Department of Medical
Biochemistry
School of Basic Medical
Sciences
University of Madras



| 1 | Name of the Department   | Medical Biochemistry  |
|---|--|---|
| 2 | Year of establishment  | 1968  |
| 3 | Is the Department part of a School/Faculty of the university?  | School of Basic Medical Sciences  |
| 4 | Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.) | M.Sc. Medical Biochemistry & Ph.D.  |
| 5 | Interdisciplinary programmes and departments involved  | Nil   |
| 6 | Courses in collaboration with other universities, industries, foreign institutions, etc.                         | Nil   |
| 7 | Details of programmes discontinued, if any, with reasons   | Nil   |
| 8 | Examination System: Annual/ Semester/<br>Trimester/Choice Based Credit System                                    | Semester, Choice Based Credit<br>System   |
| 9 | Participation of the department in the courses offered by other departments                                      | Anatomy, Physiology, Microbiology Genetics, Biochemistry, Pharmacology and Environmental Toxicology |
|   |  | Biomedical Sciences and Pathology   |

# 10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

#### **Details as on 2012-2013:**

| Category | ry Professor Ass |       | Associate | ;     | Assistant |       | UGC Sci  | entists | Grand To | tal   |
|----------|------------------|-------|-----------|-------|-----------|-------|----------|---------|----------|-------|
|          |                  |       | Professor |       | Professor |       |          |         |          |       |
|          |                  |       |           |       |           |       |          |         |          |       |
|          | Existing         | Addl. | Existing  | Addl. | Existing  | Addl. | Existing | Addl.   | Existing | Addl. |
|          |                  | Reqd. |           | Reqd. |           | Reqd. |          | Reqd.   |          | Reqd. |
|          |                  |       |           |       |           |       |          |         |          |       |
| Existing | 1                | -     | -         | -     | 2         | -     | -        | -       | 3        | -     |
| Proposed |                  | 3     |           | 2     |           | 2     |          | -       |          | 8     |
| Total    | 1                | 3     | -         | 2     | 2         | 2     | -        | 1       | 3        | 8     |

### 11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

| Dr.D.Sakthisekaran | M.Sc.,<br>M.Phil.,<br>Ph.D., | Professor<br>and<br>Head | Antioxidants and Anticancer drugs in cancer chemotherapy | 35<br>Years | 17 Ph.D.<br>Students |
|--------------------|------------------------------|--------------------------|--|-------------|----------------------|
| Dr.P.Kalaiselvi    | M.Sc.,<br>Ph.D.,             | Assistant<br>Professor   | Kidney stones (Urolithiasis), and Aging                  | 15<br>Years | 4 Ph.D.<br>Students  |
| Dr.T.Sumathi       | M.Sc.,<br>Ph.D.,             | Assistant<br>Professor   | Neurosciences<br>and<br>Cardiovascular<br>Diseases       | 15<br>Years | 1 Ph.D.,<br>Students |

#### i) Retired Professors:

| Name                   | Qualification             | Designation                                   | Specialization | No. of<br>Years of<br>Experience |
|------------------------|---------------------------|---|----------------|----------------------------------|
| Dr.Varalakshmi         | M.Sc., M.Phil.,<br>Ph.D., | Professor<br>and Head<br>(Retired on<br>2007) | Kidney Stone   | 30 Years<br>Until June<br>2007   |
| Dr.C.Panneer<br>Selvam | M.Sc., M.Phil.,<br>Ph.D., | Professor<br>and Head<br>(Retired on          | Aging          | 30 Years<br>Until June<br>2008   |

| Name               | Qualification             | Designation                       | Specialization   | No. of<br>Years of<br>Experience |
|--------------------|---------------------------|-----------------------------------|--|----------------------------------|
|                    |                           | 2008)                             |  |                                  |
| Dr.P.Sachidanandam | M.Sc., M.Phil.,<br>Ph.D., | Professor<br>(Retired on<br>2012) | Cancer and its<br>treatment<br>With indigenous<br>Medicine and<br>Vitamins | 30 Years<br>Until June<br>2012   |

#### 12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

#### i) Visiting Fellows:

| S.No | Name & Qualification   | Designation        | Major Area of specialization | Duration of Appointments |
|------|--|--------------------|------------------------------|--------------------------|
| 1    | Prof. M.J. Nanjan Director, TIFAC, J.S.S. College of Pharmacy, Ooty,   | Visiting<br>Fellow | Pharmacology                 | 2009-2010                |
| 2    | <b>Dr. K. Sugendran</b> Head, Department of Biochemistry, Institute of Aerospace Medicine, Bangalore   | Visiting<br>Fellow | Biochemistry                 | 2009-2010                |
| 3    | Dr.A.K.Singh, Director, Directorate of Human Resource Development, Ministry of Defense, DRDO, New Delhi – 110 105,   | Visiting<br>Fellow | Radio Biology                | 2010 -2011               |
| 4    | Prof.P.Palanivelu Professor and<br>Head, Department of Molecular<br>Microbiology, Madurai Kamaraj<br>University, Madurai   | Visiting<br>Fellow | Molecular<br>Biology         | 2010-2012                |
| 5    | Prof.R.Boopathy Professor and<br>Head, Department of<br>Biotechnology, Bharathiar<br>University, Coimbatore  | Visiting<br>Fellow | Biotechnology                | 2010-2011                |
| 6    | Prof.D.K. Dhawan, Coordinator,<br>Centre for Nuclear Medicine,<br>University Institute of Emerging<br>Areas in Science and Technology,<br>Panjab University, Chandigarh-<br>160014 | Visiting<br>Fellow | Radio Biology                | 2011-2012                |
| 7    | <b>Dr.Ramadasan Kuttan</b> Research Director Amala Cancer Research Institute Thrissur- 580 555.  | Visiting<br>Fellow | Cancer Biology               | 2011-2012                |

| 8 | Dr. K. Muralidhar, Ph.D. |          |               |           |
|---|--------------------------|----------|---------------|-----------|
|   | Professor                | Visiting |               |           |
|   | Department of Zoology    | Fellow   | Endocrinology | 2011-2012 |
|   | University of Delhi      |          |               |           |
|   | Delhi – 110 007          |          |               |           |

#### ii) Adjunct Professor:

| S.No | Name & Qualification | Designation     | Major Area of specialization | Duration of Appointments |  |
|------|----------------------|-----------------|------------------------------|--------------------------|--|
| 1.   | Dr. Ikuo Nishigaki   | Adjunct Faculty | Antioxidants                 | 2009-2011                |  |

#### iii) Emeritus Professors: Nil

### 13. Percentage of classes taken by temporary faculty – programme-wise information:

| S.No. | Name & Qualification    | Designation    | Academic  | Percentage |
|-------|-------------------------|----------------|-----------|------------|
|       |                         | (Guest/        | Year      | of Class   |
|       |                         | Part-time/TRF) |           | taken by   |
|       |                         |                |           | temporary  |
|       |                         |                |           | Faculty    |
| 1     | Ms.A.Jaya               | TRF            | 2008-2009 | 20%        |
| 2     | Ms.D.Kalpana Deepa      | TRF            | 2008-2009 | 20%        |
|       | Priya                   | TKI            | 2000 2007 |            |
| 3     | Mr.S.Sathish            | TRF            | 2009-2010 | 20%        |
| 4     | Ms.M.S.Veena            | TRF            | 2009-2010 | 20%        |
| 5     | Ms.S.Dhivya, M.Sc.,     | TRF            | 2010-2011 | 20%        |
| 6     | Dr.D.Kalpana Deep Priya | Guest Lecturer | 2011-2012 | 20%        |
| 7     | Ms. S. Dhivya, M.Sc     | TRF            | 2011-2012 | 20%        |
| 8     | Dr.D.Kalpana Deep Priya | Guest Lecturer | 2012-2013 | 20%        |
| 9     | Ms. M.K.Vanitha, M.Sc   | TRF            | 2012-2013 | 20%        |

