

DEPARTMENT ACTIVITIES DURING THE ACADEMIC YEAR 2014-15

ASSOCIATION ACTIVITIES/STUDENT ACTIVITIES/ STUDENT ACHIEVEMENTS

The Loyola Association of Plant Biologists and Biotechnologists (LAPB) was inaugurated by Dr. V. Krishnamurthy, Professor of Homeopathy, Chennai on the 1st August, 2014.

Dr. R. Ravindhran was the President of the association for the Academic year 2014 – 2015.

Dr. Prem Kumar was appointed as the Vice – President.

The following were the other office bearers:

S. No.	Name	Designation
1.	Periya Pandi Selvam V. (12-PB-003)	Secretary
2.	Suresh S. (12-PB-005)	Cultural Secretary
3.	Rakesh Kumar K (12-PB-015)	Sports Secretary
4.	Harish Kumar (13-PBT-18)	Association Secretary (PG)
5.	Abadya Abraham Mathew(13-PB-035)	Joint Secretary (II B. Sc.,)
6.	Tenistan Rajan R (14-PB-017)	Joint Secretary (I B. Sc.,)
7.	Florence Patricia F (14-PBT-09)	Joint Secretary (1 st M. Sc.,)

ACHIEVEMENT OF STUDENTS:

Students participated in many cultural fests held by the other city colleges. The students participated and received the overall shield at “**Madhulika**” held at SDNB Vaishnav College, Chromepet on 12.09. 2014.

They won the overall shield at “**Astera**” hosted by the Department of Plant Biology and Biotechnology, Stella Maris College on 08-10-2014 and “**Lantana**” organised by the Department of Plant Biology & Plant Biotechnology, Ethiraj College on 17-12-2014.

On the 12th of December, 2014 the department hosted “**Genotsav ‘14**” – the annual Inter – collegiate Department Festival. The Chief Guest for the day was Dr. S. J. Kingsley, Director, Self - Financed Section, Madras Christian College, Tambaram. On this day, more than 8 colleges participated in the 10 different events. Ethiraj College for women won the overall Winner’s trophy and Madras Christian College was the runners-up.

Mr. V. Periya Pandi selvam, Mr. S. Suresh, and Mr. Nikhil have participated in the internship on “Medical Bioinformatics” during the period from 28th to 30th January, 2015 (three days) held at the Department of Bioinformatics, Sri Ramachandra University, Chennai.

Mr. V. Periya Pandi Selvam, Mr. S. Suresh, Mr. V. Kaviarasan, Mr. PT. Nikhil and Mr. NJ. Anderson Luke Manoj have participated in the meeting of the IFAD NUS and IV on “Reinforcing the resilience of poor rural communities in the face of food insecurity, poverty, and

climate change farm conservation of local agrobiodiversity” held on 17th February , 2015 at M. S. Swaminathan Research Foundation, Taramani , Chennai.

Mr. Alan Paiva, Mr. Akhil, Ms. Florence Patricia, Mr. Ganesh Baba, Ms. Priyanka Saroka, Mr. Mahesh Nayak and Ms. Unnati Jaiswal have participated in the Conference “On Recent Trends in Nano biotechnology” held on 28th January, 2015 at Stella Maris College, Chennai.

Mr. S. Suresh and Mr. N.J. Anderson Luke Manoj were awarded runners-up for the Dr. K. R. Venkatasubban oratorical competition organized by the department of Plant Biology and Biotechnology at Madras Christian College on 25.02.2015.

SPORTS DAY

UG and PG Students of the department actively participated in the March Past as well as the inter-departmental sports events organized by the Department of Physical Education, Loyola College, Chennai.

Mr. J. Jeyachandran (1st B. Sc., Student) has participated in the Inter Departmental Tournaments Annual Athletic meet and won second position in 800 metres, and 1st position in 1500 and 5000 metres, I Division. Mr. K. Rakesh Kumar won 3rd position in 800 metres II Division. Mr. J. Jeyachandran has also won 10th place in Chennai Marathon(21 Km), 5th and 2nd place in the running competition conducted at Anna University(10Km) and at Pachaiyappa College(10 Km) respectively.

ENDOWMENT LECTURES:

1. The Department of Plant Biology and Biotechnology organized Endowment day on 10th March, 2015. **Dr. T. Ambrose**, Associate Professor, Dept. of Advanced Zoology and Biotechnology, Loyola College, Chennai delivered **Prof. C. R. Babujee Endowment Lecture**.
2. **Dr. N. Raaman**, Director, Centre for Advanced Studies in Botany, University of Madras, Guindy Campus, Chennai - 25 delivered **Rev. Fr. Alfred Rapinat SJ** Endowment Lecture.
3. **Dr. S. Seshadri**, Indigenous and Frontier Technology Research Centre, Chennai delivered **Prof. J. Edmund Manohar Raj** Endowment Lecture.

