

## **CHAPTER 4**

### **School of Life Sciences, Assam University: Research Outputs**

#### **4.0. INTRODUCTION**

Assam University was established in January 1994 through Assam (Central) University Act, 1989 (Established under an Act of Parliament). The campus is situated in Dargakona, about 20 kms from Silchar town. The University has sixteen Schools on major disciplines. There are 35 Departments under these sixteen Schools. The university sustains a multidisciplinary approach to higher education. Silchar being the gateway to the entire southern part of North East India is the hub of commercial activities and is known for its history as the Tea Capital of South Assam,

The sprawling university campus is spread over an area of about 600 acres on which 34 post graduate departments and 3 interdisciplinary centres including School of Technology are located. In addition, CIL (Central Instrumentation Laboratory) has also been established in the university. The institution provides state-of-the-art facilities to students coming from different parts of the country and abroad. There are 1587 students registered upto the year 2015 for M. Phil. & Ph. D. programmes. Apart from these, there are nearly 25000 students in the 59 affiliated and permitted colleges in the five districts of South Assam which together constitute the jurisdiction of Assam University. The colleges impart the

under-graduate teaching in Science, Arts, Commerce, B.Ed. and the Law streams. The information about the School of Life Sciences was collected from Assam University website i.e., [www.aus.ac.in](http://www.aus.ac.in).

#### **4.1. SCHOOL OF LIFE SCIENCES**

The School of Life Sciences named as Hargobind Khurana School of Life Sciences had been established with an emphasis on interdisciplinary teaching and research in modern biology. The School consists of three Departments: 1) Department of Life Science and Bioinformatics, 2) Department of Microbiology, and 3) Department of Biotechnology. The Life Sciences comprise the fields of science that involve the scientific study of living organisms, such as microorganisms, plants, animals, and human beings, as well as related considerations like bioethics. It is considered that study of Life Sciences is helpful in improving the quality and standard of life.

##### **4.1.1. Department of Life Science and Bioinformatics**

The Department of Life Science and Bioinformatics was established in the year 1996. This department meets the national and regional needs for interdisciplinary teaching and research through its two years Masters Degree Course in Life Sciences and M Phil / Ph D Programme. The faculty members of the department are vastly experienced and motivated representing almost all areas of modern biology. The department has made pioneering efforts in formulating syllabi that takes care of all modern and common subjects in first year of M. Sc. Programme. In the second year, students get exposed to the frontier areas in plant and animal sciences depending upon their previous courses.

A number of research projects funded by DBT, DST, UGC, TAI, ICAR, MOEF has been undertaken by the faculty members. The department has been recognized under Special Assistance Programme (SAP) by UGC and FIST by DST. The Bio-informatics Centre and Biotech Hub are also associated with the department.

Almost all the faculty members have received specialized training from reputed institutions and research laboratories around the globe. Quality teaching requires ongoing research activity which is being reflected by regular publications by the faculty members of the school in high impacted journals.

#### **4.1.2. Department of Microbiology**

The department of Microbiology was established in the year 2009. The main objective and focus of the department was to guide and impart innovative education at par with International Universities. The department endeavours to specialize its student in distinct areas of Microbiology.

The course contents have been kept as per UGC guidelines and support competitive exams like UGC-CSIR NET, DBT-JRF, GATE, ICMR-JRF and ICAR-JRF.

#### **4.1.3. Department of Biotechnology**

The Department of Biotechnology, Assam University, Silchar, offers M.Sc., M Phil. and Ph D programs in Biotechnology. The Master Degree program of the department was started in July 2004, and it is of two years duration. Core courses as well as advanced courses like Genetics, Molecular Biology, Biochemistry,

Immunology, Microbiology, Bioinformatics. Genetic Engineering, Plant Biotechnology, Animal Biotechnology and Medical Biotechnology are covered. M.Sc. final semester students also undertake a short term research project towards completion of the program.

The main goal of the department is to provide hands on practicals in six different laboratories, 1. Biochemistry, 2. Animal Cell Biology and Immunology, 3. Molecular Biology, 4. Microbial Technology, 5. Plant Biotechnology and 6. Bioinformatics and Genomics. The faculty members of the department are actively involved in research in the broad areas of Molecular Biology, Cancer Biology. Plant Biotechnology. Immunology, DNA bar-coding, Genomics, Genetics and Bioinformatics. Department has several research projects on Cancer Genomics, DNA Barcoding, Methanogenomics, Molecular Characterization of Nitrogen Fixing Bacteria. Plant Biotechnology, etc. These facilities are available to M.Sc. M.Phil, Ph.D. and M.Sc. students. Students actively participates in seminars and workshops conducted at both university and national level. They are also encouraged to participate in Co-curricular activities at university level.

#### **4.2. RESEARCH OUTPUTS IN SCHOOL OF LIFE SCIENCES**

Bibliometrics studies are needed to identify the pattern of publication, authorship and citation analysis which can give an insight into the dynamics of the area under consideration. The present study is undertaken to present a bibliometrics analysis of research outputs in the School of Life Sciences, Assam University during 1996 to 2012.