#### 14. **Programme-wise Student Teacher Ratio** : 1:5

### 15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual:

|                      | Sanctioned | Filled | Actual |
|----------------------|------------|--------|--------|
| Technical Staff      | 3          | 1      | 1:1    |
| Administrative Staff | 2          | -      | 1:1    |
| Office Assistant     | 3          | -      | 1:1    |
| Others               |            |        |        |

# 16. Research thrust areas as recognized by major funding agencies

- a) Cancer Biology
- b) Cardiovascular Disease
- c) Kidney disorders
- d) Diabetes
- e) Aging
- f) Neurodegenerative diseases



#### **Major Project Details of Faculty of Department of Medical Biochemistry:**

| Name of the<br>Principal / Co-<br>Principal<br>Investigator | Title of the Project      | Sponsored by | Amount<br>Sanctioned | year   |
|---|---------------------------|--------------|----------------------|--------|
| Dr. D.  | Role of piperin and       | UGC-         | 4,50,000             | 2007   |
| Sakthisekaran   | crocetin as promoters of  | UWPFE        |                      |        |
|   | antitumor effects         |              |                      |        |
| Dr. D.  | "Biochemical and          | ICMR         | 16,32,960            | 2009 - |
| Sakthisekaran   | molecular studies on the  |              |                      | 2011   |
|   | therapeutic efficacy of   |              |                      |        |
|   | ellagic acid along with   |              |                      |        |
|   | paclitaxel against DMBA   |              |                      |        |
|   | induced breast cancer in  |              |                      |        |
|   | aged Sprague Dawley rats" |              |                      |        |
| Dr. D.  | Anti-diabetic studies on  | Tajmahal     | 1,00,000             | 2008 - |
| Sakthisekaran   | Taj's HPR Rice.           | Agro         |                      | 2010   |
|   |                           | Industries   |                      |        |

| P.Sachdanandam  Dr. P. Kalaiselvi | Evaluation of antcancer<br>and antiproliferative<br>efficacy of a combination<br>therapy against breast<br>cancer studied in Sprague-<br>Dawley rats<br>Structural Changes I THP              | UGC-<br>UWPFE | 2,70,000  | 2007-<br>2008<br>Apr 2006        |
|-----------------------------------|---|---------------|-----------|----------------------------------|
|                                   | during progressive diabetic nephropathy   | UGC-USF       | 40,000    | -Mar<br>2007                     |
| Dr. P. Kalaiselvi                 | Mitochondrial DNA deletions and apoptosis in aged rat brain regions: Modulatory roles of L- Carnitine and alpha lipoic acid   | UGC           | 11,04,300 | Apr 2006<br>to Mar<br>2009       |
| Dr. P. Kalaiselvi                 | Plausible role of Nitrosative Stress in progression of kidney stone disease and Its Influence on molecular events leading to calcium oxalate crystal deposition                               | ICMR          | 10,05,290 | April<br>2007 -<br>March<br>2010 |
| Dr. P. Kalaiselvi                 | Food Supplements and<br>Neutraceuticals –<br>Compilation work   | TBI           | 12,000    | May 2008                         |
| Dr. P. Kalaiselvi                 | Efficacy of Insulin Inhaler  – Testing its bioactivity  | TBI           | 35,000    | July<br>2008- Oct<br>2008        |
| Dr. P. Kalaiselvi                 | Implications of hypercholesterolemia on mitotic and post mitotic tissues of young and aged rats with special emphasis on inflammation and apoptosis: Exploitation of EGCG to alleviate stress | DST           | 35,79,511 | Nov<br>2009- Oct<br>2012         |
| Dr. P. Kalaiselvi                 | "Protective role of the Homeopathic preparation of Berberis vulgaris to alleviate kidney stone disease and its influence on molecular events leading to calcium oxalate crystal deposition"   | CCRH          | 29,62,100 | Feb.2010-<br>Jan 2012            |
| Dr. P. Kalaiselvi                 | Neuroprotective Effect of<br>Noni (Morinda citrifolia<br>extract) in restraining the<br>locomotor disturbances in   | WNRF          | 10,00,000 | 2011                             |

|                   | animals modeled with Parkinsonism by rotenone   |     |           |               |
|-------------------|---|-----|-----------|---------------|
| Dr. P. Kalaiselvi | Pharmacodynamics of EGCG nanoparticles in extenuating dietary cholesterol mediated atherosclerotic plague progression |     | 10,00,000 | 2011          |
| Dr.T. Sumathi     | Effect of Bacoside-a on Morphine induced Pharmacological and Gastrointestinal studies in mice.                        | UGC | 35,000    | 2007-<br>2008 |

#### **Department Project details:**

| Scheme  | Funding Source | Estimated cost/ |
|---|----------------|-----------------|
| UGC Infrastructure                            | UGC            | Rs. 20,00,000   |
| UGC-SAP-DRS-Phase-II 2007-2011                | UGC-SAP-DRS    | 35,00,000       |
| Computer Network                              | UGC-SAP        | 10,00,000       |
| DST-PURSE 2010-2013 Chemicals and consumables | DST            | 10,00,000       |
| DST-PURSE-Equipment                           | DST            | 10,00,000       |

# 17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

| Dr.D.Sakthisekaran | UGC Onetime Grant   | UGC  | 7,00,000   | 2012-<br>2013        |
|--------------------|---|------|------------|----------------------|
| Dr.D.Sakthisekaran | UGC Faculty Fellowship  | UGC  | Sanctioned | 2013-<br>2014        |
| Dr.P.Kalaiselvi    | Implications of hypercholesterolemia on mitotic and post mitotic tissues of young and aged rats with special emphasis on inflammation and apoptosis: Exploitation of EGCG to alleviate stress | DST  | 35,79,511  | Feb2010-<br>Jan 2013 |
| Dr.P.Kalaiselvi    | Protective role of the<br>Homeopathic preparation of<br>Berberis vulgaris to alleviate  | CCRH | 29,62,100  | Feb2010 - 2013       |

|                 | kidney stone disease and its influence on molecular events leading to calcium oxalate crystal deposition   |                   |           |               |
|-----------------|--|-------------------|-----------|---------------|
| Dr.P.Kalaiselvi | Neuroprotective effect of Noni ( <i>Morinda citrifolia</i> ) extract in restraining the locomotor disturbances in animals modeled with Parkinsonism by rotenone. | WNRF              | 10,00,000 | sanctioned    |
| Dr.T. Sumathi   | Neuroprotective effects of Bacopa Monniera in the model of 6-hydroxy dopamine [6-oh da] lesion in rats — Biochemical, Behavioral and Neurochemical Studies".     | Major<br>Research | 7,89,800  | 2011-<br>2014 |

#### 18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration Nil
- b) International collaboration Nil
- 19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

 UGC-SAP-DRS Phase-II:
 : 2007-2012
 Rs.35 Lakh

 DST-PURSE
 : 2010-2013
 Rs.20 Lakh

 UGC XI Plan
 : 2007-2012
 Rs.30 Lakh

20. Research facility / centre with

• state recognition : Tamilnadu State Council for

Science and Technology

• national recognition : ICMR, CSIR, DBT

• international recognition :

21. Special research laboratories sponsored by / : UGC-SAP, UGC XI PLAN created by industry or corporate bodies.

#### 22. Publications:

\* Number of papers published in peer reviewed journals (national /

international) : 78

\* Monographs : Nil

\* Chapters in Books : 04

\* Edited Books : 04

\* Books with ISBN with details of publishers : -

\* Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nature, Science Direct,

Emerald, Springer link, etc.,

\* Citation Index – range / average :

Prof.D.Sakthisekaran
 Dr.P.Kalaiselvi
 22 papers 145 Index
 14 articles 53 Index

3. Dr.T.Sumathi : 5

\* SNIP : -

\* SJR : -

\* Impact Factor – range / average :

