muhammad Jaisir	S <sub>3</sub> FST	<del>Muhammad</del>
22)	Ria Elza Varghese	S <sub>3</sub> BC	<del>Ria</del>
23)	Lekshmi Devi J.C.	S <sub>3</sub> BC	<del>Lekshmi</del>
24)	Sujda S.P	S <sub>3</sub> BC	<del>Sujda</del>
25)	Varsha S.S	S <sub>3</sub> BC	<del>Varsha</del>
26)	Bhanya Xavier	S <sub>3</sub> BC	<del>Bhanya</del>
27)	Grace Samuel	S <sub>3</sub> BIF	<del>Grace</del>
28)	Dalija Simon	S <sub>3</sub> BIF	<del>Dalija</del>
29)	Surya B.S	S <sub>1</sub> PBT	<del>Surya</del>
30)	Neha Lukose	S <sub>1</sub> PBT	<del>Neha</del>
31)	Riceesh Milton.	S <sub>1</sub> BT	<del>Riceesh</del>

32.	Jain Sarah Jacob.	S, FST	<del>Jain Sarah</del>
33.	Bhageya Vajayan	"	<del>Bhageya</del>
34.	Lekshmi. S. kumar	S, PBT	<del>Lekshmi</del>
35.	Akhil Seva	S, FST	<del>Akhil</del>
36.	Vishnu. C	"	<del>Vishnu</del>
37.	Nikhil. A.N	"	<del>Nikhil</del>
38.	Rathesh. G	S, FST	<del>Rathesh</del>
39.	Anil. T. Kumar	S, FST	<del>Anil</del>
40)	Vijeta. V	S, FST	<del>Vijeta</del>
41)	Ribu Dilshad. PP	S, FST	<del>Ribu</del>
42)	ATHUL. K	S, FST	<del>Athul</del>
43)	APPUS. M.V	S, PBT	<del>Appus</del>
44)	Mohammed Saheed	S, FST	<del>Mohammed</del>
45)	Abhisek. A	S, BC	<del>Abhisek</del>
46)	ANUR. P.K.	S, PH400	<del>Anur</del>
47)	Chippy. Mathew	S, FST	<del>Chippy</del>
48)	Shan Elizabeth Rajan	"	<del>Shan Elizabeth</del>
49)	Aryanna Krishna.	"	<del>Aryanna</del>
50.	AYANA ASHOK	S, FST	<del>Ayana</del>
51	SUSANNA JOY	S, FST	<del>Susanna</del>
52	SREELESHMI B.S	S, FST	<del>Sreeleshmi</del>
53	Keerthana Roop	S, FST	<del>Keerthana</del>
54.	ATHIRA RAJAN	S, FST	<del>Athira</del>
55)	Shirin Sabu Thomas	S, FST	<del>Shirin</del>
56.	Arya C. Milra	S, FST	<del>Arya</del>
57.	Sanjetha Daman.	S, PBT	<del>Sanjetha</del>
58.	CHRISTEENA SIBY	S, FST	<del>Christeena</del>
59	LJATTY ELSA ABRAHAM	S, FST	<del>Ljatty</del>
60.	MISHEL ELIZABETH	S, FST	<del>Mishel</del>
61.	fathima Rabim. S.R	"	<del>Fathima</del>
62.	Fathima Nazim.	"	<del>Fathima</del>
63.	Vardana. S. Kumar	"	<del>Vardana</del>
64	Ashira Thomas	S, PBT	<del>Ashira</del>
65.	Athira Aravind	S, BC	<del>Athira</del>

66.	Jessija Jacob	S <sub>1</sub> PMS	Jessija
67.	Gopika Raj. P.	S <sub>1</sub> FBT	Gopika
68.	Remita M. Shafahan	S <sub>1</sub> FBT	Remita
69.	Anya Sush	S <sub>1</sub> PBT	Anya
70.	Ajmi S	S <sub>1</sub> PBT	Ajmi
71.	Kamalapriya H	"	Kamala
72.	Jinsa Sara Kusian	S <sub>1</sub> PBT	Jinsa
73.	Neeraj Krishnan	S <sub>1</sub> BC	Neeraj
74.	Soreya Antony	S <sub>1</sub> BT	Soreya
75.	Aneetha S. Kumar	S <sub>1</sub> BC	Aneetha
76.	Akshaya S. S	S <sub>1</sub> BC	Akshaya
77.	Anju Jose	S <sub>1</sub> BC	Anju
78.	Anjali G.	S <sub>1</sub> BC	Anjali
79.	Durga Venugopal	S <sub>1</sub> BT	Durga
80.	Stella Stanley	S <sub>1</sub> BT	Stella
81.	Ashley Mary Jose	S <sub>1</sub> BC	Ashley
82.	Athira Rajan	S <sub>2</sub> PBT	Athira
83.	Anaswara Syam	S <sub>2</sub> PBT	Anaswara
84.	Parvathy Naradkumar	S <sub>2</sub> PBT	Parvathy
85.	Parvathy J	S <sub>2</sub> PBT	Parvathy
86.	Athira P. Anil	S <sub>1</sub> BIF	Athira
87.	Jeeba S. Babu	S <sub>1</sub> BC	Jeeba
88.	Ajali Prakash	S <sub>1</sub> BC	Ajali
89.	Vinita Francis	S <sub>2</sub> BC	Vinita
90.	Anjumol K.P	S <sub>2</sub> BT	Anjumol
91.	Anjali S	S <sub>2</sub> BC	Anjali
92.	Innu S. George	S <sub>2</sub> BT	Innu
93.	Blessan	family	Blessan
94.	Linas	S <sub>1</sub> B101/102	Linas
95.	Charndini	S <sub>1</sub> BT	Charndini

School of Biosciences Organizes  
Training Programme on



# *Chocolate Making for Prospective Entrepreneurs*

**Resource Person** Ms. PINCHU ELIZABETH

**10<sup>th</sup> November 2017 - 11<sup>th</sup> November 2017**





MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALA  
(MACFAST)

Thiruvalla - 689101

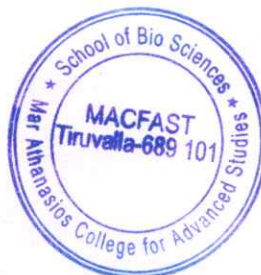
Workshop on "Chocolate making for prospective entrepreneurs"

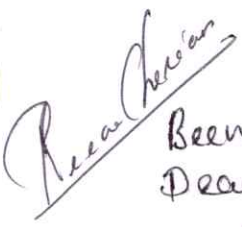
School of Biosciences

10<sup>th</sup> and 11<sup>th</sup> November 2017

As per the study reports of 2016, more than two hundred thousand tonnes of chocolate have been consumed in a year and highlights the possibility of exploiting this passion for chocolate into a rewarding business opportunity. The market value for chocolate opens up an ideal opportunity for women entrepreneurs and to those who wish to start a low-investment small-scale business. Taking this into account MACFAST has conducted a training program on chocolate making on the 10<sup>th</sup> and 11<sup>th</sup> of November 2017 to encourage and guide and inspire aspiring entrepreneurs for getting into the chocolate-making business. MACFAST has conducted a training program on Chocolate making on the 10<sup>th</sup> and 11<sup>th</sup> of November 2017. The hands-on training was coordinated by Mrs. Pinchu Elizabeth Thomas, School of Biosciences. Mr. Biju Dharmapalan gave a small introductory talk on the opportunity of using chocolate in business start-ups. Students from the department worked as volunteers during the workshop. A total of 6 participants attended the training program to start chocolate making as a business venture. At the end of the training program, a feedback form was circulated among the participants and we received positive feedback from all the participants.

  
Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Tiruvalla- 689101, Kerala



  
Beene Cherian  
Dean, School of  
Biosciences

## RESUME

### **PINCHU ELIZABATH THOMAS**

Onattu Thenadil

Perumpanachy P. O.

Changanacherry- 686536

Kerala, India

Mobile: +91 9446401391

E-mail: [pinchuthomas@gmail.com](mailto:pinchuthomas@gmail.com)

---

### **CAREER OBJECTIVE**

To work in an organization that simultaneously enriches my professional knowledge, living and contributes towards achieving the goals of the employer.

### **AREAS OF INTEREST**

Teaching, Research and Product development, Bakery & confectionery, Quality Assurance and Process & Technology

### **PROFESSIONAL & ACADEMIC QUALIFICATIONS**

- **Diploma in Sugar Paste**, ICCA (International Center for Culinary Arts), Dubai, UAE, City & Guilds Accredited Certified Programme, 2018
- Qualified **National Eligibility Test (ICAR-NET) in Food Technology** for lectureship, 2016
- **Master of Science in Food Science & Technology**, 2005-2007, Mahatma Gandhi University, Kottayam, Kerala, India- Graduated with Distinction, **First Rank**
- **Bachelor of Science in Food Science & Quality Control**, 2002-2005, Mahatma Gandhi University, Kottayam, Kerala, India- Graduated with Distinction, **Second Rank**

### **PROFESSIONAL SKILLS**

- **Laboratory:** Physico- chemical, nutritional, microbial and sensory analysis of food
- **Engineering skills:** experience in handling food processing equipment
- **Quality Assurance:** Food safety, GMPs, SSOPs and HACCP prerequisites, auditing, documentation and ISO standards in food industries
- **Computer:** MS Word, MS Excel, MS Power Point
- **Baking technology-** new product development, baking, designing and decorating cakes, experienced in handling fondant and sugar paste.
- **Chocolate making-** experienced in manufacturing various homemade chocolates, tempering techniques, filling, enrobing and designing

### **PROFESSIONAL EXPERIENCE**

Assistant Professor



Associated with the School of Biosciences, MACFAST (Mar Athanasios College for Advanced Studies Tiruvalla), Mahatma Gandhi University, Kottayam, Kerala, India, January 2008- Till date.

**Duties and Responsibilities:**

- Curriculum in-charge of Food Science & Technology Post Graduate Programme, till 2019
- Faculty in-charge of Post Graduate Diploma in Food Technology, till 2015
- Additional, Chief and external examiner for various Food Science Courses under Mahatma Gandhi University, Kottayam, Calicut University and IGNOU, Delhi
- Visiting Faculty, Department of Food Science & Quality Control (Undergraduate Programme), BCM College, Kottayam, Mahatma Gandhi University, Kerala, India
- Guiding external student projects and small-scale entrepreneurs
- Member of the syllabus proposal and revision committee, Mahatma Gandhi University, Kottayam, Kerala
- Member of the Inspection commission, Mahatma Gandhi University, Kottayam, Kerala, 2014-2015
- Question paper setter for various university exams

**Facilitator**, Training programme in chocolate making and cake decoration for prospective entrepreneurs

**Chocolatier**

- Experienced in chocolate making, tempering, enrobing, molding and framing techniques
- Modern chocolate decorations using texture sheets, transfer sheets and pralines
- Experienced in manufacture of various chocolate products like truffles, rochers, barks, toffees, French bonbons, truffle shells, chocolate salami, lollipops and chocolate dessert cups
- Experience of decorating confectionery products and baked foods with chocolate materials
- Use of food colours in designing chocolates
- Storage and packaging of products
- Quality evaluation of chocolates

**Cake Baker, Designer & Decorator**

- Bake cakes in accordance with customer's specifications
- Decorate cakes using different types of icings and mixing of colors
- Designing novelty cakes based on customer's requirements
- Experienced in fondant and sugar paste techniques
- Assembling special occasion cakes
- Experienced in covering, crimping, and embossing
- Skilled in doing fabric effects, textured drapes, frills, ribbons, roses, bows and sugar embroidery
- Modeling Fun Figures, textures, inlay & applique & overlay

- Design and handling, presentation of multi-tiered cake (dowelling & stacking)
- Designing Celebration Cakes & Color Balance