GUEST LECTURES ORGANIZED

Prof. T. Pradeep, DST Unit of Nanoscience (DST UNS) and, Thematic Unit of Excellence (TUE), Department of Chemistry, Indian Institute of Technology, Madras, Chennai delivered a lecture on “*New ways of Ambient ionization for Plant Sciences*”.

Dr. D. Arivoli, Crystal Growth Centre, Anna University, Chennai delivered a lecture on “*Introduction to Nanobio in Nature*”

VALEDICTORY FUNCTION

The LAPB valedictory function was held on 10th March, 2015. Dr. T. Ambrose was the chief guest of the function and bringing to a close all the departmental activities for the academic year 2014-15.

AWARD OF DOCTORATE:

S.NO.	Name of the Student	Name of the Supervisor	Date of Exam
1.	Dr. NimalChristhudas I.V.S.	Dr. P. Agastian	05.01.2015
2.	Dr. Swarna	Dr. R. Ravindhran	07.01.2015

STAFF ACHIEVEMENTS

Awards/Honors

Dr. P. Agastian received INSA - Visiting Fellowship award for the year 2014-2015.

Dr. R. Ravindhran received the UGC Research Award 2014-2016 for excellence in the field of Biotechnology.

Patent filed

Dr. G. Jeya Jothi has filed for a patent on a novel and facile process to synthesize ecofriendly bio-initiator from *Azadirachta indica*. A. Juss. and product there of (Appl.No: 6658/CHE/2014).

RESEARCH PROJECTS / RESEARCH GRANTS RECEIVED

Loyola College-Times of India Major Science Research Projects:

Dr. P. Agastian

Production of novel bioactive compounds from the endophytes of endangered medicinal plants through biotechnological approaches (Rs. 31,64,600).

Dr. R. Ravindhran

Bio-fortification of vitamin E in Finger millet (Rs. 28,53,950).

Dr. J. Joel Gnanadoss

Characterization of novel Actinomycetes from mangrove soil and sediments and development of low cost technology for production of proteases for industrial applications (Rs. 21,26,100).

Minor Research Projects:

Dr. R. Ravindhran received a UGC sponsored minor research project on *in vitro* clonal propagation of oil palm (*Elaeis guineensis* Jacq.) and assessment of genetic fidelity using molecular markers (Rs.4,70,000).

WORKSHOP/CONFERENCE/SEMINAR/ SYMPOSIUM/ TRAINING ORGANIZED

Dr. J. Joel Gnanadoss

1. UGC Sponsored Conference on “Youth Issues: Challenges and Responses” 3 Dec, 2014. **Co-convenor.**

Dr. Jaqueline Chinna Rani

Organised a UGC sponsored 3- day State Level Workshop on "Nanotechnology in Plant Sciences" in the Dept of Plant Biology and Biotechnology, Loyola College, between 26-28 Nov, 2014.

WORKSHOP/CONFERENCE/SEMINAR/ SYMPOSIUM/ TRAINING ATTENDED

Dr. J. Joel Gnanadoss

21st IAAM National Conference on “Global Trends and Challenges in Biosciences”. Dr. MGR Janaki College for Women. 5-6 Dec 2014.

Ms. Anitha Sebastian

Ms. Mary Dorothy Anitha Sebastian participated in the Regional conference on Nanobiotechnology conducted by Stella Maris College, Chennai, on 28th January 2015.

Dr. Shirly George Panicker

Dr. Shirly George Panicker participated in “ Sanger to NGS – The Genomics Era” symposium organized by Genetics dept, Sankara Netralaya, Vision Research Foundation, Chennai, Jan 30-31, 2015.

RESOURCE PERSON

Dr. R. Ravindhran

Resource person for the National Level Research Scholars Workshop on E- Resource and Data Analysis organized by Advanced Zoology and Biotechnology, Loyola College supported by DBT during Feb.9-14, 2015.

Dr. J .Joel Gnanadoss

Regional seminar on “Unave Marunthu” organized by Quiad-E-Millath College for Women, Chennai, February, 2015 and delivered a lecture on “Millets – The Grain To Improve Health

Dr. I. Jaqueline Chinna Rani

1. Delivered a talk on "Challenges in Teaching" in the Orientation for School Teachers organized by Directorate of School Education on 8th Sept, 2014.
2. Delivered an invited lecture on "Nanotechnology and living systems" in the Department of Biotechnology, Stella Maris College, on 19th Aug, 2014.