#### **4.2.1. Subject Wise Doctoral Theses Submitted**

During the period of study, it was found that five numbers of doctoral theses were submitted in the subject Biotechnology, twenty-two numbers of doctoral theses were submitted in the subject Life Science and 13 numbers of the doctoral theses were submitted in Life Science and Bioinformatics as shown in Table 4.1. The Department of Life Science and Bioinformatics was previously known as Department of Life Sciences. Therefore, in this study the total theses were distributed under their departments' name as found in their respective theses. The researcher worked with different titles which are presented in the Table 4.1. There was not any thesis submitted in the Department of Microbiology as the department was started very recently in 2009. The present study is limited to the period 1996 to 2012 and Department of Microbiology has started its research program in the year 2012. So, no doctoral thesis was submitted till the period of study.

Table 4.1. Subject Wise Doctoral Theses Submitted

| Department/Subject | Researcher's Name     | Title of the Thesis   | Year of Submission |
|--------------------|-----------------------|---|--------------------|
| Biotechnology      | Chakraborty, Biswajit | Antimicrobial Hepatoprotective and Immunomodulatory Role of Tinospora, Cordifolia, Curcuma Longa and Zingibar officinale on Peritoneal and Splenic Microphages in Ccl4 Intoxicated Male Albino Mice | 2011               |
|                    | Deb, Ishita           | Effect of Selected Heavy Metals (Arsenic, Cadmium, Lead and Mercury) on Reproductive Functions in Human Male Volunteers from Southern Assm  | 2012               |
|                    | Gang, Sneha           | Effect of cadmium exposure on immunomodulatory and proinflammatory role of Murine splenic and Peritoneal Macrophage   | 2011               |
|                    | Roy, Ratna            | Genetic Variation and Hormonal Regulation for Drought Resistance Traits in Rice (Oryza Sativa. L)   | 2012               |
|                    | Sharma, Durga         | Studies on Isolation Characterization and Improvement of Microbes During Biodegradation of Organic Wastes from Paper Industry South Assam   | 2012               |

| <b>Department/<br/>Subject</b> | <b>Researcher's<br/>Name</b> | <b>Title of the Thesis</b>  | <b>Year of<br/>Submission</b> |
|--------------------------------|------------------------------|---|-------------------------------|
| Life<br>Sciences               | Banik, Gobinda               | Anti Diabetes Plants of Southern Assam With Special Reference to Biological Screening   | 2010                          |
|                                | Barbhuiya,<br>Anjam Hussain  | Habitat Mapping of Mahseer Fisheries and Development of Spatial Database for the Rivers Barak, Jhatinga and Dhaleshwari in N E India  | 2009                          |
|                                | Barman,<br>Ramendra Ch.      | Impact of Development and Management of Selected Flood Plain Wetland (Beels) in Assam through Community Based Fisheries Management    | 2009                          |
|                                | Chakraborty,<br>Jayasree     | Microbiological and Nutritional Analysis of Some Fermented Foods Consumed by Different Tribes of North Cachar Hills District of Assam | 2011                          |
|                                | Choudhury, Ratna             | Phyto-Chemical and Therapeutic Evaluation of some Ethno-Botanical Plants of Tripura, India  | 2008                          |
|                                | Choudhury,<br>Reshmi Chanda  | Epidemiological Investigation on Candida Species with Special Reference to the AIDs   | 2012                          |
|                                | Choudhury,<br>Shuvasish      | Bioactivity Evaluation and Phytochemical Characterization of Pajanelia Longifolia (Wild) K. Schumann (Bignoniaceae)                   | 2009                          |
|                                | Das Roy,<br>Lupamudra        | Studies On The Genotoxicity of Some Marketed Pharmaceuticals In Mammalian Test System in Vivo: Preliminary Studies on Drug Mutagen    | 2007                          |
|                                | Das, Ajit Kumar              | Study Of Medicinal Plants Used by Different Communities of Cachar District, Assam, India  | 2006                          |
|                                | Das, Arunava                 | Isolation And Molecular Characterization Of Clostridium Perfringens from Livestock and Poultry  | 2007                          |