### TRAINING EXPOSURE

- Training programme on "Role of HPLC in Food Analysis", CFTRI, Mysore, 26<sup>th</sup> -27<sup>th</sup> August 2019
- Training programme on Phytochemical techniques, FRI, Dehradun, April 2019
- Training programme in Safety of Food in Metal and Plastic Packaging, CFTRI (Central Food Technological Research Institute), Mysore, October 2018
- 10 days training experience in Food Technology R&D Division, Sami Labs Limited, Bangalore. December 2017
- Training Programme in "Chocolate for Entrepreneurs", De' Pastry School, Cochin, 2016
- Training Programme in "Cake designing", De' Pastry School, Cochin 2016
- Advanced Food Hygiene and Application of HACCP Based Food Safety Management System- Level 4 (ISO 22000), training curriculum developed by FAO, Food Safety Solutions International, Cochin, Kerala, November 2014
- Advanced Food Hygiene and Application of HACCP Based Food Safety Management System- Level 2 (training curriculum developed by FAO & CAC & RIPH UK, complies with the requirements of US FDA, EU COMMISSION and various other National and International Regulations) Food Safety Solutions International, Cochin, Kerala, May 2012
- Codex General Principles of Food Hygiene and Application of HACCP Based Food Safety System (FAO & CAC, complies with the requirements of US FDA, EU COMMISSION), Food Safety Solutions International, Cochin, Kerala, January 2005.
- Entrepreneurship Development Program on "Food Science & Technology" conducted by Field Testing Station, Changanacherry (Small Industries Development Organization, Ministry of SSI, Govt. India), Jan to Feb 2005
- Seafood Processing and Quality Control, The Integrated Fisheries Project, (Dept. of Animal Husbandry & Dairying, Govt. of India), Cochin, Oct to Nov 2003
- Milk and Milk Products Training, Dairy Training Centre, Kottayam (Kerala State Dairy Development Department), Dec 2002
- Processing of Pickles, Jams & Squashes, The Malabar Cost Products, Kerala, May- June 2003
- Training in the processing of Bakery and Confectionary Products Breads, Hot Breads, Kunjoos Fine Products, Kerala, February 2003

### RESEARCH EXPERIENCE

- Worked as **Senior Research Fellow**, in the project "**Integrated Technology for the Development of Reinforced Bioplastics with Celluloses of Plant Origin**" funded by Department of Biotechnology (DBT), Govt. of India, and has successfully developed value added products such as degradable, non-toxic packing material there by reducing the usage of LDPE, 2009-2012
- "**Value added Products from Cassava,**" Mar Athanasios College for Advanced Studies Tiruvalla, Kerala, 2008

- "Studies on Naturally Fortified Pasta Products," Defence Food Research Laboratory, Govt. of India, Mysore, 2007
- "A Study to Increase the Shelf-life of Raw Jack Fruit by Drying," Mar Athanasios College for Advanced Studies Tiruvalla, Kerala, 2007

#### PROJECT COMPLETED

- "Database on Food Toxins," Kerala State Council for Science, Technology & Environment (KSCSTE), Thiruvananthapuram, Kerala, 2014.

#### PROJECT ONGOING

- Co-PI of the project "Human Milk based Human Milk Fortifier for Preterm Infants" Department of Biotechnology, Delhi, 2021

#### PROFESSIONAL AND PERSONAL ACHIEVEMENTS

- Awarded First Rank by the M.G. University Kottayam for M.Sc., 2007
- Awarded Second Rank by the M.G. University Kottayam for B.Sc., 2005
- Award for best poster presentation in the International Symposium on "Advances in Food Biotechnology," 2007
- Organizing Committee Member, **Treasurer** of International Symposium on "Second Green Revolution: Priorities, Programmes, Social and Ethical Issues," Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- Recipient of the President of India Guide Award, 2000

#### PROFESSIONAL MEMBERSHIP

- Member, Association of Food Scientists & Technologists, India (AFSTI)
- Kerala Food Technologists Association (KEFTA)

#### PUBLICATIONS/ SCIENTIFIC PRESENTATIONS

- Value Added Products from Jackfruit (*Artocarpus heterophyllus*) Fruit, **Pinchu Elizabeth Thomas** and Biju Dharmapalan, *Acta Scientific Nutritional Health*, ISSN:2582-1423, 4.2 (2020): 105-110.
- Value added food products from *Flacourtia jangomas* (Lour.) Raeusch, **Pinchu Elizabeth Thomas** and Biju Dharmapalan, *Indian Food Industry Mag*, Vol 38 No 1, Jan- Feb 2019
- Physico-chemical and sensory properties of biscuits fortified with carrot powder, **Pinchu Elizabeth Thomas**, Litty Mary Abraham and Biju Dharmapalan, *International Journal of Food and fermentation Technology*. 8(2): 01-05, December 2018, ISSN No.2249-1570
- "Clovora- A New Herbal Mouth Wash for Oral Hygiene", Amal P. K., Abu Anna Joy, Athira Thomas, Jessiya Jacob, Biju Bharmapalan and **Pinchu Elizabeth Thomas**, *Journal of Science, Technology and Management*, December 2018
- "Isolation of Oleoresin from *Capsicum frutescens* and its Value Addition," **Pinchu Elizabeth Thomas**, and Betsy M. Baby, *International Symposium on Advances in Bioprocess Technology*, 2015
- "Functional Properties of Cellulose-Reinforced Bioplastics and their Potential Usage as Food Packaging Material" **Pinchu Elizabeth Thomas**, Rathish Rajan, Subin Damodaran and C. Balagopalan, *Journal of Science, Technology and Management*, January 2014

- "Rapport between Bioinformatics and Food Technology" Betsy M. Baby, **Pinchu Elizabeth Thomas**, International Symposium on Computational Biology and Drug Design, MACFAST, Thiruvalla, India, 2013
- "Utilization of Cotton Textile Waste as Reinforcement in Low Density Polyethylene Based Bioplastics" Rathish Rajan, **Pinchu Elizabeth Thomas**, Balagopalan C, APM-2011: International Conference on "Advancements in Polymeric Materials," CIPET, Chennai
- "Strategic Solutions for Food Security" **Pinchu Elizabeth Thomas**, Treesa Varghese and Betsy M. Baby, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "Biofortification: A Valuable Ingredient in High Quality Cereals Production" Treesa Varghese, **Pinchu Elizabeth Thomas**, and Betsy M. Baby, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "Computational Analysis of Putative Calmodulin Binding Protein SUN" Betsy M. Baby, Treesa Varghese and **Pinchu Elizabeth Thomas**, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "A Study to Increase the Shelf-life of Raw Jack Fruit by Drying" **Pinchu Elizabeth Thomas**, Indubala, Maya Raman, National Seminar on Advances in Food Biotechnology, Biospectrum 2007, Mar Athanasios College for Advanced Studies Thiruvalla, India

#### PERSONAL PROFILE

Date of Birth : 16<sup>th</sup> January 1985  
 Nationality : Indian  
 Gender : Female

#### DECLARATION

I hereby declare that the particulars furnished above are true and correct to the best of my knowledge and belief.

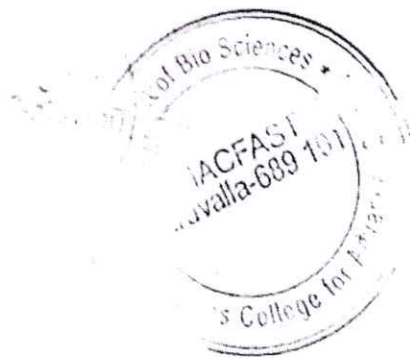
**PINCHU ELIZABATH THOMAS**

Training Programme in chocolate making

10<sup>th</sup> to 11<sup>th</sup> November 2017

Student participation

name of student	course	signature
Manija Madhu	FTQA	Manija
Marcy Jose	"	Marcy Jose



Beene Chendan

Beene Chendan  
Dean, School of  
Biotechnology



# MACFAST

## SCHOOL OF BIOSCIENCES

Training program in

# CAKE MAKING

for prospective entrepreneurs

**07, 08**  
**DECEMBER**  
**2017**



**PROGRAMME COORDINATOR**

Pinchu Elizabeth Thomas , Phone: 9446401391

**FOR REGISTRATION DETAILS CONTACT**

Biju Dharmapalan , Phone: 9447121716



## School of Biosciences, MACFAST Tiruvalla

### Report on the workshop

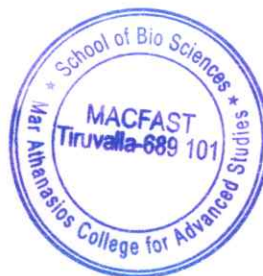
### “Cake making for prospective entrepreneurs”

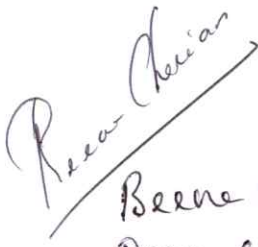
09th of December, 2017

While you may be wondering how to start a cake business from home, there are many other home bakers who have already converted their passion into a successful business and have started selling cakes from home. This industry is rapidly growing and there's heavy competition. According to another research study, the Indian cake market is projected to grow at a steady rate. From the past few years, there's a high demand for customized and artisanal cakes as well. Factors like product innovations in terms of new flavours rise in disposable income and changing consumer tastes and preferences are the key drivers of the segment. This is where home bakers have a role to play and a business space to explore.

MACFAST has catered to these demands by arranging a training programme on Cake making in this regard. A 2 Day training program on cake making, for prospective entrepreneurs was conducted on 07th and 08th of December, 2017. The coordinator and the main resource person of the program was Mrs. Pinchu Elizabeth Thomas. The registration was handed by Mr. Biju Dharmapalan, School of Biosciences. A total of 8 participants attended the training programme to start cake making as a business.

  
Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Tiruvalla- 689101, Kerala



  
Beene Chieran  
Dean, School of  
Biosciences

## RESUME

### **PINCHU ELIZABATH THOMAS**

Onattu Thenadil

Perumpanachy P. O.

Changanacherry- 686536

Kerala, India

Mobile: +91 9446401391

E-mail: [pinchuthomas@gmail.com](mailto:pinchuthomas@gmail.com)

---

### **CAREER OBJECTIVE**

To work in an organization that simultaneously enriches my professional knowledge, living and contributes towards achieving the goals of the employer.

### **AREAS OF INTEREST**

Teaching, Research and Product development, Bakery & confectionery, Quality Assurance and Process & Technology

### **PROFESSIONAL & ACADEMIC QUALIFICATIONS**

- **Diploma in Sugar Paste**, ICCA (International Center for Culinary Arts), Dubai, UAE, City & Guilds Accredited Certified Programme, 2018
- **Qualified National Eligibility Test (ICAR-NET) in Food Technology** for lectureship, 2016
- **Master of Science in Food Science & Technology**, 2005-2007, Mahatma Gandhi University, Kottayam, Kerala, India- Graduated with Distinction, **First Rank**
- **Bachelor of Science in Food Science & Quality Control**, 2002-2005, Mahatma Gandhi University, Kottayam, Kerala, India- Graduated with Distinction, **Second Rank**

### **PROFESSIONAL SKILLS**

- **Laboratory:** Physico- chemical, nutritional, microbial and sensory analysis of food
- **Engineering skills:** experience in handling food processing equipment
- **Quality Assurance:** Food safety, GMPs, SSOPs and HACCP prerequisites, auditing, documentation and ISO standards in food industries
- **Computer:** MS Word, MS Excel, MS Power Point
- **Baking technology-** new product development, baking, designing and decorating cakes, experienced in handling fondant and sugar paste.
- **Chocolate making-** experienced in manufacturing various homemade chocolates, tempering techniques, filling, enrobing and designing

### **PROFESSIONAL EXPERIENCE**

Assistant Professor



Associated with the School of Biosciences, MACFAST (Mar Athanasios College for Advanced Studies Tiruvalla), Mahatma Gandhi University, Kottayam, Kerala, India, January 2008- Till date.