RESEARCH PUBLICATIONS IN NATIONAL AND INTERNATIONAL JOURNALS

Mr. Antoine Lebel L.

1. Amruthraj, N.J., Preetham Raj, J.P. and **Antoine Lebel L.**, 2014. Isolation and molecular characterisation of plant growth promoting Rhizobacterium *Paenibacillus illinoisensis* strain Nagoth JAR 007 from seeds of *Capsicum chinense* Bhut Jolokia. *Journal of Microbiology, Biotechnology and food Sciences*. Vol. 3, No. 5: 391-394 (**Impact factor: 0.388**)
2. Amruthraj, N.J., Preetham Raj, J.P. and **Antoine Lebel L.**, 2014. Impact of organic solvents in the extraction efficiency of therapeutic analogue capsaicin from *Capsicum chinense* Bhut Jolokia fruits. *International Journal of Pharmaceutical and Clinical Research*. 6(2): 159-164(**Impact factor: 1.117**).
3. Amruthraj, N.J., Preetham Raj, J.P., Saravanan, S. and **Antoine Lebel L.**, 2014. *In vitro* studies on anticancer activity of Capsaicinoids from *Capsicum chinense* against human hepatocellular carcinoma cells. *International Journal of Pharmacy and Pharmaceutical Sciences*. Vol. 6, issue 4, 2014(**Impact factor: 1.59**).
4. Amruthraj, N.J., Preetham Raj, J.P., and **Antoine Lebel L.**, 2014. Capsaicin-capped silver nanoparticles: its kinetics, characterisation and biocompatibility assay. *Appl. Nanosci*. DOI 10.1007/s13204-014-0330-5(Springerlink.com).
5. Amruthraj, N.J., Preetham Raj, J.P. Gabriel Paulraj M. and **Antoine Lebel L.**, 2014. Report on micro moth *Phthorimaea Operculella* (Lepidoptera: Gelechiidae) infestation in *Capsicum chinense* Bhut Jolokia fruit. *IOSR Journal of Agriculture and Veterinary Science*. Vol. 7, Issue 8 ver.II, pp41- 45
6. Amruthraj, N.J., Preetham Raj, J.P., and **Antoine Lebel L.**, 2014. Comparative study on the extraction of capsaicinoids from *Capsicum chinense* and their analysis by phosphomolybdic acid reduction and HPLC. *Int.J. Pharm. Sci.Rev. Res*. 28(2), Article No. 44, pp 247-252.

Dr. P. Agastian

1. Paulrayer Antonisamy, Muniyappan Dhanasekarab, Savarimuthu Ignacimuthu, Veeramuthu Duraipandiyand, Joseph Devadass Balthazarb, **Paul Agastian** c, Jong-Hoon Kim (2014). Gastroprotective effect of epoxy clerodane diterpene isolated from *Tinospora cordifolia* Miers (Guduchi) on indomethacin-induced gastric ulcer in rats. *PHYMED-51612*; No. of Pages 4. (**Impact Factor: 3.258**).
2. Mariadhas Valan Arasu, Thankappan Sarasam Rejiniemon, Naif Abdullah Al-Dhabi, Veeramuthu Duraipandiyand, Savarimuthu Ignacimuthu, **Paul Agastian**, Sun-Ju Kim, V. Aldous J. Huxley, Kyung Dong Lee, Ki Choon Choi (2014). Nutritional requirements for the production of antimicrobial metabolites from *Streptomyces* African Journal of Microbiology Research Vol. 8(8), pp. 750-758. ISSN 1996-0808 ©