 1. Prof.D.Sakthisekaran
 : 0.2 to 5.00

 2. Dr.P.Kalaiselvi
 : 0.2 to 4.0

 3. Dr.T.Sumathi
 : 0.371 to 3.268

\* h-index : 19

#### 23. Details of patents and income generated - Nil

#### 24. Areas of consultancy and income generated -

| Name of the       | Title of the Project  | Sponsored        | Amount     | Month & Year |
|-------------------|---|------------------|------------|--------------|
| Principal / Co-   |   | by               | Sanctioned | of           |
| Principal         |   |                  |            | Commencement |
| Investigator      |   |                  |            | & Duration   |
| Dr. D.            | Anti-diabetic studies   | Tajmahal         | 1,00,000   | 2008 - 2010  |
| Sakthisekaran     | on Taj's HPR Rice.  | Agro             |            |              |
|                   |   | Industries       |            |              |
| Dr. P. Kalaiselvi | Neuroprotective effect of Noni (Morinda citrifolia) extract in restraining the locomotor disturbances in animals modeled with Parkinsonism by rotenone. | WNRF             | 10,00,000  | 2011-2014    |
| All Faculty       | M.Sc., /B.Tech. project work  | Through<br>UICIC | 2,50,000   | 2007-2012    |

# 25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad

| S.<br>No. | Faculty Name         | Foreign<br>Country   | Purpose of Visit  | Year   |
|-----------|----------------------|----------------------|---|--|
| 1         | Prof.D.Sakthisekaran | Japan                | Visiting Professor to NPO<br>International Laboratory<br>of Biochemistry, Nagoya.                                 | 19.10.2007 to 23.10.2007                                       |
| 2         | Prof.D.Sakthisekaran | France               | 19 <sup>th</sup> International<br>Congress on Anti-Cancer<br>Treatment.<br>Palais des Congres –<br>Paris, France. | 5 <sup>th</sup> Feb 2008 to 8 <sup>th</sup><br>Feb 2008        |
| 3         | Prof.D.Sakthisekaran | Juelich,<br>Germany  | On Invitation to give seminar in MHH  | 9 <sup>th</sup> Feb 2008 to<br>11 <sup>th</sup> Feb 2008       |
| 4         | Prof.D.Sakthisekaran | Hannover,<br>Germany | On Invitation to give seminar in MHH  | 11 <sup>th</sup> Feb 2008 to<br>12 <sup>th</sup> Feb 2008      |
| 5         | Prof.D.Sakthisekaran | Berlin,<br>Germany   | On Invitation to give seminar in MDC  | 13 <sup>th</sup> Feb 2008 to<br>15 <sup>th</sup> Feb 2008      |
| 6         | Prof.D.Sakthisekaran | Japan                | Visiting Professor to NPO International Laboratory of Biochemistry, Nagoya.                                       | 14 <sup>th</sup> Apr 2008 to<br>20 <sup>th</sup> Apr 2008      |
| 7         | Prof.D.Sakthisekaran | Japan                | Visiting Professor to NPO<br>International Laboratory<br>of Biochemistry, Nagoya.                                 | 16 <sup>th</sup> May 2009 to 25 <sup>th</sup> May 2009         |
| 8         | Prof.D.Sakthisekaran | Japan                | Visiting Professor to NPO<br>International Laboratory<br>of Biochemistry, Nagoya.                                 | 13th May 2010 to<br>26th May 2010                              |
| 9         | Prof.D.Sakthisekaran | Japan                | Visiting Professor to NPO<br>International Laboratory<br>of Biochemistry, Nagoya.                                 | 6 <sup>th</sup> Nov 2010 to<br>17 <sup>th</sup> Nov 2010       |
| 10        | Prof.D.Sakthisekaran | Japan                | Visiting Scientist, NPO<br>International Laboratory<br>of Biochemistry, Nagoya.                                   | 17 <sup>th</sup> Jun 2011 to 26 <sup>th</sup> Jun 2011         |
| 11        | Prof.D.Sakthisekaran | Japan                | Visiting Scientist, NPO<br>International Laboratory<br>of Biochemistry, Nagoya.                                   | 30 <sup>th</sup> October 2011<br>to 8 <sup>th</sup> November 2 |
| 12        | Prof.P.Sachidanandam | Japan                | 5 <sup>th</sup> International<br>CoenzymeQ <sub>10</sub> conference<br>at Kobe, Japan                             | 9 <sup>th</sup> – 12 <sup>th</sup><br>November 2007            |

# 26. Faculty serving in a) National b) Inter National Committees c) Editorial Boardsd) any other (pl. specify)

| S.No. | Name of the Faculty  | Details of the Extension activities  | Year             |
|-------|----------------------|--|------------------|
| 1     | Prof.D.Sakthisekaran | UGC Review Committee Meeting at Panjab University, Chandigarh.   | February<br>2010 |
| 2     | Prof.D.Sakthisekaran | Biochemistry UG & PG Board of Studies<br>Meeting at D.K.M. College for Women,<br>Vellore.  | April 2010       |
| 3     | Prof.D.Sakthisekaran | Programme Committee Meeting at Pondicherry University  | May 2010         |
| 4     | Prof.D.Sakthisekaran | Member of the Expert Committee Meeting, for Selection of Emeritus Fellowship at UGC, New Delhi.  | July 2010,       |
| 5     | Prof.D.Sakthisekaran | Selection Committee Member at University of Calicut  | August<br>2010   |
| 6     | Prof.D.Sakthisekaran | President of the Indian Association of Biomedical Scientists   | 2008-<br>2009.   |
| 7     | Prof.D.Sakthisekaran | Vice-Chancellor's Nominee for Selecting<br>Project Staff for the Major Research<br>Project of University Grants Commission,<br>University of Madras. | 2011             |
| 8     | Dr.P.Kalaiselvi      | Extended research facilities to other University Ph.D. Students  | 2007-2012        |
| 9     | Dr.P.Kalaiselvi      | Handled CSIR Classes for students in the University Campus   | 2011             |
| 10    | Dr.P.Kalaiselvi      | Involved in consultancy work with WNRF   | 2011             |
| 11    | Dr.P.Kalaiselvi      | Life Member of Indian Association of<br>Biomedical Scientist   | -                |
| 12    | Dr.P.Kalaiselvi      | Life member of Society for<br>Neurochemistry of India (SNCI), India  | -                |
| 13    | Dr.P.Kalaiselvi      | Member of Urolithiasis Society of India (USOI)   | -                |
| 14    | Dr.P.Kalaiselvi      | Member of Board of Studies in<br>Biochemistry for Bharathi Women's<br>College (Autonomous), Chennai  | -                |
| 15    | Dr.T.Sumathi         | Consultancy Training Programe for M.Sc.,/B.Tech students for their Project work through UICIC  | 2011-2012        |

#### 27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

- Dr.P.Kalaiselvi, Assistant Professor attended the Faculty refresher course-UGC Academic Staff College.
- > Dr.T.Sumathi, Asst. Professor participated in the Workshop on "Short-term courses for research guides in Science" held on 8th to 12th March 2010 in the Academic Staff college, University of Madras.
- > Dr.P.Kalaiselvi, Chaired a session in the International Seminar entitled, "Biochemistry for Tomorrow's Medicine" by Justice Basheer Ahmed College for Women, Chennai on 22<sup>nd</sup> February, 2012.
- > Dr.P.Kalaiselvi, attended a Seminar on "Translation from laboratory to bedside" conducted by Frontier Lifeline Mediville, Gumidipoondi on 21<sup>st</sup> January, 2012

#### 28. Student projects

- (i) percentage of students who have done in-house projects including inter-departmental been done their project in the Dept. projects
- : 100% of our M.Sc.. Students have
- (ii) percentage of students doing projects in collaboration with other universities / industry / institute.
- : 40% of Ph.D. Students doing their Project with other Institutions such as IIT - Madras, CLRI, Tamilnadu Veterinary University, CMC- Vellore, Dr.MGR Medical , University, National Centre for Cell Sciences- Pune, TRC-Chennai.