**Duties and Responsibilities:**

- Curriculum in-charge of Food Science & Technology Post Graduate Programme, till 2019
- Faculty in-charge of Post Graduate Diploma in Food Technology, till 2015
- Additional, Chief and external examiner for various Food Science Courses under Mahatma Gandhi University, Kottayam, Calicut University and IGNOU, Delhi
- Visiting Faculty, Department of Food Science & Quality Control (Undergraduate Programme), BCM College, Kottayam, Mahatma Gandhi University, Kerala, India
- Guiding external student projects and small-scale entrepreneurs
- Member of the syllabus proposal and revision committee, Mahatma Gandhi University, Kottayam, Kerala
- Member of the Inspection commission, Mahatma Gandhi University, Kottayam, Kerala, 2014-2015
- Question paper setter for various university exams

**Facilitator**, Training programme in chocolate making and cake decoration for prospective entrepreneurs

**Chocolatier**

- Experienced in chocolate making, tempering, enrobing, molding and framing techniques
- Modern chocolate decorations using texture sheets, transfer sheets and pralines
- Experienced in manufacture of various chocolate products like truffles, rochers, barks, toffees, French bonbons, truffle shells, chocolate salami, lollipops and chocolate dessert cups
- Experience of decorating confectionery products and baked foods with chocolate materials
- Use of food colours in designing chocolates
- Storage and packaging of products
- Quality evaluation of chocolates

**Cake Baker, Designer & Decorator**

- Bake cakes in accordance with customer's specifications
- Decorate cakes using different types of icings and mixing of colors
- Designing novelty cakes based on customer's requirements
- Experienced in fondant and sugar paste techniques
- Assembling special occasion cakes
- Experienced in covering, crimping, and embossing
- Skilled in doing fabric effects, textured drapes, frills, ribbons, roses, bows and sugar embroidery
- Modeling Fun Figures, textures, inlay & applique & overlay

- Design and handling, presentation of multi-tiered cake (dowelling & stacking)
- Designing Celebration Cakes & Color Balance

### TRAINING EXPOSURE

- Training programme on "Role of HPLC in Food Analysis", CFTRI, Mysore, 26<sup>th</sup> -27<sup>th</sup> August 2019
- Training programme on Phytochemical techniques, FRI, Dehradun, April 2019
- Training programme in Safety of Food in Metal and Plastic Packaging, CFTRI (Central Food Technological Research Institute), Mysore, October 2018
- 10 days training experience in Food Technology R&D Division, Sami Labs Limited, Bangalore. December 2017
- Training Programme in "Chocolate for Entrepreneurs", De' Pastry School, Cochin, 2016
- Training Programme in "Cake designing", De' Pastry School, Cochin 2016
- Advanced Food Hygiene and Application of HACCP Based Food Safety Management System- Level 4 (ISO 22000), training curriculum developed by FAO, Food Safety Solutions International, Cochin, Kerala, November 2014
- Advanced Food Hygiene and Application of HACCP Based Food Safety Management System- Level 2 (training curriculum developed by FAO & CAC & RIPH UK, complies with the requirements of US FDA, EU COMMISSION and various other National and International Regulations) Food Safety Solutions International, Cochin, Kerala, May 2012
- Codex General Principles of Food Hygiene and Application of HACCP Based Food Safety System (FAO & CAC, complies with the requirements of US FDA, EU COMMISSION), Food Safety Solutions International, Cochin, Kerala, January 2005.
- Entrepreneurship Development Program on "Food Science & Technology" conducted by Field Testing Station, Changanacherry (Small Industries Development Organization, Ministry of SSI, Govt. India), Jan to Feb 2005
- Seafood Processing and Quality Control, The Integrated Fisheries Project, (Dept. of Animal Husbandry & Dairying, Govt. of India), Cochin, Oct to Nov 2003
- Milk and Milk Products Training, Dairy Training Centre, Kottayam (Kerala State Dairy Development Department), Dec 2002
- Processing of Pickles, Jams & Squashes, The Malabar Cost Products, Kerala, May- June 2003
- Training in the processing of Bakery and Confectionary Products Breads, Hot Breads, Kunjoos Fine Products, Kerala, February 2003

### RESEARCH EXPERIENCE

- Worked as **Senior Research Fellow**, in the project "**Integrated Technology for the Development of Reinforced Bioplastics with Celluloses of Plant Origin**" funded by Department of Biotechnology (DBT), Govt. of India, and has successfully developed value added products such as degradable, non-toxic packing material there by reducing the usage of LDPE, 2009-2012
- "**Value added Products from Cassava,**" Mar Athanasios College for Advanced Studies Tiruvalla, Kerala, 2008

- "Studies on Naturally Fortified Pasta Products," Defence Food Research Laboratory, Govt. of India, Mysore, 2007
- "A Study to Increase the Shelf-life of Raw Jack Fruit by Drying," Mar Athanasios College for Advanced Studies Tiruvalla, Kerala, 2007

#### PROJECT COMPLETED

- "Database on Food Toxins," Kerala State Council for Science, Technology & Environment (KSCSTE), Thiruvananthapuram, Kerala, 2014.

#### PROJECT ONGOING

- Co-PI of the project "Human Milk based Human Milk Fortifier for Preterm Infants" Department of Biotechnology, Delhi, 2021

#### PROFESSIONAL AND PERSONAL ACHIEVEMENTS

- Awarded First Rank by the M.G. University Kottayam for M.Sc., 2007
- Awarded Second Rank by the M.G. University Kottayam for B.Sc., 2005
- Award for best poster presentation in the International Symposium on "Advances in Food Biotechnology," 2007
- Organizing Committee Member, **Treasurer** of International Symposium on "Second Green Revolution: Priorities, Programmes, Social and Ethical Issues," Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- Recipient of the President of India Guide Award, 2000

#### PROFESSIONAL MEMBERSHIP

- Member, Association of Food Scientists & Technologists, India (AFSTI)
- Kerala Food Technologists Association (KEFTA)

#### PUBLICATIONS/ SCIENTIFIC PRESENTATIONS

- Value Added Products from Jackfruit (*Artocarpus heterophyllus*) Fruit, **Pinchu Elizabeth Thomas** and Biju Dharmapalan, *Acta Scientific Nutritional Health*, ISSN:2582-1423, 4.2 (2020): 105-110.
- Value added food products from *Flacourtia jangomas* (Lour.) Raeusch, **Pinchu Elizabeth Thomas** and Biju Dharmapalan, *Indian Food Industry Mag*, Vol 38 No 1, Jan- Feb 2019
- Physico-chemical and sensory properties of biscuits fortified with carrot powder, **Pinchu Elizabeth Thomas**, Litty Mary Abraham and Biju Dharmapalan, *International Journal of Food and fermentation Technology*. 8(2): 01-05, December 2018, ISSN No.2249-1570
- "Clovora- A New Herbal Mouth Wash for Oral Hygiene", Amal P. K., Abu Anna Joy, Athira Thomas, Jessiya Jacob, Biju Bharmapalan and **Pinchu Elizabeth Thomas**, *Journal of Science, Technology and Management*, December 2018
- "Isolation of Oleoresin from *Capsicum frutescens* and its Value Addition," **Pinchu Elizabeth Thomas**, and Betsy M. Baby, *International Symposium on Advances in Bioprocess Technology*, 2015
- "Functional Properties of Cellulose-Reinforced Bioplastics and their Potential Usage as Food Packaging Material" **Pinchu Elizabeth Thomas**, Rathish Rajan, Subin Damodaran and C. Balagopalan, *Journal of Science, Technology and Management*, January 2014

- "Rapport between Bioinformatics and Food Technology" Betsy M. Baby, **Pinchu Elizabeth Thomas**, International Symposium on Computational Biology and Drug Design, MACFAST, Thiruvalla, India, 2013
- "Utilization of Cotton Textile Waste as Reinforcement in Low Density Polyethylene Based Bioplastics" Rathish Rajan, **Pinchu Elizabeth Thomas**, Balagopalan C, APM-2011: International Conference on "Advancements in Polymeric Materials," CIPET, Chennai
- "Strategic Solutions for Food Security" **Pinchu Elizabeth Thomas**, Treesa Varghese and Betsy M. Baby, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "Biofortification: A Valuable Ingredient in High Quality Cereals Production" Treesa Varghese, **Pinchu Elizabeth Thomas**, and Betsy M. Baby, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "Computational Analysis of Putative Calmodulin Binding Protein SUN" Betsy M. Baby, Treesa Varghese and **Pinchu Elizabeth Thomas**, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "A Study to Increase the Shelf-life of Raw Jack Fruit by Drying" **Pinchu Elizabeth Thomas**, Indubala, Maya Raman, National Seminar on Advances in Food Biotechnology, Biospectrum 2007, Mar Athanasios College for Advanced Studies Thiruvalla, India

#### PERSONAL PROFILE




Date of Birth	:	16 <sup>th</sup> January 1985
Nationality	:	Indian
Gender	:	Female

#### DECLARATION

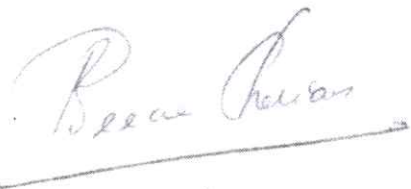
I hereby declare that the particulars furnished above are true and correct to the best of my knowledge and belief.

**PINCHU ELIZABATH THOMAS**

Training Programme in Cake Making  
7 & 8 December 2017

Name of Student	Course	Signature
Ammu Bejoe	FTQA	
Renu John	"	
Mathai Mathew	"	





Beena Cherian  
Dean, School of Biosciences

Department of Management Studies,  
MACFAST organizes a session



# Power of 7i for Successful Start-ups



Resource Person

**Mr. Neelakantan Padmanabhan**  
(GM(India)& Head) Global & Operations  
LUCEP, Bangalore

**DATE: 13<sup>th</sup> December 2017**



MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA

(MACFAST)

Thiruvalla - 689101

**Report on**

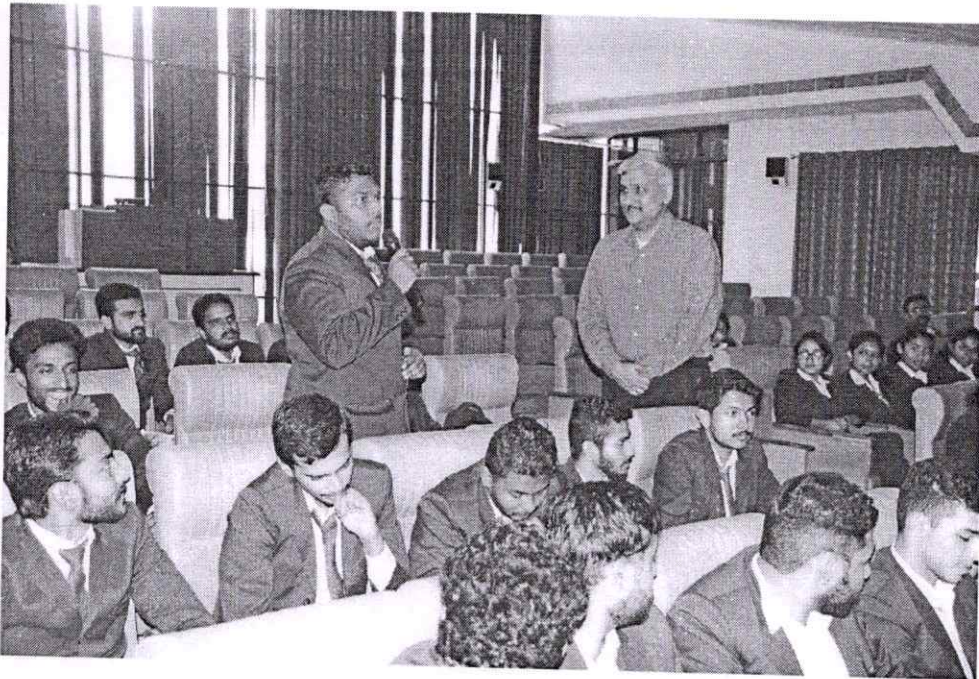
**'The Power of 7i for Successful Start-ups'**

**Mr. Neelakantan Padmanabhan (GM (India) & Head), Global & Operations at LUCEP, Bangalore, India on 13th December 2017**

A session by Mr. Neelakantan Padmanabhan, (GM (India) & Head), Global & Operations at LUCEP, Bangalore were organized for students on 13<sup>th</sup> December 2017. The title of the session was 'The Power of 7i for Successful Start-ups'. The Session was of 1 hour duration.