| <b>Department/<br/>Subject</b> | <b>Researcher's<br/>Name</b> | <b>Title of the Thesis</b>   | <b>Year of<br/>Submission</b> |
|--------------------------------|------------------------------|--|-------------------------------|
| Life<br>Sciences               | Das, Bonani                  | Fern Flora and Fern Allies of Southern Assam with Reference to Ethno Medico Botanical  | 2007                          |
|                                | Das, Jayanta Kumar           | Some studies on Epidemiology and Biochemistry of Childhood Ocular and Orbital Malignant Tumors in North Eastern India            | 2010                          |
|                                | Das, Partha Sarathi          | Herbaceous Flora of Karimganj District, Assam with Reference to their Economic Utility   | 2008                          |
|                                | Giri, Sarbani                | Studies on the Genotoxic effects of some Pesticides in Mice and chick invivo by Multiple Cytogenetic end point analysis          | 2001                          |
|                                | Khan, Mohammad Hussain       | Physiological and Biochemical Studies of NaCl-Salinity Stress in Crop Plants   | 2006                          |
|                                | Mazumdar, Yahya              | Molecular Characterization of causative agents of Atrophic Rhinitis with special emphasis on Bordetella Bronchiseptica           | 2006                          |
|                                | Nath, Mautushi               | Ethno-medico Botanical Aspects of Hmar Tribe of Cachar District, Assam: A Comprehensive Study                                    | 2010                          |
|                                | Panda, Piyalee               | Studies on induction of Oxidative Stress, Phytochelatin and Its Molecular Aspects in Rice (Oriza Sativa L) under Cadimium Stress | 2012                          |
|                                | Shil, Sanjib                 | Ethno Medico Botanical aspects of Reang Tribe of Tripura state along with photo-chemicalS of some Selected Plants                | 2007                          |
|                                | Talukdar, Anupam Das         | On Certain phytochemical aspecta of Cyatheaceae of Southern Assam: A study   | 2009                          |
|                                | Upadhyay, Hrishikesh         | Bio-Chemical Studies in Camellia Sinesis (Tea) under Abiotic Stress  | 2008                          |
|                                | Upadhyay, Rishikesh          | Physiological and Biochemical Studies of Heavy Metal Toxicity in Aquatic Plant   | 2009                          |



| <b>Department/<br/>Subject</b>        | <b>Researcher's<br/>Name</b>   | <b>Title of the Thesis</b>  | <b>Year of<br/>Submission</b> |
|---------------------------------------|--------------------------------|---|-------------------------------|
| Life Science<br>and<br>Bioinformatics | Alka                           | Microbiological Studies in Fermentation of Different Varieties of Musa Paradica of South Asia   | 2012                          |
|                                       | Chackrabarty,<br>Rahul         | Genetic Study Of Some Promising Bold Grained Rice (Oryza Sativa L.) Variety of Barak Valley, Assam  | 2008                          |
|                                       | Chanu,<br>Thounaojam<br>Thorny | Studies on The Regulation of Antioxidant Metabolism and Metal Detoxification Mechanisms in Rice Under Metal Stress  | 2012                          |
|                                       | Chetia, Pankaj                 | Therapeutic Potential Of Dipteris Wallichii (R.Br.) Moore: An Endemic Plant of North East India   | 2011                          |
|                                       | Devi, Salam<br>Himika          | Genotoxic and Tumorigenic Potential and Areca nut Alkaloids and Metabolites in Mice   | 2011                          |
|                                       | Devi, Soubam<br>Supriya        | Studies On Air Microflora Over The Rice With Special Reference To Blast Disease Of Rice In South Assam  | 2012                          |
|                                       | Dey, Mohitosh                  | Genetic Engineering Of Rice (Oryza Sativa L) For Abiotic Stress Tolerance   | 2012                          |
|                                       | Huidrom, Pratibha              | Sustainable Use Of Beneficial Rhizobacteria Of Tea Field Soils Under Different Treatment Of Pesticides  | 2012                          |
|                                       | Kawsar, Afifa                  | Studies on the Frequency of Micronucleus Among The Local Population in Cachar District of Assam: Preliminary Investigations on its Correlation With Beetle Quid Chewing and Tobacco Use | 2010                          |

| <b>Department/<br/>Subject</b>        | <b>Researcher's<br/>Name</b> | <b>Title of the Thesis</b>   | <b>Year of<br/>Submission</b> |
|---------------------------------------|------------------------------|--|-------------------------------|
| Life Science<br>and<br>Bioinformatics | Mazumdar,<br>Mehnaz          | Protective Action of Some<br>Natural Antioxidants Against<br>Selected Antitumor<br>Chemotherapeutic Agents: A<br>Comparative Study in Mouse<br>Test System Using | 2010                          |
|                                       | Rajkumar, Bibhas             | Ecological Studies on Microbial<br>Community of Barak River,<br>South Assam  | 2012                          |
|                                       | Roy, Biswajit<br>Deb         | Microbiological Studies of Soil<br>Diazotrophs of Rice Agro<br>Ecosystems of Southern Assam,<br>India  | 2011                          |
|                                       | Roy, Prasenjit               | Arsenic Contamination in<br>Southern Assam and Its Health<br>Effects and Studies on Arsenic<br>Genotoxicity in Murine Test<br>System in Vivo                     | 2012                          |

#### 4.2.2 Number of Theses Submitted to the School of Life Sciences

The Table 4.2 below shows the corresponding number of theses submitted in the department.

Table 4.2 Department wise theses Submission

| <b>Sl. No.</b> | <b>Department</b>                  | <b>No. of Theses Submitted</b> |
|----------------|------------------------------------|--------------------------------|
| 1              | Biotechnology                      | 5                              |
| 1              | Life Science                       | 22                             |
| 3              | Life Science and<br>Bioinformatics | 13                             |
| <b>Total</b>   |                                    | <b>40</b>                      |

Figure 4.1 represents that highest number of theses submitted in the subject Life Science and Bioinformatics.