#### 29. Awards / recognitions received at the national and international level by

• Faculty –



| Faculty Name         | Name of the Award                              | Conferred by the Agency   | Year                          |
|----------------------|--|---|-------------------------------|
| Prof.D.Sakthisekaran | SOMPS Poster Award                             | 19 <sup>th</sup> International congress<br>on Anti-cancer treatment<br>held at Paris, France from | 8 <sup>th</sup> Feb.<br>2008. |
| Prof.D.Sakthisekaran | Mr.M.K.Nambiar<br>Memorial oration award       | 1. Indian Association of Biomedical Scientists  | November 2009                 |
| Prof.D.Sakthisekaran | Indira Vasudevan Award,<br>Gold Medal          | Best paper in Cancer<br>Research from the Indian<br>Association of Biomedical<br>Scientists—      | 2009                          |
| Prof.D.Sakthisekaran | WHO IS WHO in the world for Publication        | Marqui's, Who is Who's Publications Board, USA.   | December 2010.                |
| Prof.D.Sakthisekaran | Academic Achievement<br>Award                  | University of Madras  | 2011                          |
| Prof.D.Sakthisekaran | Teaching in Excellence in Medical Biochemistry | INDO-US Foundation,<br>Hyderabad  | 2013                          |
| Prof.P.Sachidanandam | TANSA Award                                    | Government of Tamil<br>Nadu   | 2010                          |
| Dr.P.Kalaiselvi      | Siri Research Award                            | Indian Association of Biomedical Scientists in  | 2008                          |
| Dr. P. Kalaiselvi    | FABMS  | Indian Association of<br>Biomedical Scientists  | 2008                          |

#### a) Doctoral fellows achievements:

- i. Gayathri R attended the Workshop on "Computational Sources for Drug discovery" held at Tuberculosis Research Centre, Chennai  $600~031~{\rm from}~24^{\rm th}$  to  $26^{\rm th}$  November, 2008
- ii. Kalpana Deepapriya, D attended the Workshop on "Computational Sources for Drug discovery" held at Tuberculosis Research Centre, Chennai 600 031 from 24<sup>th</sup> to 26<sup>th</sup> November, 2008
- iii. Jaya A and Sachdanandam, P participated in "INDO-US Workshop on Mitochondrial Research and Medicine" held at Manipal University, Manipal during 12<sup>th</sup>-14<sup>th</sup> November 2008 and presented a poster entitled "Mitochondrial protective effects of *Semecarpus anacardium* in diabetic rats"
- iv. Senthilkumaran V and Kalaiselvi P participated in "INDO-US Workshop on Mitochondrial Research and Medicine" held at Manipal University, Manipal during 12<sup>th</sup>-14<sup>th</sup> November 2008 and presented a poster entitled "Attenuation of senescence mediated redox imbalance in post-mitotic tissue of aged rats by Epigallocatechin-3-Gallate (EGCG) with special reference to Apoptosis".

- v. Senthilkumaran V and Kalaiselvi P participated and presented a poster entitle"Screening for angiotensin converting enzyme (ACE) gene polymorphism in ischemic heart disease patients" in "National conference on Genomics, Proteomics & System Biology" held at IISc Campus, Bangalore during 1<sup>st</sup> to 3<sup>rd</sup> October 2008.
- vi. Srividhya R and Kalaiselvi P participated in "National conference on Genomics, Proteomics & System Biology" held at IISc Campus, Bangalore during 1<sup>st</sup> to 3<sup>rd</sup> October 2008.
- vii. Jayasudha E and Kalaiselvi P participated in "INDO-US Workshop on Mitochondrial Research and Medicine" held at Manipal University, Manipal during 12<sup>th</sup>-14<sup>th</sup> November 2008 and presented a poster entitled "Triogerring the events of mitochondrial mediated apoptosis in the different models of experimental hyperoxaluria".
- viii. Mr.V.Senthilkumaran participated in the training programme in *In situ* hybridization techniques organized by Department of Physiology, AIIMS, New Delhi.
- ix. Mr.V.Senthilkumaran participated in the workshop in Micro array techniques organized by Manipal University, Manipal.
- x. Mr.K.Thulasi Raman attended the Interaction Program for Ph.D. scholars conducted by UGC, Academic Staff College by University of Madras.
- xi. Mr.K.Thulasi Raman attended the National Workshop on Usage of Statistical packages" conducted by the Department of Statistics, University of Madras.
- xii. Mr.K.Periyasamy attended Participated in the Regional Science Congress on Science for Shaping the Future of India, organized by the Indian Science Congress Association, Coimbatore Chapter at Kongunadu Arts and Science College, Coimbatore- 641 029 on 15<sup>th</sup> and 16<sup>th</sup> December 2012.
- xiii. Mr.K.Periyasamy participated in Dr.Sarada Subramaniam Memorial Workshop "Basic Tehniques in Cell culture" at Internation symposium on "Recent Trends and advances in Biomedical Research-an Integrated Approach" on November 1-3, 2012 at Nitte University, Mangalore.
- xiv. K.Periyasamy, participated The Indus Foundation of "Indo-American Education Summit and Expo 2013, on February 1 to 5, 2013, at Marigold By Green Park, Hyderabad, India.

b) **Students**: Attended the National Conferences, workshops, Lecture Programme, University of Madras, Taramani, Chennai.

# 30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Seminars/Conferences/Workshops organized = 19 (**Details furnished in Appendix II**)

#### 31. Code of ethics for research followed by the departments -

UGC regulations on minimum standard and procedure for the award of M.Phil/Ph.D. degree – 2009 and guidelines of Institutional Animal Ethical Committee are followed.

#### 32. Student profile programme-wise:

| Name of the            | Academic  | Applications | Se   | lected | Number of |
|------------------------|-----------|--------------|------|--------|-----------|
| Programme              | Year      | received     |      |        | Passed    |
|                        |           |              | Male | Female | students  |
| (refer to question no. |           |              |      |        |           |
| 4)                     |           |              |      |        |           |
| M.Sc., Medical         | 2007-2008 | 365          | 10   | 13     | 23        |
| Biochemistry           | 2008-2009 | 407          | 8    | 15     | 23        |
|                        | 2009-2010 | 311          | 6    | 17     | 23        |
|                        | 2010-2011 | 236          | 4    | 18     | 22        |
|                        | 2011-2012 | 165          | 2    | 18     | 20        |
| Ph.D., Medical         | 2007-2008 | 9            | 6    | 3      | 10        |
| Biochemistry           | 2008-2009 | 5            | 2    | 3      | 4         |
|                        | 2009-2010 | 15           | 8    | 7      | 9         |
|                        | 2010-2011 | 11           | 5    | 4      | 8         |
|                        | 2011-2012 | 6            | 3    | 3      | 6         |

#### 33. Diversity of students

| Name of the     | % of       | % of students    | % of students | % of       |
|-----------------|------------|------------------|---------------|------------|
| Programme       | students   | from other       | from          | students   |
| (refer to       | from the   | universities     | universities  | from other |
| question no. 4) | same       | within the State | outside the   | countries  |
|                 | university |                  | State         |            |
| M.Sc., Medical  | 50%        | 35%              | 14%           | 10/        |
| Biochemistry    | 30%        | 33%              | 14%           | 1%         |
| Ph.D., Medical  | C00/       | 200/             | 100/          |            |
| Biochemistry    | 60%        | 30%              | 10%           | -          |

# 34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

UGC NET - 2 Students/YearGATE - 2 Students/YearSET - 2 Students/year

#### 35. Student progression

| Student progression           | Percentage against enrolled |
|-------------------------------|-----------------------------|
| UG to PG                      | -                           |
| PG to M.Phil.                 | 10%                         |
| PG to Ph.D.                   | 60%                         |
| Ph.D. to Post-Doctoral        | 78%                         |
| Employed                      |                             |
| Campus selection              | 10%                         |
| Other than campus recruitment | 22%                         |
| Entrepreneurs                 |                             |

#### 36. Diversity of staff

| Percentage of faculty who are graduates  |     |  |  |  |
|--|-----|--|--|--|
| of the same university                   | 90% |  |  |  |
| from other universities within the State | 10% |  |  |  |
| from universities from other States      | -   |  |  |  |
| from universities outside the country    | -   |  |  |  |

# 37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

Prof.P.Sachidanandam was awarded the D.Sc.