A total of 98 participants attended the session.

The session was highly interactive and Mr. Neelakantan has answered the queries raised by participants. He has given the basic guidelines to be considered while starting a new venture.



Interacting with the students

*Alma Ray  
Co-ordinator.*

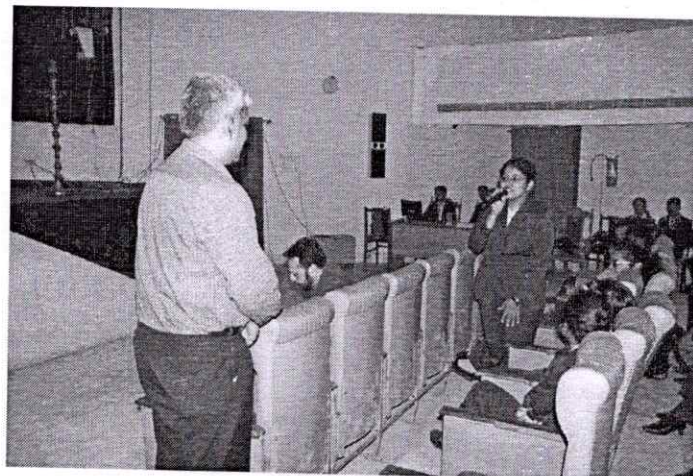
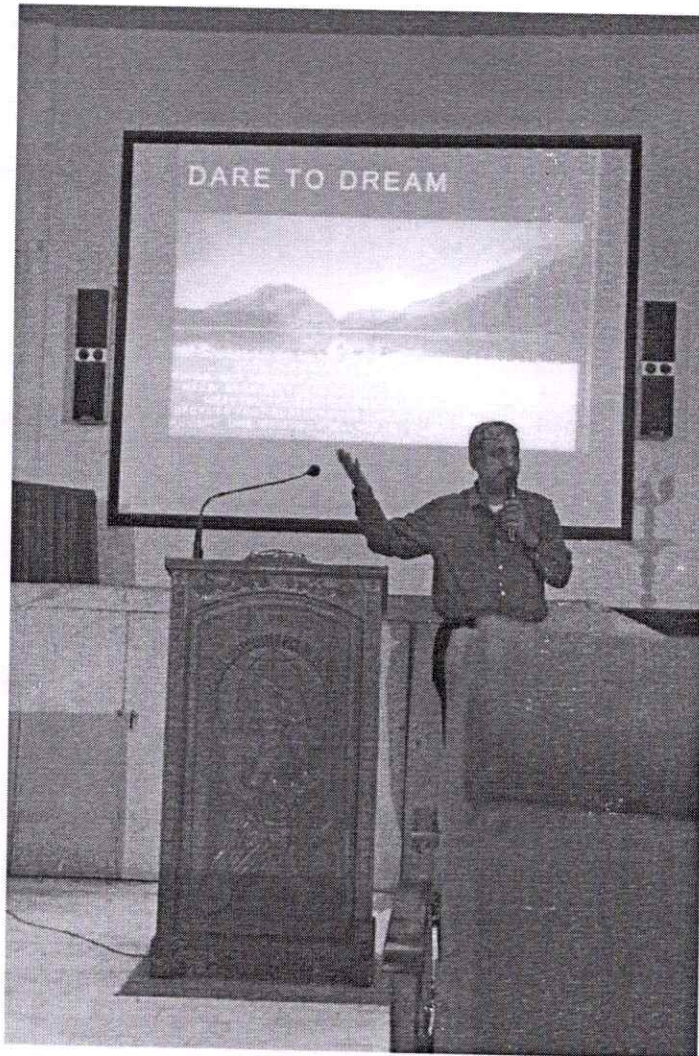
*Fr. Dr. Cherman J Kottayil*  
**Fr. Dr. CHERIAN J KOTTAYIL**  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Tiruvalla- 689101, Kerala





MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALA  
(MACFAST)

Thiruvalla - 689101



Glimpses of the session and interaction with students



## Contact

[www.linkedin.com/in/neelpadmanabhan](http://www.linkedin.com/in/neelpadmanabhan) (LinkedIn)  
[lookingovertheshoulder.wordpress.com/author/lookingovertheshoulder/](http://lookingovertheshoulder.wordpress.com/author/lookingovertheshoulder/) (Blog)  
[lucep.com](http://lucep.com) (Company)

## Top Skills

SAP  
Software Development  
Management

## Languages

German (Elementary)  
Hindi (Native or Bilingual)  
English (Full Professional)

## Honors-Awards

SAP Ganges - Short Listed under  
Optimizing Category for 2015  
Awards  
Innovation Excellence - SAP Ganges  
Best Innovation Product or Service

# Neelakantan Padmanabhan

Director and Global Client Partner at Lucep  
Bangalore Urban

## Summary

Neelakantan (Neel ) Padmanabhan has 25+ years of experience across business development, consulting, product development and support where he has managed multiple products and large teams, creating new product and business lines.

At Lucep, Neel is Director India & Head of Global Operations. He is handling Enterprise Accounts across all lines of business as a Global Client Partner. Apart from this, he is also responsible for Operations, Support and Business Development

At EVA, Neel was involved in mentoring start-ups, establish & commercialise new business offerings and supporting business operations.

Neel was with SAP Labs for 15+ years in different businesses across Business Suite & Business by Design in leadership roles in Development, Product Support, Localization Development, Quality Management and New Product Development.

In the last 4 years at SAP, he was the driving force behind an initiative on Business Networks in the Retail Space, SAP Ganges, which aimed to create a network of retail stores, especially in the unorganized sector and focused on emerging economies. From initial user research to productisation, he was managing the project which involved a diverse set of teams and stakeholders spanning across many countries and areas of expertise.

Prior to working in SAP Labs, Neel was with IVL India working on SAP Implementations and before that worked as equipment commissioning engineer with Mazgon Docks in their off-shore division.

Neel did his graduation in Mechanical Engineering and holds an MBA in Finance.

## Interests

- Avid Networker
- Ideate, Incubate & Commercialise
- Design thinking ( outside-in approach )
- Manage Diverse Network of Stakeholders
- People & Project Management
- Quality Processes and Agile Methodology
- Business Strategy

---

## Experience

### Lucep

Director & Global Client Partner - Enterprise Business

November 2015 - Present (5 years 9 months)

India

To own the relationship with customer and ensure successful growth of the business in the account across the product lines as measured by customer satisfaction and net new business .

To nurture and grow business opportunities in new verticals

To manage the India operations

### ESCAPE VELOCITY ACCELERATOR

Vice President

March 2015 - February 2017 (2 years)

Bengaluru Area, India

EVA is an accelerator helping companies in the life science and healthcare domains resolve operational, strategic and organizational challenges by providing technical, infrastructure, outreach and mentorship support.

EVA nurtures on the passion and drive to spur innovation and entrepreneurship by hand-holding young and ambitious companies that cater to the broad area of Health-Care.

### SAP Labs India

15 years 5 months

Director & Product Owner SAP GANGES

October 1999 - February 2015 (15 years 5 months)

Bangalore

Responsible for Customer, Technology and Operations for SAP Ganges.

This team works like a start up with end to end responsibilities handled within the team. The responsibilities include identifying and acquiring new customers, maintaining relationship with all existing partners and stakeholders, oversight for all operational tasks and support the engineering / architecture team. The activities stretched from identifying user personas to gathering user pain points to delivering the final products and also involved setting up a new ecosystems from existing industry players.

#### Lead - Innovation Project

May 2010 - June 2011 (1 year 2 months)

Bangalore

To identify new business opportunities in emerging economies, especially at bottom of pyramid.

Set up the process, build the team, identify opportunity, create the PoC Applications , establish value proposition for the players in the eco system

#### Quality Manager - Test Center

July 2009 - April 2010 (10 months)

Delivery: Responsibility for Testing new features and regression runs for SAP Business Suite in OPS area

People Management : Mentoring / Coaching colleagues and direct reports

Member of Global Project in Quality Engineering on Solution Manager Adoption

#### Head Development Support - India - Business By Design

October 2006 - April 2009 (2 years 7 months)

Set up the team and organisation in close cooperation with colleagues from Germany

Set up the process in the team for Growth, Talent Development and Knowledge Transfer.

Developed business / technical processes for support delivery Contributed to / Lead strategic global projects

#### Development Manager , IMS

July 2003 - September 2006 (3 years 3 months)

Setting up the product support teams across multiple areas [ Manufacturing, PLM, Financials, Industry Solutions ] .

Managing the growth of the team and development of people

Setting up the knowledge transfer process .

Work on strategic projects in customer support

#### Project Manager Quality

April 2001 - June 2003 (2 years 3 months)

Responsible for Quality Management in the team.

Plan and Execute product Acceptance Test with Customer and Consultants

Plan for process compliance and ensure that Standards are met in development

Work with the Software Logistics team to ensure that Support Packages, Retrofits and Releases are consistent

Technical Leader [ Financials ]

October 1999 - March 2001 (1 year 6 months)

Lead for Withholding Taxes Development for India

Responsible for roll in of requirements , development and customer support for the India specific functions in SAP Country Version for India [ CIN ] .

IVL India Pvt Ltd

Sr SAP Consultant

February 1997 - October 1999 (2 years 9 months)

Trivandrum, India

Mazagon Dock

Engineer, Offshore Services-Operations

August 1993 - February 1995 (1 year 7 months)

---

## Education

INSEAD

RMDP, Management · (2007 - 2007)

Institute of Management, University of Kerala

MBA, General Management / Finance · (1995 - 1997)

College of Engineering, Trivandrum

B.Tech, Mechanical Engineering · (1988 - 1992)

'The Power of 7i for Successful Start-ups' by Mr. Neelakantan Padmanabhan (GM (India) & Head), Global & Operations at LUCEP, Bangalore, India on 13<sup>th</sup> December 2017

Participants List

SL.NO:	Name of the student	SL.NO:	Name of the student
1	Abhishek Purushothaman		
2	Ajo Varghese Rajan	36	Sreejesh S
3	Akash Mathew	37	Steffi Philip
4	Akhila O V	38	Sudheesh S Nair
5	Akhilmon V Thomas	39	Swathy Sathyavan
6	Albin Baby	40	Veena Mol V
7	Alma Mariam Abraham	41	Vivek Vijayan
8	Ameer Ismail	42	Abiya Babu
9	Amitha Rajesh R	43	Akshaya E S
10	Ancy Monachan	44	Aleena Jacob
11	Anita Ann Alex	45	Anjali B Joseph
12	Anuja Elizabeth Joseph	46	Anju Vijay
13	Ashik S Antony	47	Anu Abraham
14	Athira R	48	Anu Joseph
15	Brian Binu Thomas	49	Arya M M
16	Cyriac Stephen George	50	Ashma C Das
17	Divya Ann Varghese	51	Aswani S Kumar
18	Heera Maria Vilson	52	Athira Babu
19	Jayasree J	53	Athira V M
20	Jiby Varghese	54	Bijina Beegam
21	Jikku Varughese Koruth	55	C S Chitra
22	Job Justin	56	Chinnu Maria Thankachan
23	Jojo John Varughese	57	Gibin Babu
24	Joshni Mary Thomas	58	Haripriya J
25	Megha A P Panicker	59	Jibi Joseph
26	Nidhi Elizabeth Philip	60	Jilbi Susan James
27	Nimmy Francis	61	Ligitha Aru Ninan
28	Praveen P Nair	62	Merin Anna Mathew
29	Riya Eliz Biju	63	Merin Chacko
30	Rony K J	64	Preethy Mariam Kacheriparambil
31	Sanju Mariam Thomas	65	Sandra Biju
32	Senu C Mathew	66	Shanu Eappen
33	Shijin Babu		
34	Sijin Saji		
35	Simi Chacko		