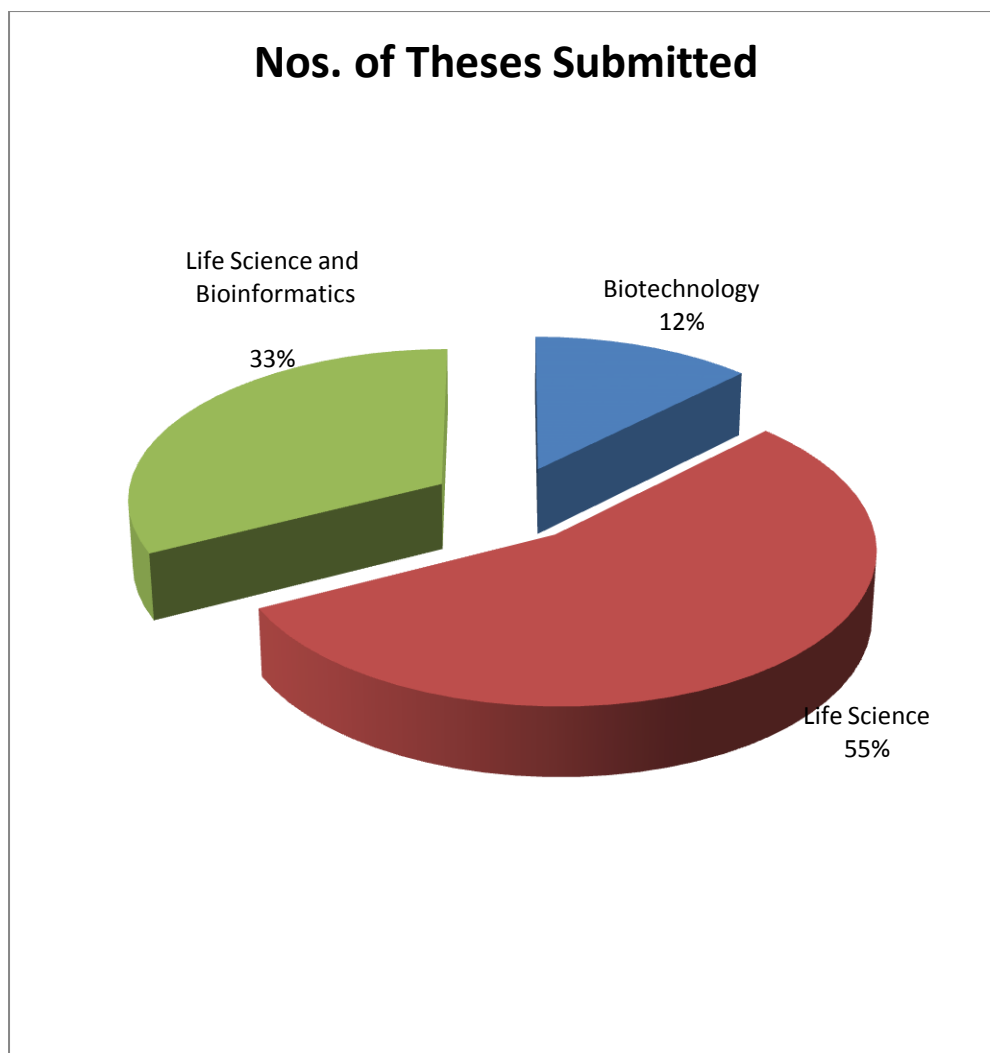


Figure 4.1 No. of Theses Submitted in Three Departments

#### 4.2.3. Year Wise Submission of Theses

Table 4.3 represents the year wise submission of doctoral theses in different departments under the School of Life Sciences. It is observed from the table below that 12 numbers of theses were submitted in the year 2012 which is highest and only one thesis was submitted in the year 2001.

Table 4.3 Year Wise Submission of Theses

| Year of Submission | Departments   |                                 |              | Total     | Percentage    |
|--------------------|---------------|---------------------------------|--------------|-----------|---------------|
|                    | Biotechnology | Life Science and Bioinformatics | Life Science |           |               |
| 2001               | 0             | 0                               | 1            | 1         | 2.50          |
| 2006               | 0             | 0                               | 3            | 3         | 7.50          |
| 2007               | 0             | 0                               | 4            | 4         | 10.00         |
| 2008               | 0             | 1                               | 3            | 4         | 10.00         |
| 2009               | 0             | 0                               | 5            | 5         | 12.50         |
| 2010               | 0             | 2                               |              | 5         | 12.50         |
| 2011               | 2             | 3                               | 1            | 6         | 15.00         |
| 2012               | 3             | 7                               | 2            | 12        | 30.00         |
| <b>Total</b>       | <b>5</b>      | <b>13</b>                       | <b>22</b>    | <b>40</b> | <b>100.00</b> |