# 38. Present details of departmental infrastructural facilities with regard toa) Library

| No. of Department Library Books  | International Journals<br>Subscribed<br>(Give Names)   |
|--|--|
| 412 Books (From the Madras University<br>Grants and UGC-SAP-DRS-Phase II Grants) | <ul><li>i) Free Radicals in Biology<br/>and Medicine</li><li>ii) Journal of Nutritional<br/>Biochemistry</li></ul> |

#### **Equipments details:**

| Name of the Equipment                    | PROGRAMME            | Installation<br>Date | Cost in INR  | Condition |
|--|----------------------|----------------------|--|-----------|
| Ultra Deep Frezeer -80°C                 | DST-FIST             | 04.09.2002           | Rs.5,10,922  | Working   |
| Millipore Water<br>Purification System   | UGC-SAP-DRS          | 31.08.2004           | Rs.1,81,700  | Working   |
| Metler Electronic Balance                | UGC-SAP-DRS          | 05.12.2003           | Rs.1,39,360  | Working   |
| Trinocular Microscope<br>(Light)         | CSIR-Project         | 23.03.1998           | Rs.3,80,678<br>*AMC<br>01.04.2011 to<br>31.03.2012 | Working   |
| ELISA -Reader                            | UGC-SAP-DRS          | 29.05.2004           | Rs.4,20,097  | Working   |
| Inverted Microscope                      | DST-FIST             | 23.01.2006           | Rs.1,35,460  | Working   |
| Vestfrost make-Freezer vertical          | UGC-SAP-DRS          | 28.03.2005           | Rs.53,100  | working   |
| Electroporation System                   | UGC-SAP-DRS          | 14.05.2004           | Rs.1,92,050  | Working   |
| Sonicator                                | UGC- IX-Plan         | 18.03.2002           | Rs.59,964  | Working   |
| Projector TDP – T100                     | UGC- X-Plan          | 30.03.2007           | Rs.98,137  | Working   |
| Semi Dry Blotter                         | UGC- X-Plan          | 30.03.2007           | Rs.1,04,978  | Working   |
| CO2 Incubator                            | UGC-Infrast.         | 07.05.2008           | Rs.6,00,000  | Working   |
| High Speed Cooling<br>Centrifuge         | ICMR                 | 11.03.2008           | Rs.1,29,844  | Working   |
| PCR                                      | ICMR                 | 11.08.2008           | Rs.1,96,611  | Working   |
| LCD Projector Toshiba                    | UGC-Infrast.         | 27.06.2008           | Rs.90,000  | Working   |
| Spectrophotometer                        | CSIR                 | 26.06.1990           | Rs.7,36,891  | Working   |
| Nano-Drop<br>Spectrophotometer           | DST-PURSE            | 09.02.2011           | \$10,400   | Working   |
| PCR                                      | UGC X-PLAN           | 30/3/2007            | Rs.1,12,000  | Working   |
| Hybridization Incubator                  | UGC-SAP-DRS          | 03.06.2004           | Rs.2,26,273  | Working   |
| Orbital Shaker                           | UGC-SAP-DRS          | 10.07.2003           | Rs.65,021  | working   |
| Spectrophotometer and Spectrofluorimeter | MEF                  | 13.01.1999           | Rs.6,00,000  | Working   |
| Freezer -40°C                            | UGC Onetime<br>Grant | 2013                 | Rs.1,00,000  | Working   |
| Western Blotting Unit (Biorad)           | UGC Onetime<br>Grant | 2013                 | Rs.2.00,000  | Working   |
| Centrifuge (Remi)                        | UGC Onetime<br>Grant | 2013                 | Rs.50,000  | Working   |

#### Others:

| Item detail                                  | Cost      | Nature of Utilization  |
|--|-----------|------------------------|
|  | Rs.       |                        |
| Civil work (M. Sc. Lab)                      | 3,98,295  | For civil work         |
| U Table and Revolving Chairs (12nos.)        | 89,620    | For seminar Hall       |
| Electrical work                              | 96,150    | Electrical work in the |
|  |           | Department             |
| Tubular chair with Arm & Cushion Seat & Back | 44,825    | For seminar Hall       |
| (20 nos.)                                    |           |                        |
| Digital Copier (Xerox Machine)               | 1,72,000  | For Departmental use   |
| Computer Lab for Networking                  | 10,00,000 | For Students &         |
| Computers 10 Nos                             |           | Faculty                |
| Printers 4 Nos                               |           |                        |
| LG Split A/C 2 Nos.                          |           |                        |
| Laboratory Partition work and Tails          | 2,00,000  | Department             |

b) Internet facilities for staff and students - Internet with computer Laboratory Facility

c) Total number of class rooms

- One Class Room

d) Class rooms with ICT facility

- Class Rooms having Projector with computer facilities and Internet facilities.

e) Students' laboratories f) Research laboratories -400 Sq. m. -488.93 Sq. m.

#### 39. List of doctoral, post-doctoral students and Research Associates:

a) from the host institution/university

| S.No.  | Name of the Research | Details of the  | Status    |  |
|--------|----------------------|-----------------|-----------|--|
| 3.110. | Scholars             | Fellowship      | Status    |  |
| 1      | Mr.Devaraja          | CSIR-SRF        | Completed |  |
| 2      | Mrs. V. Jothilakshmi | CCRH - SRF      | Completed |  |
| 3      | Mr. V. Dharmendra    | UGG- RFSMS      | Completed |  |
| 4      | Mr. R. Sundaram      | UGG- RFSMS      | Completed |  |
| 5      | Ms. S. Kaladevi      | TNJRF           | Completed |  |
|        | Ms. G. Thellamaudhu  | CCRH-JRF        | Doing     |  |
| 6      | Mr. R. Naresh Kumar  | UGG- RFSMS      | Completed |  |
| 7      | Mrs. M.S. Veena      | UGG- RFSMS      | Completed |  |
| 9      | Mr. V. Kamesh        | UGG- RFSMS      | Completed |  |
| 10     | Ms. R. Latha         | JNMF            | Completed |  |
| 11     | Mr. M. Suresh        | ICMR - SRF      | Completed |  |
| 12     | Mrs. C. Shobana      | UGC-MAJOR-JRF   | Doing     |  |
| 13     | Mr. V. Sivabalan     | Non-Stipendiary | Completed |  |

NAAC Reaccreditation - Evaluative Report School of Basic Medical Sciences Department of Medical Biochemistry

| 14 | Ms. G. Nithya          | Non-Stipendiary | Completed |
|----|------------------------|-----------------|-----------|
| 15 | Ms. S. Dhivya          | TRF             | Doing     |
| 16 | Ms. K. Kanchana        | DST-PURSE-JRF   | Completed |
| 17 | Mr. K. Thulasi Raman   | DST-JRF         | Doing     |
| 18 | Ms. N. Rajeswari       | DST-INSPIRE     | Doing     |
| 19 | Ms. C. Anusha          | URF             | Doing     |
| 20 | Mr.A.Ashok Kumar       | NCNST-JRF       | Doing     |
| 21 | Mr.Kishore Kumar       | WNRF-JRF        | Doing     |
| 22 | Mrs.E.Jayasudha        | UGC-RFSMS       | Completed |
| 23 | Mr.E.Nandhakumar       | Non-Stipendiary | Doing     |
| 24 | Ms.A.Ilakkia           | Non-Stipendiary | Doing     |
| 25 | Ms.V.Prema             | Non-Stipendiary | Doing     |
| 26 | Ms.J.Christinal        | Non-Stipendiary | Doing     |
| 27 | Mr.K.Periyasamy        | Non-Stipendiary | Doing     |
| 28 | Ms. M.K. Vanitha       | TRF             | Doing     |
| 29 | Mr.K.Baskaran          | Non-Stipendiary | Doing     |
| 30 | Ms.D.Asha              | Non-Stipendiary | Doing     |
| 31 | Ms.S.N.Suganya         | Non-Stipendiary | Doing     |
| 32 | Mr.S.N.Kishore Kumar   | DST-JRF         | Doing     |
| 33 | Mr.Ashok Kumar         | DST-JRF         | Doing     |
| 34 | Mr.S.Selvaraj          | Non-Stipendiary | Doing     |
| 35 | Mr.Lakshmi Narashimhan | Non-Stipendiary | Doing     |
| 36 | Ms.Abhilasha           | Non-Stipendiary | Doing     |
| 37 | Ms.K.Kasthuri          | Non-stipendiary | Doing     |
| 38 | Mrs.R.Venkateswari     | Part-Time       | Completed |
| 39 | Mrs.R.Revathi Mani     | Part-Time       | Completed |
| 40 | Mrs.M.Uma              | Part-Time       | Completed |
| 41 | Mrs.S.Suganthi         | Part-Time       | Completed |
| 42 | Mrs.U.Indumathi        | Part-Time       | Completed |
| 43 | Mr.A.Purushothaman     | Part-Time       | Completed |
| 44 | Mr.D.Saravanan         | Part-Time       | Doing     |
| 45 | Ms.Aiswarya            | Full Time       | Doing     |
| 46 | Ms.Surekha             | Full Time       | Doing     |

b) from other institutions/universities -30% of Ph.D. students from Other University