67	Shany Thomas	93	Jackson
68	Smrithi Viswanath	94	Midhun
69	Sneha Catherine James	95	Vyshakh
70	Sneha Sara Thomas	96	Rahul
71	Sruthi Raj	97	Goldy S Perumal
72	Swathy Harikuttan	98	Jaison
73	Teenamol Antony		
74	Vandana V		
75	Veena Vinayan		
76	Vijitha M Nair		
77	Achu C Thampi		
78	Akhilesh Kumar C A		
79	Ananthu A Kochumon		
80	Ananthu Santhan		
81	Bibin John Babu		
82	Christopher George		
83	Harikrishnan V M		
84	Jerin George		
85	Jikku George John		
86	Jikku Mathew Thomas		
87	Midhun S Abraham		
88	Robin George Kurian		
89	Rohan Alex Mathew		
90	Sebin Sebastian		
91	Tom Abraham		
92	Vishakh T Devan		



**School of Biosciences, MACFAST**  
Organizes a Workshop on

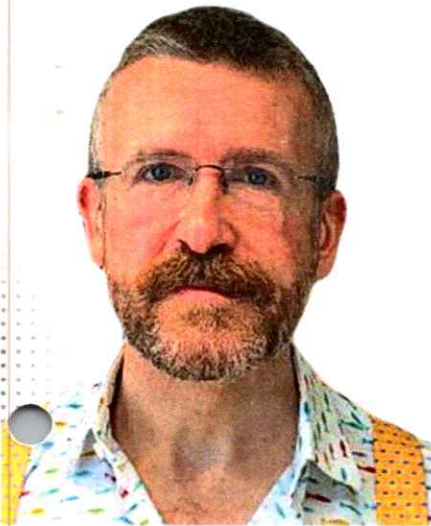
# Research Methodology

**Resource Person**

**Dr. Michael Sauer**

Department of Biotechnology,  
BOKU University of Natural Resources and  
Applied Life Sciences, Vienna.

**DATE: 8<sup>th</sup> January 2018**





MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALA

(MACFAST)

Thiruvalla - 689101


### School of Biosciences

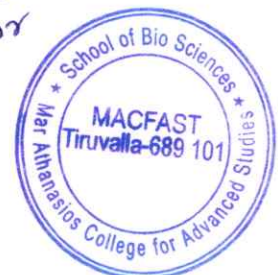
#### Report on workshop on Research Methodology by Dr. Michael Sauer

The Research Methodology workshop was organized by the School of Biosciences on the 8th of January 2018, at the MACFAST auditorium. The program was mainly aimed at bioscience students. The program was coordinated by Dr. Jenny Jacob, School of Biosciences. 90 students and participants from various departments were part of this workshop. The Workshop was handled by Dr. Michael Sauer Assoc. Prof., Department of Biotechnology, BOKU University of Natural Resources and Applied Life Sciences, Vienna. He started the session by giving an introduction to research, different types of research, experimental design, the need for finding an unanswered problem to start research, and the importance of literature review. Various online catalogs and search engines used for research purposes, various statistical approaches, reference formats, and software were also included in his talk. He also emphasized the purpose of the research proposal, the required features, and also highlighted the contents that should be included while writing a research proposal. As a part of the workshop training, the students were grouped and were asked to write a model proposal. Dr. Michael Sauer also evaluated a few randomly selected proposals and gave suggestions to improve the same. The talk was very informative and gave the student a general idea of how to select a research topic for their MSc dissertation and also became aware of the path that they should follow while performing research.



  
Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Tiruvalla- 689101, Kerala

  
JENNY JACOB  
Coordinator





Assoc. Prof. Priv.-Doz. Dipl.Natw. ETH FH-Prof. Dr. Michael Sauer

Institute of Microbiology and Microbial Biotechnology

Muthgasse 18, 1190 Wien

michael.sauer(at)boku.ac.at

Tel: +43 1 47654-79105

BOKUonline-Visitenkarte

ORCID: 0000-0003-0510-2447

## Curr. Vitae

- 2021 - Associate Professor (Industrial Microbiology)
- 2014 - Co-founder Syconium Lactic Acid GmbH
- 2014 - Head of the Christian Doppler-Laboratory for Biotechnology of Glycerol
- 2012 - Venia Docendi for Industrial Microbiology
- 2010 - Senior Scientist, Department of Biotechnology, BOKU
- 2008 - Prof (FH)
- 2004 - 2010 FH Campus Wien, School of Bioengineering
- 2003 - 2004 PostDoc, BOKU, IAM
- 2001 - 2003 Patentsachbearbeiter, Frankfurt am Main
- 1999 - 2001 PostDoc, University of Milano-Bicocca, Dip. of Biotechnology and Biosciences
- 1996 - 1998 PhD, Biochemistry, University of Vienna, Institute of Molecular Biology
- 1990 - 1995 Studies Biotechnology, ETH Zürich

## Statistik Austria, science classification

biochemistry; biotechnology; biotechnology; microbiology; genetic engineering; ethics;

## Expertise

Biotechnology; Molecular Biology; Bioethics; White Biotechnology; Industrial Microbiology;

## Appointments/Memberships in Professional Societies

- 2019 - Open Science/Vienna Open Lab  
member of the managing board
- 2016 - IBA-IFIBiop - International Association of Bioprocessing  
member
- 2016 - Austrian Association of Molecular Life Sciences and Biotechnology  
member of the managing board
- 2015 - FEMS Federation of European Microbiological Societies  
delegate
- 2009 - 2019 Section of Microbial Physiology European Federation of Biotechnology  
secretary
- 2009 - Austrian Association of Molecular Life Sciences and Biotechnology  
member
- 2008 - Society of Industrial Microbiology (SIM)  
member

## Editorial board appointments for scientific journals

- 2018 - Bioengineered:  
Editorial Board Member
- 2017 - Bioresource Technology:  
Editorial Board Member
- 2016 - Journal of Microbiology and Biotechnology:  
Editorial Board Member
- 2016 -2018 Frontiers in Microbiology: Microbial Physiology and Metabolism  
1st level below top level (Associate Editor)
- 2014 - Microbial Cell Factories:  
1st level below top level (Associate Editor)
- 2011 - FEMS Microbiology Letters: Section Editor (Synthetic Biology and Biotechnology)  
Editorial Board Member

## Reviewer for scientific journals

- 2019 - Nucleic Acids Research
- 2015 - Scientific Reports
- 2014 - Molecular Biotechnology
- 2013 - Biotechnology For Biofuels
- 2012 - Biotechnology Advances
- 2011 - Journal of Industrial Microbiology & Biotechnology
- 2011 - Bioresource Technology
- 2011 - Applied Microbiology and Biotechnology
- 2010 - Journal of Cleaner Production
- 2010 - Metabolic Engineering
- 2010 - Biotechnology and Bioengineering
- 2010 - Microbiology
- 2009 - MYCOL RES
- 2009 - Journal of Basic Microbiology
- 2009 - Trends in Biotechnology
- 2009 - Journal of Biotechnology
- 2009 - Process Biochemistry
- 2008 - Bioprocess and Biosystems Engineering
- 2007 - Fems Yeast Research
- 2007 - Biotechnology Progress
- 2006 - Microbial Cell Factories
- 2003 - FEMS Microbiology Letters

## Reviewer/Expert funding organizations

- 2019 -2019 Europäische Kommission - European Union
- 2018 -2018 Bundesministerium für Bildung und Forschung, Deutschland - Germany
- 2018 -2018 Europäische Kommission - European Union
- 2018 -2018 National Science Centre, Poland - Poland
- 2017 -2018 Innovation and Technology Fund - Hong Kong - China
- 2016 -2016 National Research Foundation of Korea (NRF) - Republic of Korea
- 2015 -2015 Estonian Research Council - Estonia
- 2015 -2015 US-Israel Binational Science Foundation - United States (USA)

- 2013 -2016 Suomen Akatemia, Academy of Finland - Finland  
2010 -2012 ÖAD - Österreichischer Austauschdienst - Austria

### **Organizer of scientific conferences, Chairs**

- 2020 International Conference on Yeasts (IYC15)  
Member of the Organisation Committee
- 2019 FEMS Congress  
Member of the Organisation Committee
- 2018 10th ÖGMBT Annual Meeting  
Organiser
- 2018 14th International Conference on Renewable Resources and Biorefineries  
Scientific Member of the Advisory Board
- 2018 4th Congress on Applied Synthetic Biology in Europe  
Member of the Organisation Committee
- 2017 13th International Conference on Renewable Resources and Biorefineries  
Scientific Member of the Advisory Board
- 2015 Microbial Stress - From Molecules to Systems III  
Organiser
- 2015 6th International Conference On Analysis Of Microbial Cells at the Single Cell Level  
Member of the Organisation Committee
- 2012 Microbial Stress - From Molecules to Systems  
Organiser
- 2011 6th Recombinant Protein Production Meeting, A Comparative View on Host Physiology  
Member of the Organisation Committee
- 2009 Microbial Stress - From Molecules to Systems  
Organiser
- 2006 4th Recombinant Protein Production Meeting, A Comparative View on Host Physiology  
Member of the Organisation Committee

## Sauer Michael

### Publications

**Year and Type of Publication**    First Author (alphabetical order)    Request for reprints

Scientific publications from BOKU scientists, especially those which are published in SCI / SSCI journals, or in other refereed journals, proceedings, monographs as well as articles in collected volumes are listed under PUBLICATIONS.

Publications with special focus on transfer of knowledge ("social impact") to practitioners as well as the interested public can be found under the menu item:

>> Transfer of Knowledge

\*\* Publications listed in SCI/SSCI - Journals (published in Web of Science)

\* Peer-reviewed publication (not listed in SCI/SSCI)

Only: Full paper/article, Review, Proceedings Paper

= Open Access - Publications

2021

### Journal Articles

\*\* Ellena, V; Bucchieri, D; Arcalis, E; Sauer, M; Steiger, MG Sclerotia formed by citric acid producing strains of *Aspergillus niger*: Induction and morphological analysis.

FUNGAL BIOL-UK. 2021; 125(6): 485-494. WoS PubMed FullText FullText\_BOKU

\*\* Hoheneder, R; Fitz, E; Bischof, RH; Russmayer, H; Ferrero, P; Peacock, S; Sauer, M Efficient conversion of hemicellulose sugars from spent sulfite liquor into optically pure L-lactic acid by *Enterococcus mundtii*.

BIORESOURCE TECHNOL. 2021; 333, 125215 WoS PubMed FullText FullText\_BOKU

\*\* Totaro, D; Radoman, B; Schmelzer, B; Rothbauer, M; Steiger, MG; Mayr, T; Sauer, M; Ertl, P; Mattanovich, D; Microscale Perfusion-Based Cultivation for *Pichia pastoris* Clone Screening Enables Accelerated and Optimized Recombinant Protein Production Processes..

Biotechnol J. 2021; 16(3):e2000215 WoS PubMed FullText FullText\_BOKU

2020

\*\* Erian, AM; Egermeier, M; Rassinger, A; Marx, H; Sauer, M Identification of the citrate exporter Cex1 of *Yarrowia lipolytica*.

FEMS YEAST RES. 2020; 20(7), foaa055 WoS PubMed FullText FullText\_BOKU

\*\* Gassler, T; Sauer, M; Gasser, B; Egermeier, M; Troyer, C; Causon, T; Hann, S; Mattanovich, D; Steiger, MG; The industrial yeast *Pichia pastoris* is converted from a heterotroph into an autotroph capable of growth on CO<sub>2</sub>.