2014 Academic Journals. (**Impact factor. 0.54**).

3. M. Valan Arasu T.S.Rejiniemon N. A. Al-Dhabi V. Duraipandiyam P. Agastian V.A.J. Huxley C.E. Song K.C Choi*. In vitro antimicrobial potential of organic solvent extracts of novel actinomycetes isolated from forest soil. African Journal of Biotechnology Vol.13(18) , pp. 1891-1897 , April 2014
DOI: 10.5897/AJB2013.13555, ISSN 1684-5315. (**Impact factor. 0.57.**)
4. Christudas Sunil, Santiago Stephen Irudayaraja, Veeramuthu Duraipandiyam, Naif Abdullah Al-Dhabib, Paul Agastian, Savarimuthu Ignacimuthu (2014) Antioxidant and free radical scavenging effects of -amyrin isolated from *S. cochinchinensis* Moore. Leaves . Industrial Crops and Products 61: 510–516.
5. Thankappan Sarasam Rejiniemon1*, Mariadhas Valan Arasu2*, Veeramuthu Duraipandiyam2, Karupiah Ponmurugan2, Naif Abdullah Al-Dhabi2, Selvaraj Arokiyaraj3, Paul Agastian4 and Ki Choon Choi5. (2014).In-vitro antimicrobial, antibiofilm, cytotoxic, antifeedant and larvicidal properties of novel quinone isolated from *Aegle marmelos* (Linn.) Correa. Annals of Clinical Microbiology and Antimicrobials, 13:48.
6. P. Praveena1, P. Agastian1, D. Sudarsanam2, S. Ignacimuthu 3, Jennifer Ambrose3. (2014). Molecular docking studies of plants derivatives isolated from plant sources target for chikungunya virus. Vol. 4, pp 70-77.

Dr. R. Ravindhran

1. Evelyne Priya S and **Ravindhran R** (2015) Phytochemical analysis and Antimicrobial properties of extracts from aerial parts of *Phyllanthus nodiflorus* (L.) Greene. International Journal of Current Microbiology and Applied Sciences. 4(2): 347 – 358.
2. Swarna J, **Ravindhran R**, Lokeshwari TS (2015) Characterization of *Talinum triangulare* (Jacq.) Willd. germplasm using molecular descriptors. South African Journal of Botany. 97: 59 – 68. (IF: **1.340**)
3. Kalaimaran Francina Cecilia, **Ramalingam Ravindhran**, Munusamy Rajiv Gandhi, Appadurai Daniel Reegan, Kedike Balakrishna and Savarimuthu Ignacimuthu 2014. Larvicidal and pupicidal activities of ebolin A and ebolin B isolated from *Ecbolium viride* (Forssk.) Alston against *Culex quinquefasciatus* Say (Diptera : Culicidae). *Parasitology Research*. 113:3477–3484 (IF: **2.327**)

Dr. J. Joel Gnanadoss

1. Jebapriya, G.R. and **Gnanadoss, J.J.** 2014. Screening and molecular characterization of white rot fungi capable of laccase production and dye decolourization. *International Journal of Life Science and Pharma Research*. 4 (2):12-20
2. Lincy, J.J. and **Gnanadoss, J.J.** 2014. Optimization of culture conditions for improved laccase production by *Agaricus* sp. LCJ262. *International Journal of Current Research*. 6 (11): 9517-9522

3. Jenitta, X.J. and **Gnanadoss, J.J.** 2014. Effect of carbon, nitrogen sources and inducers on protease production by *Penicillium citrinum* LCJ222. *International Journal of Current Research*. **6** (11): 9544-9549
4. Benlurvankar, V., Jebapriya, G.R. and **Gnanadoss, J.J.** 2015. Protease production by *Penicillium* sp. LCJ228 under solid state fermentation using groundnut oilcake as substrate. *International Journal of Life Science and Pharma Research* **5** (1): 12-19.
5. **Gnanadoss, J.J.** and Devi, S.K. 2015. Optimization of nutritional and culture conditions for improved protease production by *Aspergillus nidulans* and *Aspergillus flavus*. *Journal of Microbiology, Biotechnology and Food Science* (Under Revision).

Dr. G. Jeya Jothi

1. Anto Suganya,R. and **G.Jeya jothi**,2014. Preliminary phytochemical screening, antibacterial and antioxidant activities of *Commelina nudiflora* (Commelinaceae).*International Research journal of Pharmacy* **5**(11); 852-855.
2. Sahariya Priya and **Gabriel Jeya jothi**, 2014. Influence Of *Nardostachys Jadamansi* DC.onto Transparent Polymer Biocomposites for In-Vitro Anti Fungal Efficacy. *IOSR Journal of Pharmacy and Biological Sciences* **9**(6);44-48.
3. Hannah hepsibah A,**G.Jeya jothi** ,2015. *in vitro* antibacterial activity and phytochemical analysis of *ormocarpum cochinchinense* extracts on nosocomial infection causing bacteria .*Asian journal of pharmaceutical and clinical research* **8**(1);113-116.