- 40. Number of post graduate students getting financial assistance from the university. -
  - (i) Ms.Subhasmita Pradhan has been awarded as Library Assistant under the "Earn you while learn scheme 2008-2009.
  - (ii) Madras University Merit Fellowship Ms. P. Anto Jeniffer and Ms. K. Ponshanmugha lakshmi, II M.Sc. Medical Biochemistry
  - (iii) Arignar Anna Endowment Scholarship Ms. N. Rajeswari, II M.Sc., Medcial Biochemistry.
  - (iv) Madras University Free Education Scheme-2009 Mr.S.Kumaran, II M.Sc., Medical Biochemistry.
  - (v) Madras University Merit Fellowship 2009 Ms. P. Anto Jeniffer and Ms. K. Ponshanmugha lakshmi, II M.Sc. Medical Biochemistry.
  - (vi) K.Periyasamy has been awarded as a Laboratory Assistant under the "Earn you While Learn Scheme 2010" in the Department of Medical Biochemistry, University of Madras.
  - (vii) J.Padmanaban has been awarded as a Library Assistant under the "Earn you While Learn Scheme 2010".
  - (viii) K.Bhavani has been awarded as a Laboratory Assistant under the "Earn you While Learn Scheme 2010"
  - (ix) Indira Gandhi single girl child scholarship : 4 Students
- 41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

Nil

- 42. Does the department obtain feedback from
  - a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes. Feedback received from the faculties is placed before the Departmental Committee to revise the curriculum.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Students on staff – every academic year feedback is obtained by the IQAC and the findings are communicated to the faculty individually every year. The feedback is taken into account for confirmation/promotion.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

YES – Representation from Industries are members of the Board of Studies

#### 43. List the distinguished alumni of the department (maximum 10)

- i) Dr.R.Selvam, Former Professor and Head, Department of Medical Biochemistry, University of Madras, Taramani, Chennai-600 113.
- ii) Dr.P.Varalakshmi, Professor and Head (Rtd.), Department of Medical Biochemistry, University of Madras, Taramani, Chennai-600 113.
- iii) Dr.C.Panneerselvam, Professor and Head (Rtd.), Department of Medical Biochemistry, University of Madras, Taramani, Chennai-600 113.
- iv) Dr.P.Kalaiselvi, Assistant Professor, Department of Medical Biochemistry, University of Madras, Taramani, Chennai 600 113.
- v) Dr.G.S.Selvam, Professor and Head, Department of Biochemistry, Madurai Kamaraj University, Madurai- 625021.
- vi) Dr.N.Vasanthi, Professor and Head, Department of Biochemistry, Bharathidasan University, Trichirapalli- 620023.
- vii) Dr. Kamalakshi Krishnamurthy, Deputy Director, DNA Division, Forensic Science Department, Chennai 600 004.
- viii) Dr.P.Shanthi, Professor and Head, Department of Pathology, University of Madras, Taramani, Chennai-600 113.
- ix) Dr.C.Thirunavukkarasu, Assistant Professor, Dept. of Biochem. & Mol.Biology Pondicherry University, Puducherry-605 014.
- x) Dr.Ranga Parthasarathy, Associate Professor, Dept. of Psychiatry and Behavioral Sciences, University of Louisville, 550 S Jackson Street, 1st Floor, Louisville, Kentucky 40202, USA.
- xi) Dr.A.S.Ebrahim, Research Scientist, Department of Internal Medicine, Wayne State University, School of Medicine, Detroit, USA.
- xii)Dr. Dhandapani Kuppuswamy, Associate Professor of Medicine, Gazes Cardiac Research Institute, Charleston, SC 29403, USA.

# 44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

| Name & Dates of the<br>Conference-/Seminar/<br>Endowment Lectures/<br>Invited Lectures      | Nature (National / International, etc.)  | Delivered by  |
|---|--|---|
| Senior Prof. K. Radha<br>Shanmugasundaram<br>Endowment on 6 <sup>th</sup><br>November, 2007 | Protein kinase signaling in cardiac hypertrophy                                | DR. K. Dhandapani, Ph.D. Associate Professor Gazes Cardiac Research Institute Medical University of South Carolina United States of America |
| National Seminar on9 <sup>th</sup><br>March 2009  | the Role of Antioxidants in the<br>Treatment of Diseases                       | Eminent Scientist across the Nation  Dr.R.Puvanakrishnan,   |
|   |  | Scientist, CLRI.  |
|   |  | Dr.C.Thirunavukkarasu,<br>Assistant Professor,<br>Pondicherry University  |
|   |  | Prof. S.Niranjali Devaraj,<br>Professor and Head,<br>Department of<br>Biochemistry, University<br>of Madras                                 |
|   |  | Prof. N.Srinivasan, Professor, Department of Endocrinology, University of Madras.   |
|   |  | Prof. S. Venkataraman, Professor, Department of Pharmacology, Pharmacy college, Chennai.  |
| Visiting Fellow Lecture on 29 <sup>th</sup> March, 2010                                     | Quality control and<br>standardization of Traditional<br>medicine/Herbal Drugs | Prof. M.J. Nanjan, Director,<br>TIFAC, J.S.S. College of<br>Pharmacy, Ooty,   |
| Visiting Fellow Lecture on 31st March, 2010   | Development of ABO Blood<br>Grouping Card a new concept                        | Dr. K. Sugendran, Head, Department of Biochemistry, Institute of Aerospace Medicine, Bangalore  |

| _                              | on | Emerging Trends        | in | Dr.A.Srinivasan, Associate                          |
|--------------------------------|----|------------------------|----|---|
| 25 <sup>th</sup> February 2011 |    | complementary Medicine |    | Professor, Department of                            |
|                                |    |                        |    | Biophysics, All India                               |
|                                |    |                        |    | Institute of Medical                                |
|                                |    |                        |    | Sciences (AIIMS), New                               |
|                                |    |                        |    | Delhi   |
|                                |    |                        |    | D. M.N. D   |
|                                |    |                        |    | Dr.M.N.Ponnusamy CSIR – Emeritus Professor          |
|                                |    |                        |    | CAS-Crystallography and                             |
|                                |    |                        |    | Biophysics  |
|                                |    |                        |    | University of Madras                                |
|                                |    |                        |    | Maraimalai Valaaham                                 |
|                                |    |                        |    | Guindy, Chennai – 600                               |
|                                |    |                        |    | 025.  |
|                                |    |                        |    | 5 5 5 1 1 1   |
|                                |    |                        |    | Dr.R.Puvanakrishnan,                                |
|                                |    |                        |    | Emeritus Scientist Department of                    |
|                                |    |                        |    | Biotechnology                                       |
|                                |    |                        |    | Central Lather Research                             |
|                                |    |                        |    | Institute   |
|                                |    |                        |    | Adyar, Chennai – 600 020.                           |
|                                |    |                        |    |   |
|                                |    |                        |    | Dr.B.Nagarajan                                      |
|                                |    |                        |    | Chairman  |
|                                |    |                        |    | Department of Microbiology and Tumor                |
|                                |    |                        |    | Biochemistry  |
|                                |    |                        |    | Cancer Institute                                    |
|                                |    |                        |    | Adyar, Chennai – 600 020.                           |
|                                |    |                        |    |   |
|                                |    |                        |    | Dr.M.A.Hussain                                      |
|                                |    |                        |    | General Secretary,                                  |
|                                |    |                        |    | IABMS, 24, Saaranga                                 |
|                                |    |                        |    | Avenue Main Street, Old<br>Perungalathur, Chennai – |
|                                |    |                        |    | 600 063.  |
|                                |    |                        |    |   |
|                                |    |                        |    |   |
|                                |    |                        |    | Dr.K.Srikumar                                       |
|                                |    |                        |    | Professor and Head                                  |
|                                |    |                        |    | Department of                                       |
|                                |    |                        |    | Biochemistry and<br>Molecular Biology               |
|                                |    |                        |    | School of Life sciences                             |
|                                |    |                        |    | Pondicherry University                              |
|                                |    |                        |    | Kalapet, Puducherry – 605                           |
|                                |    |                        |    | 014.  |
|                                |    |                        |    |   |