Nat Biotechnol. 2020; 38(2):210-216 WoS PubMed FullText FullText\_BOKU

\*\* Li, J; Rinnerthaler, M; Hartl, J; Weber, M; Karl, T; Breitenbach-Koller, H; Mülleder, M; Vowinckel, J; Marx, H; Sauer, M; Mattanovich, D; Ata, Ö; De, S; Greslehner, GP; Geltinger, F; Burhans, B; Grant, C; Doronina, V; Ralser, M; Streubel, MK; Grabner, C; Jarolim, S; Moßhammer, C; Gourlay, CW; Hasek, J; Cullen, PJ; Liti, G; Ralser, M; Breitenbach, M; Slow Growth and Increased Spontaneous Mutation Frequency in Respiratory Deficient .

G3 (Bethesda). 2020; 10(12):4637-4648 WoS PubMed FullText FullText\_BOKU

\*\* Lund, PA; De Biase, D; Liran, O; Scheler, O; Mira, NP; Cetecioglu, Z; Fernandez, EN; Bover-Cid, S; Hall, R; Sauer, M; O'Byrne, C Understanding How Microorganisms Respond to Acid pH Is Central to Their Control and Successful Exploitation.

FRONT MICROBIOL. 2020; 11, 556140 WoS PubMed FullText FullText\_BOKU

\*\* Mohan, SV; Varjani, S; Pant, D; Sauer, M; Chang, JS Circular bioeconomy approaches for sustainability Preface.

BIORESOURCE TECHNOL. 2020; 318, 124084 WoS PubMed FullText FullText\_BOKU

\*\* Sauer, M Building Communities-The 8th Congress of European Microbiologists.

BIOTECHNOL J. 2020; 15(7), 2000222 WoS PubMed FullText FullText\_BOKU

\*\* Totaro, D; Rothbauer, M; Steiger, MG; Mayr, T; Wang, HY; Lin, YS; Sauer, M; Altvater, M; Ertl, P; Mattanovich, D Downscaling screening cultures in a multifunctional bioreactor array-on-a-chip for speeding up optimization of yeast-based lactic acid bioproduction.

BIOTECHNOL BIOENG. 2020; 117(7): 2046-2057. WoS PubMed FullText FullText\_BOKU

\*\* Wiltschi, B; Cernava, T; Dennig, A; Casas, MG; Geier, M; Gruber, S; Haberbauer, M; Heidinger, P; Acero, EH; Kratzer, R; Luley-Goedl, C; Muller, CA; Pitzer, J; Ribitsch, D; Sauer, M; Schmolzer, K; Schnitzhofer, W; Sensen, CW; Soh, J; Steiner, K; Winkler, CK; Winkler, M; Wriessnegger, T Enzymes revolutionize the bioproduction of value-added compounds: From enzyme discovery to special applications.

BIOTECHNOL ADV. 2020; 40, 107520 WoS PubMed FullText FullText\_BOKU

\* Ellena, V; Sauer, M; Steiger, MG; (2020): The fungal sexual revolution continues: discovery of sexual development in members of the genus *Aspergillus* and its consequences..

Fungal Biol Biotechnol. 2020; 7(1):17 PubMed FullText FullText\_BOKU

## Conference & Workshop Proceedings, Paper, Abstract

Gassler, T; Egermeier, M; Gasser, B; Sauer, M; Steiger, MG; Mattanovich, D (2020): A synthetic Calvin cycle enables autotrophic growth in yeast .

[5th Applied Synthetic Biology Conference in Europe 2020, Delft, Netherlands, NOV, 2-4, 2020]

In: EFB (Hrsg.), 5th ASB Europe 2020 - abstract book

Sauer, M (2020): Diversity of Lactic Acid Bacteria, useful for Industrial Chemical Production .

[IUMS 2020, Daejeon, South Korea, NOV 16-20, 2020]

In: IUMS (Eds.), IUMS 2020 Abstract Book

Sauer, M (2020): Communication and Dissemination in COST Actions.

[EuroMicroPH - Open Conference run by Cost Action CA18113, Lisbon, Portugal, FEB 12-14, 2020]

In: COST Action CA1811 (Eds.), EuroMicroPH - 1st open meeting - Book of Abstracts FullText

Sauer, M (2020): Diversity complements metabolic engineering for microbial chemical production.

[Doctoral Program in Applied and Environmental Microbiology - 8th DP\_AEM Workshop, Braga, Portugal, FEB 11, 2020]

In: DP\_AEM (Eds.), 8th DP\_AEM Workshop - Abstract Book

## Journal Articles

\*\* Egermeier, M; Sauer, M; Marx, H; Golden Gate-based metabolic engineering strategy for wild-type strains of *Yarrowia lipolytica*..

FEMS Microbiol Lett. 2019; 366(4): WoS PubMed FullText FullText\_BOKU

\*\* Russmayer, H; Egermeier, M; Kalemasi, D; Sauer, M Spotlight on biodiversity of microbial cell factories for glycerol conversion.

BIOTECHNOL ADV. 2019; 37(6-7), 107395 WoS PubMed FullText FullText\_BOKU

\*\* Russmayer, H; Marx, H; Sauer, M Microbial 2-butanol production with *Lactobacillus diolivorans*.

BIOTECHNOL BIOFUELS. 2019; 12(1), 262 WoS PubMed FullText FullText\_BOKU

\*\* Steiger, MG; Rassinger, A; Mattanovich, D; Sauer, M; Engineering of the citrate exporter protein enables high citric acid production in *Aspergillus niger*..

Metab Eng. 2019; 52:224-231 WoS PubMed FullText FullText\_BOKU

## Conference & Workshop Proceedings, Paper, Abstract

Altvater, M; Schmelzer, B; Mattanovich, D; Sauer M (2019): Recycling of yeast biomass in lactic acid production at low pH. [Poster]

[SIMB 2019 - Annual Meeting, San Francisco, CA, USA, JUL 21-24, 2019]

In: SIMB (Ed.), SIMB Annual Meeting and Exhibition 2019 - Abstract Book

Ellena, V; Arcalis, E; Sauer, M; Steiger, MG (2019): Engineering of the citrate exporter protein enables high citric acid production in *Aspergillus niger*.

[30th Fungal Genetics Conference, Pacific Grove, CA, USA, MAR 12-17, 2019]

In: FGC (Eds), Abstract Book of the 30th Fungal Genetics Conference

Ellena, V; Sauer, M (2019): Analysis of sclerotia formation and morphology in *Aspergillus niger*.

[ESIB 2019, Graz, Austria, NOV 19, 2019]

In: ACIB (Ed.), ESIB 2019

Ergoth, S; Russmayer, H; Sauer, M; Marx, H (2019): 3-hydroxypropionic acid production from crude glycerol with *Lactobacillus diolivorans*. [Poster]

[Biochemical and Molecular Engineering XXI, Mont-Tremblant, Quebec, Canada, JUL 14-18, 2019]

In: ECI (Ed.), Proceedings Biochemical and Molecular Engineering XXI FullText

Gassler, T; Gasser, B; Sauer, M; Steiger, M; Mattanovich, D (2019): A synthetic Calvin cycle enables autotrophic growth in the yeast *Pichia pastoris*. [Poster]

[RPP 10, Crete, Greece, APR 24-27, 2019]

In: efb (Ed.), RPP 10 - A comparative view on host physiology - abstract book

Gassler, T; Gasser, B; Sauer, M; Steiger, M; Mattanovich D (2019): A synthetic yeast for efficient assimilation of carbon dioxide.

[47th Annual Conference on Yeasts, Smolenice, Slovak Republic, MAY 12-15, 2019]

In: ACY (Ed.), 26 ACY - Abstract Book

Hoheneder, R; Bischof, RH; Sauer, M (2019): Microbial upgrading of a side stream from cellulose fiber production. [Poster]

[SIMB 2019, San Francisco, CA, USA, JUL 21-24, 2019]

In: SIMB (Ed.), SIMB Annual Meeting and Exhibition 2019 - Abstract Book

Jeschek, D; Steiger, MG; Mattanovich, D; Sauer, M (2019): A toolbox to express and characterize membrane transport proteins. [Poster]

[RPP10, Crete, Greece, APR 24-27, 2019]

08/01/2018

33

Invited lecture by Dr. Michael Sauer  
Workshop on Research Methodology

- |                        |          |                       |
|------------------------|----------|-----------------------|
| 1. Annu S George       | S4 BIF   | <del>Anna</del>       |
| 2. Litty Thomas        | S4 BT    | <del>Litty</del>      |
| 3. Manija Madhu        | S4 FTQA  | <del>Manija</del>     |
| 4. Teena Joseph        | S4 FTQA  | <del>Teena</del>      |
| 5. Nadiya Nazeer       | S4 FST   | <del>Nadiya</del>     |
| 6. Anyali S            | S4 BC    | <del>Anyali</del>     |
| 7. Aiyama Keesbma      | S4 FST   | <del>Aiyama</del>     |
| 8. Chippy Mathew       | "        | <del>Chippy</del>     |
| 9. Shan Elizabeth      | "        | <del>Shan</del>       |
| 10. Anil T. Lulu       | "        | <del>Anil</del>       |
| 11. Farwar Gqbal       | "        | <del>Farwar</del>     |
| 12. Vandana S. Kumar   | "        | <del>Vandana</del>    |
| 13. Fathima Rahim      | "        | <del>Fathima</del>    |
| 14. Fathima Nazeer     | "        | <del>Fathima</del>    |
| 15. Reemina M Shajahan | "        | <del>Reemina</del>    |
| 16. Gopika. Rey. P     | "        | <del>Gopika</del>     |
| 17. Mishel Elizabeth   | "        | <del>Mishel</del>     |
| 18. LETTY ELSA ABRAHAM | "        | <del>Letty</del>      |
| 19. Kesuya joy.        | S4 BIF   | <del>Kesuya</del>     |
| 20. Dilna T            | " "      | <del>Dilna</del>      |
| 21. Daluya Simon.      | " "      | <del>Daluya</del>     |
| 22. Maria Joy          | S4 BT    | <del>Maria</del>      |
| 23. Rathneeshu G       | S4 FST   | <del>Rathneeshu</del> |
| 24. Abhijith A         | S4 FST   | <del>Abhijith</del>   |
| 25. Rahul krishnan     | S, BC    | <del>Rahul</del>      |
| 26. AMALI P.K.         | S, PHYTO | <del>Amali</del>      |
| 27. Sujya BS           | S4 PBT   | <del>Sujya</del>      |
| 28. Denna Mary Tom     | S4 FST   | <del>Denna</del>      |
| 29. Abhisami S. Nais   | "        | <del>Abhisami</del>   |
| 30. Fathimi Shamma     | "        | <del>Fathimi</del>    |

31	Sera Piresa	S4 FST	Sera
32	Annu	u	Annu
33	Aucha	u	Testa Aucha
34	Testa	u	Sera
35	Atthiva Aravind	S1 BC	<del>Atthiva</del>
36	Atthiva Thomas	S1 PMS	Atthiva
37	Lekshmi S. Kumar	S3 PBT	Lekshmi
38	Anjuresh K.P	S3 BT	Anjuresh
39	Anju C. Anand	S4 BC	Anju
40	Gayabhi U	S4 BT	Gayabhi
41	Vinitha Francis	S4 BC	Vinitha
42	Ria Elza Varghese	S4 BC	Ria
43	Jain Sarah	S4 FST	Jain
44	ATIIRA RAJAN	S1 FST	ATIIRA
45	Keerthana Roop	S1 FST	Keerthana
46	Saishma S. Suresh	S1 BC	Saishma
47	Rajmol M.R	S4 BC	Rajmol
48	Chimju Varghese	S4 BC	Chimju
49	Reshma Shaji	S4 BC	Reshma
50	Jisha George Thytkadavil	S1 PBT	Jisha
51	Ummiraya G.	S1 PBT	Ummiraya
52	Stella Stanley	S1 BT	Stella
53	Mohammed Saheed	S1 FST	Mohammed
54	Abhin George	S1 FST	Abhin
55	Amali M Thomas	S4 FST	Amali
56	SIBIN BABU	S4 FST	SIBIN
57	Nikhil A.N	S4 FST	Nikhil
58	Jubin J. Kurichiyil	S4 FTQA	Jubin
59	Ajali Prakash	S4 POST	Ajali
60	Chandhini Tharakan	S1 Biochem	Chandhini
61	Arya C. Mitra	S1 BT	Arya
62	Sudeekshmi BS	S1 FST	Sudeekshmi
63	SUSATHA Joy	S1 FST	SUSATHA
64	Sana George	u	Sana