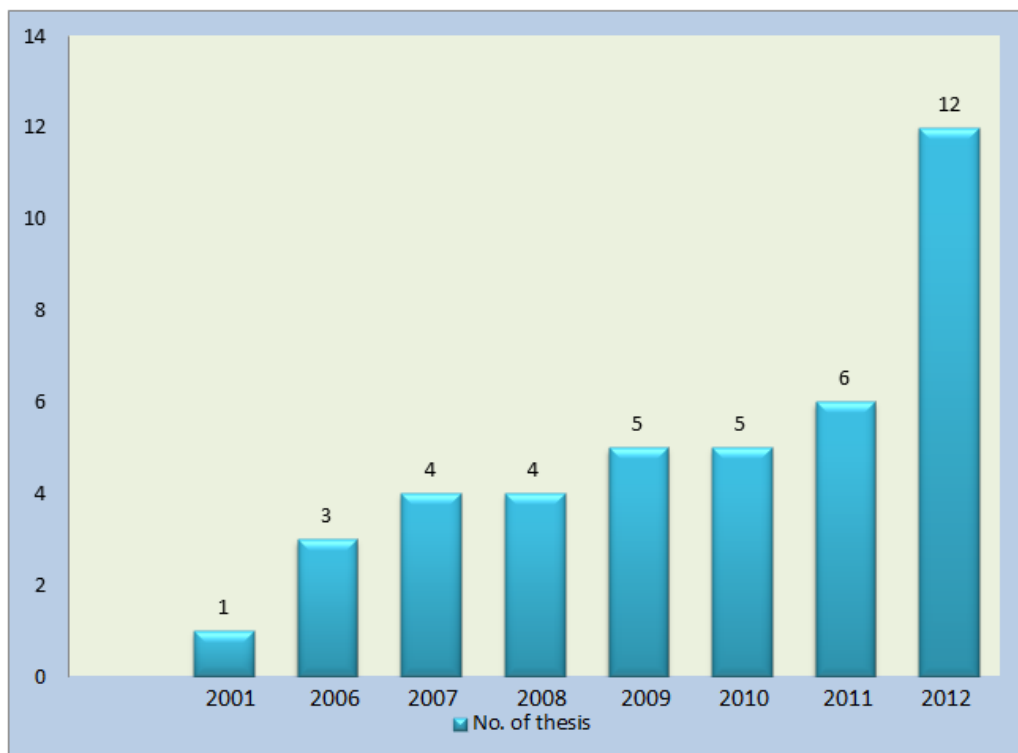


Figure 4.2 Year of Theses Submission

The Figure 4.2 depicts the number of theses submitted during the period 1996 to 2012. It is seen that research outputs in the School of Life Sciences is in increasing trend. The research scholars in the field of Life Sciences are more engaged in research activity in recent years.

#### 4.2.4. Year Wise and Research Scholar Wise Theses

The Table 4.4 represents the details of each thesis submitted in the School of Life Sciences. The table describes the year of submission, thesis no., department/subject, research scholar and title of each thesis. Table 4.4. Year Wise and Research Scholar Wise Theses.

Table 4.4. Year Wise and Research Scholar Wise Theses

| Year of Submission | Theses Number | Department/ Subject | Researcher's Name      | Title of the Thesis  |
|--------------------|---------------|---------------------|------------------------|--|
| 2001               | T01           | Life Science        | Giri, Sarbani          | Studies on the Genotoxic effects of some Pesticides in Mice and chick invivo by Multiple Cytogenetic end point analysis            |
| 2006               | T02           | Life Science        | Mazumdar, Yahya        | Molecular Characterization of causative agents of Atrophic Rhinitis with special emphasis on Bordetella Bronchiseptica             |
|                    | T03           | Life Science        | Das, Ajit Kumar        | Study Of Medicinal Plants Used by Different Communities of Cachar District, Assam, India   |
|                    | T04           | Life Science        | Khan, Mohammad Hussain | Physiological and Biochemical Studies of NaCl-Salinity Stress in Crop Plants   |
| 2007               | T05           | Life Science        | Das, Bonani            | Fern Flora and Fern Allies of Southern Assam with Reference to Ethno Medico Botanical  |
|                    | T06           | Life Science        | Das Roy, Lupamudra     | Studies On The Genotoxicity of Some Marketed Pharmaceuticals In Mammalian Test System in Vivo: Preliminary Studies on Drug Mutagen |
|                    | T07           | Life Science        | Shil, Sanjib           | Ethno Medico Botanical aspects of Reang Tribe of Tripura state along with photo-chemicalS of some Selected Plants                  |
|                    | T08           | Life Science        | Das, Arunava           | Isolation And Molecular Characterization Of Clostridium Perfringens from Livestock and Poultry                                     |