|                                     | Departin                         | ent of Medical Blochenistry |
|-------------------------------------|----------------------------------|-----------------------------|
|                                     |                                  | Dr. S. Niranjali Devaraj    |
|                                     |                                  | Professor and Head          |
|                                     |                                  | Department of               |
|                                     |                                  | Biochemistry                |
|                                     |                                  | University of Madras        |
|                                     |                                  | Maraimalai Valaaham         |
|                                     |                                  | Guindy, Chennai – 600       |
|                                     |                                  | 025.                        |
| Invited Lectures on 4 <sup>th</sup> | "Cloning and Overexpression of   | Dr. P. Palanivelu,          |
| March 2011.                         | a Chitinase Gene from a          | Professor and Head,         |
|                                     | Thermophilic Fungus in           | Department of Molecular     |
|                                     | Saccharomyces cereviciae"        | Microbiology, Madurai       |
|                                     |                                  | Kamaraj University,         |
|                                     |                                  | Madurai                     |
| Invited Lectures on 4 <sup>th</sup> | "UBL Urease to Brain Choline     | Dr.R.Boopathy, Professor    |
| March 2011. On 9 <sup>th</sup>      | esterases"                       | and Head, Department of     |
| March 2011.                         |                                  | Biotechnology, Bharathiar   |
|                                     |                                  | University,                 |
|                                     |                                  | Coimbatore – 641 046        |
| Invited Lectures on                 | "Internal decorporation of       | Dr.A.K.Singh, Director,     |
| 17 <sup>th</sup> March 2011.        | fission produced radio Nuclides" | Directorate of Human        |
|                                     | r                                | Resource Development,       |
|                                     |                                  | Ministry of Defense,        |
|                                     |                                  | DRDO Bhavan, Rajaji         |
|                                     |                                  | Marg, New Delhi – 110       |
|                                     |                                  | 105                         |
| Prof. K.V.                          | "Healthy Heart for Hearty        | Prof.V.Chockalingam,        |
| Thiruvengadam                       | Health"                          | Emeritus Professor,         |
| Endowment Lecture"                  | Tieditii                         | Dr.M.G.R. Medical           |
| on 8 <sup>th</sup> March 2011       |                                  | University, Chennai.        |
| Prof. B.Kizar Ahamath               | Incretin based therapy in        | Dr.P.G.Sundararaman         |
| Endowment Lecture"                  | Diabetes Mellitus                | Senior Consultant in        |
| on 18 <sup>th</sup> March 2011      | Diabetes Weintus                 | Medical Endocrinology       |
| on to waten 2011                    |                                  | Apollo Hospitals, Greams    |
|                                     |                                  | Road, Chennai.              |
|                                     |                                  | Billroth Chennai Kalliappa  |
|                                     |                                  | Hospital, Chennai.          |
| Senior Prof. K.Radha                | Protein Kinase Signaling in      | Dr. K. Dhandapani, Ph.D.    |
| Shanmugasundaram,                   | cardiac hypertrophy              | Associate Professor,        |
| Endowment Lecture on                | cardiac hypertrophry             | Gazes Cardiac Research      |
| Tuesday, 6 <sup>th</sup> November,  |                                  |                             |
| 2007 at 03.30 P.M.                  |                                  | Institute, Medical          |
| 2001 at 05.30 P.M.                  |                                  | University of South         |
|                                     |                                  | Carolina, USA.              |
| The Maharajah of                    | Evaluation of Speech and         | Dr.A.Muraleedharan          |
| Travancore Curzon                   | Hearing Impairment               | Professor and Director      |
| Endowment Lecture on                | Treating impairment              | UIORL                       |
| 17 <sup>th</sup> February 2012      |                                  | Madras Medical College      |
| 11 Tournary 2012                    |                                  | Chennai-600 003             |
|                                     |                                  | Chemiai-000 003             |

|                                   |                                    | ent of Medical Biochemistry           |
|-----------------------------------|------------------------------------|---------------------------------------|
| Visiting Fellow Lecture           | Microheterogeneity in Protein      | Prof.K.Muralidhar                     |
| on 20 <sup>th</sup> February 2012 | Hormones and Its Physiologica      | Professor, Dept of                    |
|                                   | Significance                       | Zoology,                              |
|                                   |                                    | University of Delhi, Delhi            |
|                                   |                                    | - 110 00 <del>7</del> .               |
|                                   |                                    |                                       |
| Special lecture                   | Skin problems and future           | Dr.G.Ravichandran,                    |
| Programme on 28 <sup>th</sup>     | Dermatology                        | Dermatologist, Lifeline Cliniq,       |
| February 2012                     | Definatology                       | Adyar, Chennai- 20                    |
| 1 cordary 2012                    |                                    |                                       |
| Special lecture                   | Diabetes Mllitus-"Ato Z"           | Dr.I.Periyandavan,                    |
| Programme on 29 <sup>th</sup>     |                                    | Institute of Diabetology,             |
| February 2012                     |                                    | Madras Medical College,               |
|                                   |                                    | Chennai – 600 003.                    |
|                                   |                                    |                                       |
| Visiting Fellow Lecture           | Radio Isotopes in Research,        | Prof.D.K.Dhawan,                      |
| on 2 <sup>nd</sup> March 2012     | Imaging and Therapy                | Professor, Panjab                     |
|                                   |                                    | University,                           |
|                                   |                                    | Chandigarh                            |
|                                   |                                    |                                       |
| Visiting Fellow Lecture           | Use of alternative therapy in the  | Dr.Ramadasan Kuttan,                  |
| on 6 <sup>th</sup> March 2012     | prevention ad treatment of         | Scientist, Oncology.                  |
|                                   | cancer-preclinical and clinical    | Scientist, eneslogy.                  |
|                                   | studies                            |                                       |
| Special Lecture                   | Role of Micro RNA's in Cancer      | Dr.D.Karunagaran,                     |
| programme on 7 <sup>th</sup>      | Troit of Milero In Mile and Carlot | Professor, Department of              |
| March 2012                        |                                    | Biotechnology, IIT                    |
| Water 2012                        |                                    | Madras, Chennai-36                    |
| Special Lecture                   | Cardiaa Arrhythmias                | Dr.K.Chandrasekar,                    |
| Special Lecture                   | Cardiac Arrhythmias                | · · · · · · · · · · · · · · · · · · · |
| programme on 9 <sup>th</sup>      |                                    | Senior Consultant                     |
| March 2012                        |                                    | Cardiologist &                        |
|                                   |                                    | Electrophysiologist, Fortis           |
|                                   |                                    | Malar Hospital, Chennai-              |
|                                   |                                    | 20                                    |
| 0 11                              | M. I. I. D. I. CO.                 | D MG : :                              |
| Special Leture                    | Molecular Basis of Osteoporosis    | Dr.N.Srinivasan,                      |
| Programme on 14 <sup>th</sup>     |                                    | Professor,                            |
| March 2012                        |                                    | Department of                         |
|                                   |                                    | Endocrinology, University             |
|                                   |                                    | of Madras, Taramani.                  |
|                                   |                                    |                                       |