Dr. Shirley George Panicker

1. Abel EE, Preetam Raj JP, **Panicker SG** (2014). Effects of different solvent extracts of *Cassia tora* leaves against gram positive Bacteria. *Int. J. Pharm. Life Sci*, **5**(4):3436-3439 (IF – 1.59)
2. Khusro A, Aarti C, Preetamraj JP, **Panicker SG** (2014 **e**). Study on production of extracellular amylase from *Bacillus subtilis* strain KPA under mild stress condition of certain antimicrobials. *Int J Pharm Clin Res*, **6**(3): 270-275 (IF- 1.1)
3. Khusro A, Preetam Raj JP, **Panicker SG** (2014 **d**). Adaptational changes in cellular morphology of *Bacillus subtilis* strain KPA in response to certain antimicrobials. *Int J Chem Tech Res*, **6**(5): 2815-2823 (SJIF- 0.63)
4. Khusro A, Aarti C, Preetamraj JP, **Panicker SG** (2014 **c**). Comparative study on the effect of different solvent extracts of *Calotropis gigantea* and *Carica papaya* latex against new bacterial isolates – An *in vitro* study. *Int J Pharm Pharm Sci*, **6** (2): 874-879 (IF- 1.59)
5. Khusro A, Preetam Raj JP, **Panicker SG** (2014 **b**).Study on Antagonistic activity of a novel bacterial isolate under mild stress condition of certain antimicrobial agents. *Europ J Exp Biol*, **4**(4): 26-30
6. Khusro A, Preetamraj JP, **Panicker SG** (2014 **a**). Multiple heavy metals response and Antibiotic sensitivity pattern of *Bacillus subtilis* strain KPA. *J Chem Pharm Res*, **6**(8):532-538 (SJIF- 0.9)

Dr. Premkumar

1. Ignacimuthu S and **Premkumar A** (2014) Development of transgenic sorghum bicolor (L) Moench resistant to the chilo partellus (swine hoe) through agrobacterium mediated transformation. *Mol Biol Genet Eng* 2:1.
2. Erenius Toppo, M. Ramakrishnan, S. Antony Ceasar, K. Sivasankaran, **A. Premkumar** and S. Ignacimuthu(2014). Regeneration from mature scutellum explants of rice variety IR64 (*Oryza sativa* L.) through direct and indirect organogenesis. *Journal of Global Agriculture and Ecology*. 1(I) 1-9.

Dr. Sheela

1. **Sheela S.**, Jayasurya Kingsley S., Flora Rayyappan and Florida Tilton (2014) Molecular detection of Esbl genes in antibiotic resistant *Aeromonas hydrophila* isolates. *Journal of Pure and Applied Microbiology* Vol. 8, Suppl 3, pp 2459-2464.

PRESENTED IN INTERNATIONAL / NATIONAL CONFERENCES

Dr. J. Joel Gnanadoss

1. Gnanasalomi, V.D.V., and **Gnanadoss, J.J.** 2014. Effective utilization of lignocellulosic agro-wastes for laccase production and its potential in the decolourization of synthetic dyes. In the *Abstracts of 12th IAAM National Conference on “Global Trends and Challenges in Biosciences”*, Dr. MGR Janaki College for Women. 5-6 Dec 2014. p. 62-63.
2. Jebapriya, G.R., and **Gnanadoss, J.J.** 2014. Biological removal of synthetic dyes by living and dead biomass of mushroom fungi. In the *Abstracts of 12th IAAM National Conference on “Global Trends and Challenges in Biosciences”*, Dr. MGR Janaki College for Women. 5-6 Dec 2014. p. 82-83.
3. Jenitta, X.J. and **Gnanadoss, J.J.** 2014. Utilization of oil cakes for production of alkaline protease by *Penicillium griseofulvum* LCJ231 under solid state fermentation. In the *Abstracts of 12th IAAM National Conference on “Global Trends and Challenges in Biosciences”*, Dr. MGR Janaki College for Women. 5-6 Dec 2014. p. 93-94.

Dr. G. Jeya Jothi

Sahariya Priya and **Gabriel Jeya jothi**, Poster presentation on “Nardostachys Jadamansi DC. based Polymer Biocomposites for in-vitro Validation of Anti bacterial and Anti fungal application” in Indo - Australian Conference on “Biomaterials, Tissue Engineering, Drug Delivery System and Regenerative Medicine” (BiTERM-2015) conducted by Anna University, Chennai – 600 025 on 5th February 2015.

BOOK CHAPTERS

Dr. R. Ravindhran

1. Ravindhran R, Balaguru B and Vinoth A. 2014. Molecular Marker Based Analysis of Genetic Diversity of Wild Relatives and Landraces of Food Crops. In: *Biotechnology, Vol.2, Plant Biotechnology*. Anand Kumar P, Govil JN (Eds.). Studium Press LLC, USA