65	Jwanka Jose	S, FST	<del>Amal Jose</del>
66	Shesim Sabu Thomas	S, FST	<del>Shesim</del>
67	Christiana Sily	S, FST	<del>Christiana</del>
68	Jessica Jacob	S, PMS	<del>Jessica</del>
69	Kamalaprige M	S, PBT	<del>Kamalaprige</del>
70	Neera Keishran	S, BC	<del>Neera</del>
71	Akshaya S.S	S, BC	<del>Akshaya</del>
72	Anjali G	S, BC	<del>Anjali</del>
73	Ashlin Mary Jose	"	<del>Ashlin</del>
74	Sneeha S. Kumar	S, BC	<del>Sneeha</del>
75	Asha Jose	"	<del>Asha</del>
76	Basma Yousef	"	<del>Basma</del>
77	AKSbag B.C	"	<del>AKSbag B.C</del>
78	Appas.	S, PBT	<del>Appas</del>
79	Anupama T	S, PBT	<del>Anupama</del>
80	Greya Antony	S, BT	<del>Greya</del>
81	Ashifa N.	S, BT	<del>Ashifa</del>
82	Durga Venugopal	S, BT	<del>Durga</del>
83	Aswathy A.S	S, PBT	<del>Aswathy</del>
84	Neha Lakshmi	S, PBT	<del>Neha</del>
85	Ajmi	S, PBT	<del>Ajmi</del>
86	Jinsa Sara Kurian	S, PBT	<del>Jinsa</del>
87	Sangeetha Soman	S, PBT	<del>Sangeetha</del>
88	Mery Jose	S, FST	<del>Mery Jose</del>
89	Aleena T. Mathews	"	<del>Aleena</del>
90	Anaswara Gyan	S, PBT	<del>Anaswara</del>

*BT*



# MACFAST

## School of Biosciences

Training program in

# Chocolate Making

for prospective entrepreneurs

March

7-8

2018



**Programme Coordinator**

Pinchu Elizabeth Thomas, Phone: 9446401391

**For registration details contact**

Biju Dharmapalan, Phone: 9447121716



## School of Biosciences, MACFAST Tiruvalla

### Report on the workshop

### “Chocolate making for prospective entrepreneurs”

09th of March 2018

MACFAST has conducted a training programme on Chocolate making on 7th and 08th of March 2018. Chocolate is a beloved sweet treat that appeals to everyone, whether young or old, rich or poor, man or woman, across all ethnicities and races. Chocolate is everyone's favourite form of expressing their feeling and the first thing that comes to mind while in the mood to celebrate, whether it is a small achievement or a big milestone. Interestingly, statistics from a study report conducted in 2016 reveals that the amount of chocolate consumed in a year is approximately more than two hundred thousand tonnes of chocolate. These astounding figures just give an inkling into the massive popularity of chocolate, whether the commercial branded bars or the premium exotic varieties.

To exploit this gap and demand in market, MACFAST had conducted a training program on Chocolate making at MACFAST. The coordinator and the main resource person of the program was Mrs. Pinchu Elizabeth Thomas. The registration was handled by Mr. Biju Dharmapalan, School of Biosciences. A total of 10 participants attended the training programme to start chocolate making as a business venture.

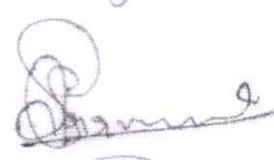

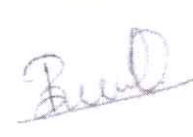


*Beena Cherian*  
Beena Cherian  
Dean, School of  
Biosciences

*Fr. Dr. Cheriyan J Kottayil*  
Fr. Dr. CHERIAN J KOTTAYIL  
Mar Athanasios College for Advanced Studies  
Tiruvalla- 689101, Kerala

# Training programme in Chocolate Making

7-8th March 2018

Name of Student	Course	Signature
Sarwan Iqbal	FTQVF	
Keerthana Roop	"	
Binil Alias	"	



Reene Cherian  
Reene Cherian  
Dean, School of Bioscience

## RESUME

### **PINCHU ELIZABATH THOMAS**

Onattu Thenadil

Perumpanachy P. O.

Changanacherry- 686536

Kerala, India

Mobile: +91 9446401391

E-mail: [pinchuthomas@gmail.com](mailto:pinchuthomas@gmail.com)

---

### **CAREER OBJECTIVE**

To work in an organization that simultaneously enriches my professional knowledge, living and contributes towards achieving the goals of the employer.

### **AREAS OF INTEREST**

Teaching, Research and Product development, Bakery & confectionery, Quality Assurance and Process & Technology

### **PROFESSIONAL & ACADEMIC QUALIFICATIONS**

- **Diploma in Sugar Paste**, ICCA (International Center for Culinary Arts), Dubai, UAE, City & Guilds Accredited Certified Programme, 2018
- **Qualified National Eligibility Test (ICAR-NET) in Food Technology** for lectureship, 2016
- **Master of Science in Food Science & Technology**, 2005-2007, Mahatma Gandhi University, Kottayam, Kerala, India- Graduated with Distinction, **First Rank**
- **Bachelor of Science in Food Science & Quality Control**, 2002-2005, Mahatma Gandhi University, Kottayam, Kerala, India- Graduated with Distinction, **Second Rank**

### **PROFESSIONAL SKILLS**

- **Laboratory:** Physico- chemical, nutritional, microbial and sensory analysis of food
- **Engineering skills:** experience in handling food processing equipment
- **Quality Assurance:** Food safety, GMPs, SSOPs and HACCP prerequisites, auditing, documentation and ISO standards in food industries
- **Computer:** MS Word, MS Excel, MS Power Point
- **Baking technology-** new product development, baking, designing and decorating cakes, experienced in handling fondant and sugar paste.
- **Chocolate making-** experienced in manufacturing various homemade chocolates, tempering techniques, filling, enrobing and designing

### **PROFESSIONAL EXPERIENCE**

Assistant Professor

Associated with the School of Biosciences, MACFAST (Mar Athanasios College for Advanced Studies Tiruvalla), Mahatma Gandhi University, Kottayam, Kerala, India, January 2008- Till date.

**Duties and Responsibilities:**

- Curriculum in-charge of Food Science & Technology Post Graduate Programme, till 2019
- Faculty in-charge of Post Graduate Diploma in Food Technology, till 2015
- Additional, Chief and external examiner for various Food Science Courses under Mahatma Gandhi University, Kottayam, Calicut University and IGNOU, Delhi
- Visiting Faculty, Department of Food Science & Quality Control (Undergraduate Programme), BCM College, Kottayam, Mahatma Gandhi University, Kerala, India
- Guiding external student projects and small-scale entrepreneurs
- Member of the syllabus proposal and revision committee, Mahatma Gandhi University, Kottayam, Kerala
- Member of the Inspection commission, Mahatma Gandhi University, Kottayam, Kerala, 2014-2015
- Question paper setter for various university exams

**Facilitator**, Training programme in chocolate making and cake decoration for prospective entrepreneurs

**Chocolatier**

- Experienced in chocolate making, tempering, enrobing, molding and framing techniques
- Modern chocolate decorations using texture sheets, transfer sheets and pralines
- Experienced in manufacture of various chocolate products like truffles, rochers, barks, toffees, French bonbons, truffle shells, chocolate salami, lollipops and chocolate dessert cups
- Experience of decorating confectionery products and baked foods with chocolate materials
- Use of food colours in designing chocolates
- Storage and packaging of products
- Quality evaluation of chocolates

**Cake Baker, Designer & Decorator**

- Bake cakes in accordance with customer's specifications
- Decorate cakes using different types of icings and mixing of colors
- Designing novelty cakes based on customer's requirements
- Experienced in fondant and sugar paste techniques
- Assembling special occasion cakes
- Experienced in covering, crimping, and embossing
- Skilled in doing fabric effects, textured drapes, frills, ribbons, roses, bows and sugar embroidery
- Modeling Fun Figures, textures, inlay & applique & overlay

- Design and handling, presentation of multi-tiered cake (dowelling & stacking)
- Designing Celebration Cakes & Color Balance

### TRAINING EXPOSURE

- Training programme on "Role of HPLC in Food Analysis", CFTRI, Mysore, 26<sup>th</sup> -27<sup>th</sup> August 2019
- Training programme on Phytochemical techniques, FRI, Dehradun, April 2019
- Training programme in Safety of Food in Metal and Plastic Packaging, CFTRI (Central Food Technological Research Institute), Mysore, October 2018
- 10 days training experience in Food Technology R&D Division, Sami Labs Limited, Bangalore. December 2017
- Training Programme in "Chocolate for Entrepreneurs", De' Pastry School, Cochin, 2016
- Training Programme in "Cake designing", De' Pastry School, Cochin 2016
- Advanced Food Hygiene and Application of HACCP Based Food Safety Management System- Level 4 (ISO 22000), training curriculum developed by FAO, Food Safety Solutions International, Cochin, Kerala, November 2014
- Advanced Food Hygiene and Application of HACCP Based Food Safety Management System- Level 2 (training curriculum developed by FAO & CAC & RIPH UK, complies with the requirements of US FDA, EU COMMISSION and various other National and International Regulations) Food Safety Solutions International, Cochin, Kerala, May 2012
- Codex General Principles of Food Hygiene and Application of HACCP Based Food Safety System (FAO & CAC, complies with the requirements of US FDA, EU COMMISSION), Food Safety Solutions International, Cochin, Kerala, January 2005.
- Entrepreneurship Development Program on "Food Science & Technology" conducted by Field Testing Station, Changanacherry (Small Industries Development Organization, Ministry of SSI, Govt. India), Jan to Feb 2005
- Seafood Processing and Quality Control, The Integrated Fisheries Project, (Dept. of Animal Husbandry & Dairying, Govt. of India), Cochin, Oct to Nov 2003
- Milk and Milk Products Training, Dairy Training Centre, Kottayam (Kerala State Dairy Development Department), Dec 2002
- Processing of Pickles, Jams & Squashes, The Malabar Cost Products, Kerala, May- June 2003
- Training in the processing of Bakery and Confectionary Products Breads, Hot Breads, Kunjoos Fine Products, Kerala, February 2003

### RESEARCH EXPERIENCE

- Worked as **Senior Research Fellow**, in the project "**Integrated Technology for the Development of Reinforced Bioplastics with Celluloses of Plant Origin**" funded by Department of Biotechnology (DBT), Govt. of India, and has successfully developed value added products such as degradable, non-toxic packing material there by reducing the usage of LDPE, 2009-2012
- "**Value added Products from Cassava,**" Mar Athanasios College for Advanced Studies Tiruvalla, Kerala, 2008

- “Studies on Naturally Fortified Pasta Products,” Defence Food Research Laboratory, Govt. of India, Mysore, 2007
- “A Study to Increase the Shelf-life of Raw Jack Fruit by Drying,” Mar Athanasios College for Advanced Studies Tiruvalla, Kerala, 2007

#### PROJECT COMPLETED

- “Database on Food Toxins,” Kerala State Council for Science, Technology & Environment (KSCSTE), Thiruvananthapuram, Kerala, 2014.