| "Phytochemicals as              | Herbal medicines for                                | Prof.Dr.S.Venkataraman                        |
|---------------------------------|---|---|
| Therapeutics" National          | Parkinsonism  | Director, C.L.Baid Metha                      |
| seminar On 24 <sup>th</sup> and |   | College of Pharmacy                           |
| 25 <sup>th</sup> February 2012  |   | Rajivgandhi salai (OMR0)                      |
|                                 |   | Thorapakkam                                   |
|                                 |   | Chennai-600097                                |
|                                 |   |   |
|                                 |   |   |
|                                 | Phytotherapeutics – the Case of                     | Dr.Rama Rajaram,                              |
|                                 | Plumbagin and Juglone                               | Biochemistry Laboratory,                      |
|                                 |   | Central Leather Research                      |
|                                 |   | Institute, Chennai-600020                     |
|                                 |   |   |
|                                 | Di . 1  |   |
|                                 | Phytochemicals in Siddha Iatro                      | Dr.P.Jayaprakash Narayanar                    |
|                                 | chemistry and their therapeutics in Siddha medicine | Chairman & Managing Director                  |
|                                 | in Siddna medicine                                  |   |
|                                 |   | Jaya Indian Medicine Pharmaceutical Pvt. Ltd. |
|                                 |   | Chennai                                       |
|                                 |   | Chemiai                                       |
|                                 |   |   |
|                                 | Therapeutic effect of anti-cancer                   | Dr.Rajeswari,                                 |
|                                 | drugs, Bleomycin, Doxorubicin                       | Professor,                                    |
|                                 | and Cisplatin on squamous cell                      | All India Institute of Medica                 |
|                                 | carcinoma of Skin                                   | Sciences, New Delhi-110029                    |
|                                 |   |   |
|                                 | Standardization and validation of                   | Dr. S. Narasimhan                             |
|                                 | Herbal products                                     | Director                                      |
|                                 |   | Asthagiri Herbal Research                     |
|                                 |   | Foundation, Chennai – 600                     |
|                                 |   | 047.  |
|                                 |   |   |
|                                 | Phytochemicals Characterization                     | Dr.A.Saraswathy,                              |
|                                 | and Significance                                    | Director, Captain Srinivasa                   |
|                                 |   | Murti Drug Research                           |
|                                 |   | Institute for Ayurveda,                       |
|                                 |   | (CCRAS, Min. of H&FW,                         |
|                                 |   | Govt. of India),                              |
|                                 |   | Arumbakkam,<br>Chennai – 106                  |
|                                 | Parapartiyas in Madam Caraar                        |   |
| Special Lecture                 | Perspectives in Modern Cancer<br>Biology            | Dr.B.Nagarajan, Distinguished Professor,      |
| Programme on 11 <sup>th</sup>   | Diology   | Tamil Nadu Dr.MGR                             |
| March 2013                      |   | Medical Unviersity,                           |
| 1v1a1C11 2013                   |   | Cancer Institute, Adyar,                      |
|                                 |   | Chennai-20                                    |
| Special Lecture                 | Microbial Enzyme Technology &                       | Dr.R.Puvanakrishnan,                          |
| Programme on 11 <sup>th</sup>   | Drug Development                                    | Emeritus Scientist, CLRI,                     |
| March 2013                      |   | Adyar, Chennai – 20                           |
| 1.141011 2010                   | <u> </u>  | 1.10/111, 0.1101111111 20                     |

| Special Lecture<br>Programme on 12 <sup>th</sup><br>March 2013 | Biomedical Applications of Nano<br>Materials         | Dr.S.Sriman Narayanan, Professor and Head, Department of Analytical Chemistry, University of Madras, Guindy-25          |
|--|--|---|
| Special Lecture<br>Programme on 12 <sup>th</sup><br>March 2013 | Vitamin-a malnutrition-real or myth?                 | Dr.G.Rajagopal, Professor<br>of Biochemistry,<br>Dr.Kamakshi Memorial<br>Hospital, Chennai-100                          |
| Special Lecture<br>Programme on 14 <sup>th</sup><br>March 2013 | Vaccinology-Basic concepts & recent advances         | Dr.P.Mullainadhan, Professor, Department of Zoology, University of Madras, Guindy.                                      |
| Special Lecture<br>Programme on 14 <sup>th</sup><br>March 2013 | Siddha Medicines and Non-Communicable Diseases       | Dr.G.Sivaraman, Managing Director & Chief Siddha Physician, Arogya Health Care Pvt., Ltd., Chennai - 10                 |
| Special Lecture<br>Programme on 20 <sup>th</sup><br>March 2013 | Importance of Biochemistry in Science and Technology | Dr.C.Victor Rajamanikkam,<br>Director, Sai Ram Advance<br>Centre for Research,<br>Chennai-44.                           |
| Special Lecture<br>Programme on 21 <sup>st</sup><br>March 2013 | Drug Discovery from plants                           | Dr.N.Raaman, Professor,<br>CAS in Betony<br>University of Madras,<br>Guindy, Chennai-25.                                |
| Special Lecture<br>Programme on 21 <sup>st</sup><br>March 2013 | Sticky Glycans-Their role in Pathogenesis            | Dr.S.Niranjali Devaraj,<br>Professor and Head, Dept<br>of Biochemistry,<br>University of Madras,<br>Guindy, Chennai-25. |
| Dr.P.Kutumbiah<br>Memorial Endowment<br>lecture (Medicine)     | Oral and Systemic Disease-is there a connection?     | Dr.Jaideep Mahendra, Professor, Department of Periodontology, Meenakshi Ammal Dental College, MAHER, Chennai-95.        |

**UGC-SAP-DRS-Phase-II Advisory Committee Member:** Visited our Department of Medical Biochemistry, from 2009-2012

- a) Prof. Cletus D'Sauza, Professor, Department of Biochemistry, University of Mysore, Mysore.
- b) Prof. C.Subramanyam (Rtd), Professor, Department of Biochemistry, Osmania University, Hyderabad.

#### 45. List the teaching methods adopted by the faculty for different programmes.

Black board teaching, Power Point, LCD projector and students seminar

### 46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Through seminars, and sessional tests.

#### 47. Highlight the participation of students and faculty in extension activities.

- The Department has conducted an ENT Camp at Taramani and Chepauk Campuses in March 2012.
- The department has conducted a Dental Camp at Taramani and Guindy Campuses in March 2013
- Students involved in the NSS Programme, University of Madras.
- ➤ Students participated in the sports activities, University of Madras
- > Students involved in Yoga Practices, University of Madras
- Students involved in the maintenance of Campus from the Students Welfare Association of Dr.ALMPGIBMS (SWAD), University of Madras.

#### 48. Give details of "beyond syllabus scholarly activities" of the department.

❖ Involved in the CSIR NET Coaching Porgramme

# **49.** State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

Yes. University Grants Commission in the form of Special Assistance Programme, Departmental Research Support, New Delhi.

### 50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

❖ Conducted Elective papers and consultancy Projects through UICIC.

## **51.** Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

#### **Major Strength of the Department:**

- Excellent Teaching Faculty who have won many awards and prizes.
- Sophisticated instrumentation facilities
- Foreign Collaboration
- UGC SAP-DRS and DST FIST Programmes
- Individual Projects by the faculty

#### Weakness of the Department:

• Shortage of staff

#### **Opportunities:**

• Ample scope for getting employment in Research position are wide open at National and International level.

#### **Challenges:**

• Venturing into Stem cell Research, Cancer Chemotherapy with natural antioxidants, Aging and Neurodegenerative Disorders are challenging task before our faculty and Research Scholars.

#### 52. Future plans of the department.

To create a National Centre for Free Radical Research in the treatment of various diseases including Cancer, Diabetes, Cardio vascular diseases, Aging, Neurodegenerative diseases, and Kidney disorders.