| Year of Submission | Theses Number | Department/ Subject             | Researcher's Name        | Title of the Thesis   |
|--------------------|---------------|---------------------------------|--------------------------|---|
| 2008               | T09           | Life Science                    | Das, Partha Sarathi      | Herbaceous Flora of Karimganj District, Assam with Reference to their Economic Utility  |
|                    | T10           | Life Science                    | Upadhyay, Hrishikesh     | Bio-Chemical Studies in Camellia Sinesis (Tea) under Abiotic Stress   |
|                    | T11           | Life Science                    | Choudhury, Ratna         | Phyto-Chemical and Therapeutic Evaluation of some Ethno-Botanical Plants of Tripura, India  |
|                    | T12           | Life Science and Bioinformatics | Chackrabarty, Rahul      | Genetic Study Of Some Promising Bold Grained Rice (Oryza Sativa L.) Variety of Barak Valley, Assam                                  |
| 2009               | T13           | Life Science                    | Upadhyay, Rishikesh      | Physiological and Biochemical Studies of Heavy Metal Toxicity in Aquatic Plant  |
|                    | T14           | Life Science                    | Talukdar, Anupam Das     | On Certain phytochemical aspects of Cyatheaceae of Southern Assam: A study  |
|                    | T15           | Life Science                    | Choudhury, Shuvasish     | Bioactivity Evaluation and Phytochemical Characterization of Pajanelia Longifolia (Wild) K. Schumann (Bignoniaceae)                 |
|                    | T16           | Life Science                    | Barman, Ramendra Ch.     | Impact of Development and Management of Selected Flood Plain Wetland (Beels) in Assam through Community Based Fisheries Management  |
|                    | T17           | Life Science                    | Barbhuiya, Anjam Hussain | Habitat Mapping of Mahseer Fisheries and Development of Spatial Database for the Rivers Barak, Jhatinga and Dhaleshwari in NE India |

| Year of Submission | Theses Number | Department/ Subject             | Researcher's Name  | Title of the Thesis  |
|--------------------|---------------|---------------------------------|--------------------|--|
| 2010               | T18           | Life Science                    | Das, Jayanta Kumar | Some studies on Epidemiology and Biochemistry of Childhood Ocular and Orbital Malignant Tumors in North Eastern India  |
|                    | T19           | Life Science                    | Banik, Gobinda     | Anti Diabetes Plants of Southern Assam With Special Reference to Biological Screening  |
|                    | T20           | Life Science                    | Nath, Mautushi     | Ethno-medico Botanical Aspects of Hmar Tribe of Cachar District, Assam: A Comprehensive Study  |
|                    | T21           | Life Science and Bioinformatics | Kawsar, Afifa      | Studies on the Frequency of Micronucleus Among The Local Population in Cachar District of Assam: Preliminary Investigations on its Correlation With Beetle Quid Chewing and Tobacco Use                      |
|                    | T22           | Life Science and Bioinformatics | Mazumdar, Mehnaz   | Protective Action of Some Natural Antioxidants Against Selected Antitumor Chemotherapeutic Agents: A Comparative Study in Mouse Test System Using  |
| 2011               | T23           | Life Science and Bioinformatics | Chetia, Pankaj     | Therapeutic Potential Of Dipteris Wallichii (R.Br.) Moore: An Endemic Plant of North East India  |
|                    | T24           | Life Science and Bioinformatics | Devi, Salam Himika | Genotoxic and Tumorigenic Potential and Areca nut Alkaloids and Metabolites in Mice  |
|                    | T25           | Biotechnology                   | Gang, Sneha        | Effect of cadmium exposure on immunomodulatory and proinflammatory role of Murine splenic and Peritoneal Macrophage<br>immunomodulatory and proinflammatory role of Murine splenic and Peritoneal Macrophage |



| Year of Submission | Theses Number | Department/ Subject             | Researcher's Name        | Title of the Thesis   |
|--------------------|---------------|---------------------------------|--------------------------|---|
| 2011               | T26           | Life Science                    | Chakrabort, Jayasree     | Microbiological and Nutritional Analysis of Some Fermented Foods Consumed by Different Tribes of North Cachar Hills District of Assam   |
|                    | T27           | Biotechnology                   | Chakrabort, Biswajit     | Antimicrobial Hepatoprotective and Immunomodulatory Role of Tinospora, Cordifolia, Curcuma Longa and Zingibar officinale on Peritoneal and Splenic Microphages in Ccl4 Intoxicated Male Albino Mice |
|                    | T28           | Life Science and Bioinformatics | Roy, Biswajit Deb        | Microbiological Studies of Soil Diazotrophs of Rice Agro Ecosystems of Southern Assam, India  |
| 2012               | T29           | Life Science and Bioinformatics | Alka                     | Microbiological Studies in Fermentation of Different Varieties of Musa Paradica of South Asia   |
|                    | T30           | Life Science and Bioinformatics | Roy, Prasenjit           | Arsenic Contamination in Southern Assam and Its Health Effects and Studies on Arsenic Genotoxicity in Murine Test System in Vivo  |
|                    | T31           | Life Science and Bioinformatics | Chanu, ThounaojamThorny  | Studies on The Regulation of Antioxidant Metabolism and Metal Detoxification Mechanisms in Rice Under Metal Stress  |
|                    | T32           | Life Science and Bioinformatics | Devi, Soubam Supriya     | Studies On Air Microflora Over The Rice With Special Reference To Blast Disease Of Rice In South Assam  |
|                    | T33           | Life Science                    | Choudhury, Reshmi Chanda | Epidemiological Investigation on Candida Species with Special Reference to the AIDs   |
|                    | T34           | Biotechnology                   | Sharma, Durga            | Studies on Isolation Characterization and Improvement of Microbes During Biodegradation of Organic Wastes from Paper Industry South Assam   |