#### PROJECT ONGOING

- Co-PI of the project “Human Milk based Human Milk Fortifier for Preterm Infants” Department of Biotechnology, Delhi, 2021

#### PROFESSIONAL AND PERSONAL ACHIEVEMENTS

- Awarded First Rank by the M.G. University Kottayam for M.Sc., 2007
- Awarded Second Rank by the M.G. University Kottayam for B.Sc., 2005
- Award for best poster presentation in the International Symposium on “Advances in Food Biotechnology,” 2007
- Organizing Committee Member, **Treasurer** of International Symposium on “Second Green Revolution: Priorities, Programmes, Social and Ethical Issues,” Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- Recipient of the President of India Guide Award, 2000

#### PROFESSIONAL MEMBERSHIP

- Member, Association of Food Scientists & Technologists, India (AFSTI)
- Kerala Food Technologists Association (KEFTA)

#### PUBLICATIONS/ SCIENTIFIC PRESENTATIONS

- Value Added Products from Jackfruit (*Artocarpus heterophyllus*) Fruit, **Pinchu Elizabeth Thomas** and Biju Dharmapalan, Acta Scientific Nutritional Health, ISSN:2582-1423, 4.2 (2020): 105-110.
- Value added food products from Flacourtia jangomas (Lour.) Raeusch, **Pinchu Elizabeth Thomas** and Biju Dharmapalan, Indian Food Industry Mag, Vol 38 No 1, Jan- Feb 2019
- Physico-chemical and sensory properties of biscuits fortified with carrot powder, **Pinchu Elizabeth Thomas**, Litty Mary Abraham and Biju Dharmapalan, International Journal of Food and fermentation Technology. 8(2): 01-05, December 2018, ISSN No.2249-1570
- “Clovora- A New Herbal Mouth Wash for Oral Hygiene”, Amal P. K., Abu Anna Joy, Athira Thomas, Jessiya Jacob, Biju Bharmapalan and **Pinchu Elizabeth Thomas**, Journal of Science, Technology and Management, December 2018
- “Isolation of Oleoresin from *Capsicum frutescens* and its Value Addition,” **Pinchu Elizabeth Thomas**, and Betsy M. Baby, International Symposium on Advances in Bioprocess Technology, 2015
- “Functional Properties of Cellulose-Reinforced Bioplastics and their Potential Usage as Food Packaging Material” **Pinchu Elizabeth Thomas**, Rathish Rajan, Subin Damodaran and C. Balagopalan, Journal of Science, Technology and Management, January 2014



- "Rapport between Bioinformatics and Food Technology" Betsy M. Baby, **Pinchu Elizabeth Thomas**, International Symposium on Computational Biology and Drug Design, MACFAST, Thiruvalla, India, 2013
- "Utilization of Cotton Textile Waste as Reinforcement in Low Density Polyethylene Based Bioplastics" Rathish Rajan, **Pinchu Elizabeth Thomas**, Balagopalan C, APM-2011: International Conference on "Advancements in Polymeric Materials," CIPET, Chennai
- "Strategic Solutions for Food Security" **Pinchu Elizabeth Thomas**, Treesa Varghese and Betsy M. Baby, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "Biofortification: A Valuable Ingredient in High Quality Cereals Production" Treesa Varghese, **Pinchu Elizabeth Thomas**, and Betsy M. Baby, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "Computational Analysis of Putative Calmodulin Binding Protein SUN" Betsy M. Baby, Treesa Varghese and **Pinchu Elizabeth Thomas**, International Symposium on Second Green Revolution: Priorities, Programmes, Social and Ethical Issues, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, India, 2009
- "A Study to Increase the Shelf-life of Raw Jack Fruit by Drying" **Pinchu Elizabeth Thomas**, Indubala, Maya Raman, National Seminar on Advances in Food Biotechnology, Biospectrum 2007, Mar Athanasios College for Advanced Studies Thiruvalla, India

#### PERSONAL PROFILE

Date of Birth : 16<sup>th</sup> January 1985  
 Nationality : Indian  
 Gender : Female

#### DECLARATION

I hereby declare that the particulars furnished above are true and correct to the best of my knowledge and belief.

**PINCHU ELIZABATH THOMAS**

# MACFAST



Department of Management Studies in association with  
Entrepreneurship Development Club MACFAST organizes a talk on

## Entrepreneurship Development-Government Schemes and Support

*Resource Person*

**Prakash G S**

Joint Director  
MSME Development Institute  
Thrissur, Kerala



**DATE: 5<sup>th</sup> April 2018**



**MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALA**  
**(MACFAST)**  
**Thiruvalla – 689101**

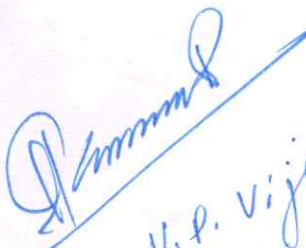
**Report – ‘Entrepreneurship Development – Government Schemes and Support’ by Mr. Prakash, Deputy Director Micro Small and Medium Enterprises on 4th May 2018**

In order to nurture entrepreneurship skills for aspiring students and to familiarize them with different government schemes and support, a session was organized with the title ‘Entrepreneurship Development – Government Schemes and Support’ on 4<sup>th</sup> May 2018. The resource person for the session was Mr. Prakash, Deputy Director Micro Small and Medium Enterprises. 92 participants have attended the session.


This one hour session has enlightened students with the following out comes in the field of entrepreneurship.

- How to start and MSME
- Various Government schemes available to start MSME
- Financing options available to start MSME

Mr. Prakash has also answered the questions raised by the participants.

  
Dr. V. P. Vijayamohan  
(Co-ordinator EDC)



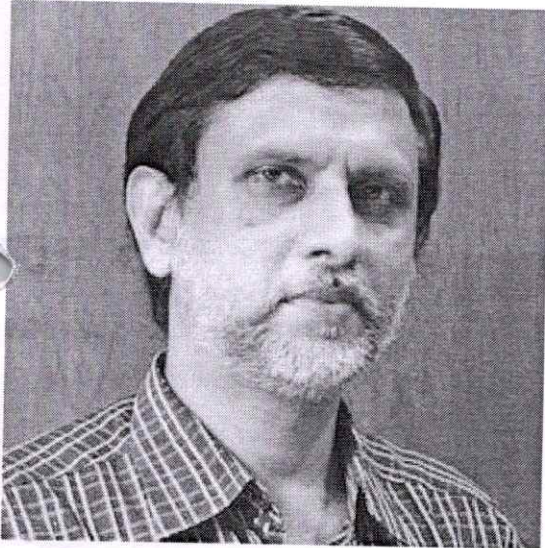
  
Fr. Dr. CHERIAN J KOTTAYIL  
PRINCIPAL  
Mar Athanasios College For Advanced Studies  
Thiruvalla- 689101, Kerala



(<https://cimsme.in/>)

## PRAKASH GS

Home > Speaker > Prakash GS



### PRAKASH GS

Prakash GS IEDS Joint Director MSME Development Institute Thrissur Kerala. He is an Indian Enterprise Development Service (IEDC) cadre officer in Govt of India.

Graduate in Engineering, prior to joining to the Ministry of MSME through UPSC, he worked in BPL Ltd as a production Engineer in the consumer electronics division. In the Ministry, he worked in the HQ at Delhi and worked 6 different stations in the country.

Presently posted as Joint Director & Head of Office at MSME Development Institute Thrissur, he is engaged in implementation of various programs and policies of the Ministry of MSME in Kerala and Lakshadweep.

### Events Joined



**INVITATION FOR THE TALK Organized By ED CLUB**

1 message

Fr. Dr. Cherian J Kottayil <principal@macfast.org>

Fri, May 4, 2018 at 10:47 AM

To: faculty <faculty@macfast.org>, H R Macfast <hr@macfast.org>, Library <library@macfast.org>, "I.T. Officer" <it@macfast.org>, "nithin.mathews" <nithin.mathews@macfast.org>, Deputy Director Macfast <dd@macfast.org>, administrator@macfast.org, Pro Macfast <pro@macfast.org>, Pavin Thadathil <pavin@macfast.org>, Saji accounts <financialmanger@macfast.org>, saji john <sajijohn@macfast.org>

Dear All,

**Department of Management Studies** in association with ED Club is organizing an invited talk on the topic **'Entrepreneurship Development - Government Schemes and Supports'** by Mr. Prakash Deputy Director Micro Small and Medium Enterprises (MSME) with the objective of developing entrepreneurship flairs in our post graduate students on **4th May, 2018 (Friday)** from **1:45pm to 2:50pm** at Auditorium.

The outcomes expected from the program are following.

1. How to start an MSME
2. Various Government schemes available to start MSME
3. Financing options available to start MSME

All Faculty members and students are cordially invited .

Thanks and Regards,

Fr. Dr. Cherian J Kottayil

Principal Cum Director- **MACFAST** ( Accredited by **NAAC** with **A Grade**)  
Chairman- **Radiomacfast 90.4**

Watch Our Profile Video

MACFAST at Vikasana Sandesham- Doordarshan

Interview at Power Vision Channel

UNAI & UNHate Foundation 2015 Diversity Contest

**'Entrepreneurship Development – Government Schemes and Support' by Mr. Prakash, Deputy Director Micro Small and Medium Enterprises on 4th May 2018**

**Participants List**

<b>SL.NO</b> :	<b>Name of the student</b>	<b>SL.NO:</b>	<b>Name of the student</b>
1	Abhishek Purushothaman		
2	Ajo Varghese Rajan	36	Sreejesh S
3	Akash Mathew	37	Steffi Philip
4	Akhila O V	38	Sudheesh S Nair
5	Akhilmon V Thomas	39	Swathy Sathyavan
6	Albin Baby	40	Veena Mol V
7	Alma Mariam Abraham	41	Vivek Vijayan
8	Ameer Ismail	42	Abiya Babu
9	Amitha Rajesh R	43	Akshaya E S
10	Ancy Monachan	44	Aleena Jacob
11	Anita Ann Alex	45	Anjali B Joseph
12	Anuja Elizabeth Joseph	46	Anju Vijay
13	Ashik S Antony	47	Anu Abraham
14	Athira R	48	Anu Joseph
15	Brian Binu Thomas	49	Arya M M
16	Cyriac Stephen George	50	Ashma C Das
17	Divya Ann Varghese	51	Aswani S Kumar
18	Heera Maria Vilson	52	Athira Babu
19	Jayasree J	53	Athira V M
20	Jiby Varghese	54	Bijina Beegam
21	Jikku Varughese Koruth	55	C S Chitra
22	Job Justin	56	Chinnu Maria Thankachan
23	Jojo John Varughese	57	Gibin Babu
24	Joshni Mary Thomas	58	Haripriya J
25	Megha A P Panicker	59	Jibi Joseph
26	Nidhi Elizabeth Philip	60	Jilbi Susan James
27	Nimmy Francis	61	Ligitha Anu Ninan
28	Praveen P Nair	62	Merin Anna Mathew
29	Riya Eliz Biju	63	Merin Chacko
30	Rony K J	64	Preethy Mariam Kacheriparambil
31	Sanju Mariam Thomas	65	Sandra Biju
32	Senu C Mathew	66	Shanu Eappen
33	Shijin Babu	67	Shany Thomas
34	Sijin Saji	68	Smrithi Viswanath
35	Simi Chacko	69	Sneha Catherine James

70	Sneha Sara Thomas
71	Sruthi Raj
72	Swathy Harikuttan
73	Teenamol Antony
74	Vandana V
75	Veena Vinayan
76	Vijitha M Nair
77	Achu C Thampi
78	Akhilesh Kumar C A
79	Ananthu A Kochumon
80	Ananthu Santhan
81	Bibin John Babu
82	Christopher George
83	Harikrishnan V M
84	Jerin George
85	Jikku George John
86	Jikku Mathew Thomas
87	Midhun S Abraham
88	Robin George Kurian
89	Rohan Alex Mathew
90	Sebin Sebastian
91	Tom Abraham
92	Vishakh T Devan

Verified by

*[Handwritten Signature]*  
4/5/18

Jibumon K.G  
ED club Co-ordinator (MBA)