| Year of Submission | Theses Number | Department/ Subject             | Researcher's Name | Title of the Thesis  |
|--------------------|---------------|---------------------------------|-------------------|--|
| 2012               | T35           | Life Science and Bioinformatics | Huidrom, Pratibha | Sustainable Use Of Beneficial Rhizobacteria Of Tea Field Soils Under Different Treatment Of Pesticides                                     |
|                    | T36           | Life Science                    | Panda, Piyalee    | Ethno Medico Botanical aspects of Reang Tribe of Tripura state along with photo-chemicalS of some selected plants                          |
|                    | T37           | Biotechnology                   | Roy, Ratna        | Genetic Variation and Hormonal Regulation for Drought Resistance Traits in Rice ( <i>Oryza Sativa. L</i> )                                 |
|                    | T38           | Biotechnology                   | Deb, Ishita       | Effect of Selected Heavy Metals (Arsenic, Cadmium, Lead and Mercury) on Reproductive Functions in Human Male Volunteers from Southern Assm |
|                    | T39           | Life Science and Bioinformatics | Dey, Mohitosh     | Genetic Engineering Of Rice ( <i>Oryza Sativa L</i> ) For Abiotic Stress Tolerance   |
|                    | T40           | Life Science and Bioinformatics | Rajkumar, Bibhas  | Ecological Studies on Microbial Community of Barak River, South Assam  |

#### 4.2.5. Supervisor Wise Theses Submission

There are 40 numbers of theses submitted in the School of Life Sciences, Assam University during 1996 to 2012. The scholars have submitted their thesis under 12 different supervisors and it is observed that highest number 9 theses submitted under the supervisor Dr. G. D. Sharma followed by 8 numbers of theses under Dr. Manabendra Dutta Choudhury and in the third with 5 numbers of theses submitted

under supervisors, Dr. Sarbani Giri, and Dr. Sanjib Kumar Panda, they are in the third place as shown in Table 4.5.

Table 4.5: Supervisor Wise Theses Submission

| <b>Sl. No.</b> | <b>Supervisor</b>           | <b>Numbers of Scholar</b> | <b>Rank</b> |
|----------------|-----------------------------|---------------------------|-------------|
| 1              | Sharma, G. D.               | 9                         | 1           |
| 2              | Choudhury, Manabendra Dutta | 8                         | 2           |
| 3              | Giri, Sarbani               | 5                         | 3           |
| 4              | Panda, Sanjib Kumar         | 5                         | 3           |
| 5              | Dutta, B. K.                | 3                         | 4           |
| 6              | Kar, D                      | 3                         | 4           |
| 7              | Sengupta, Mahuya            | 3                         | 4           |
| 9              | Bawari, M                   | 1                         | 5           |
| 10             | Chackrabarty, Supriya       | 1                         | 5           |
| 11             | Mazumder, P. B.             | 1                         | 5           |
| 12             | Tiwari, B. K.               | 1                         | 5           |
| <b>Total</b>   |                             | <b>40</b>                 |             |

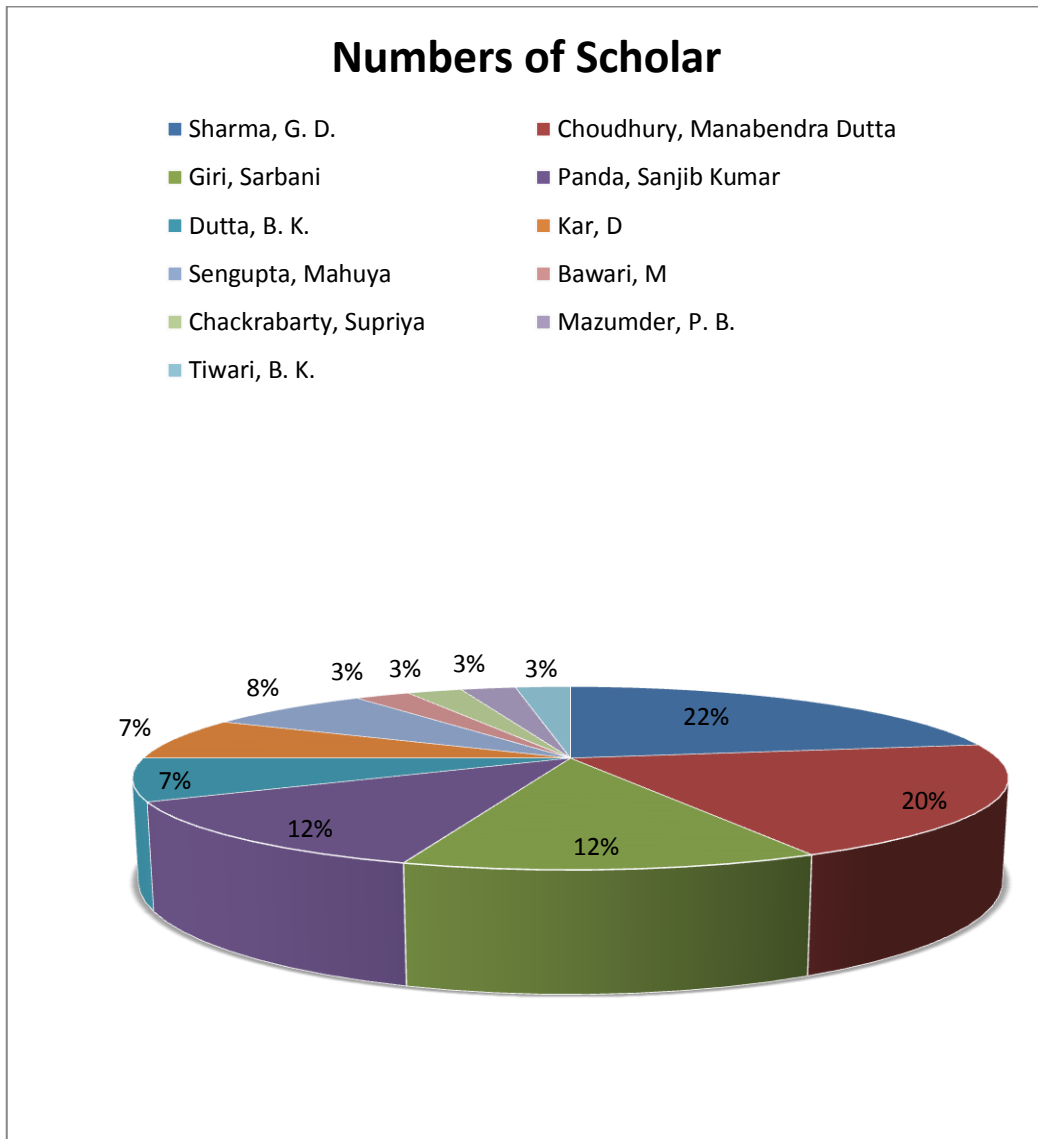


Figure 4.3 Supervisor Wise Theses Submission

The Figure 4.3 illustrates the supervisor wise theses submission in the School of Life Sciences. It is revealed from the above figure that highest numbers of theses submitted under the supervisor Dr. G. D. Sharma (22%). The lowest number (1) of thesis was submitted under 4 supervisors, that include M. Barwari, Supriya Chackrabarty, P. B. Mazumdar and B. K. Tiwari.

#### 4.2.6. Thesis Wise Citations

The Table 3.6 represents the number of citations appended at the end of each thesis. All the these were numbered as per their year of submission serially for fact analysis through the application of bibliometric methods.

Table 4.6 Theses Wise Number of Citations

| Sl. No. | Thesis No. | Number of Citations | Cumulative No Citation |
|---------|------------|---------------------|------------------------|
| 1       | T01        | 355                 | 355                    |
| 2       | T02        | 221                 | 576                    |
| 3       | T03        | 325                 | 901                    |
| 4       | T04        | 703                 | 1604                   |
| 5       | T05        | 304                 | 1908                   |
| 6       | T06        | 245                 | 2153                   |
| 7       | T07        | 248                 | 2401                   |
| 8       | T08        | 253                 | 2654                   |
| 9       | T09        | 151                 | 2805                   |
| 10      | T10        | 140                 | 2945                   |
| 11      | T11        | 157                 | 3102                   |
| 12      | T12        | 267                 | 3369                   |
| 13      | T13        | 152                 | 3521                   |
| 14      | T14        | 102                 | 3623                   |
| 15      | T15        | 63                  | 3686                   |
| 16      | T16        | 204                 | 3890                   |
| 17      | T17        | 364                 | 4254                   |
| 18      | T18        | 242                 | 4496                   |
| 19      | T19        | 96                  | 4592                   |
| 20      | T20        | 206                 | 4798                   |

| <b>Sl. No.</b> | <b>Thesis No.</b> | <b>Number of Citations</b> | <b>Cumulative No Citation</b> |
|----------------|-------------------|----------------------------|-------------------------------|
| 21             | T21               | 274                        | 5072                          |
| 22             | T22               | 222                        | 5294                          |
| 23             | T23               | 122                        | 5416                          |
| 24             | T24               | 232                        | 5648                          |
| 25             | T25               | 214                        | 5862                          |
| 26             | T26               | 186                        | 6048                          |
| 27             | T27               | 235                        | 6283                          |
| 28             | T28               | 504                        | 6787                          |
| 29             | T29               | 212                        | 6999                          |
| 30             | T30               | 336                        | 7335                          |
| 31             | T31               | 220                        | 7555                          |
| 32             | T32               | 196                        | 7751                          |
| 33             | T33               | 197                        | 7948                          |
| 34             | T34               | 286                        | 8234                          |
| 35             | T35               | 125                        | 8359                          |
| 36             | T36               | 140                        | 8499                          |
| 37             | T37               | 365                        | 8864                          |
| 38             | T38               | 500                        | 9364                          |
| 39             | T39               | 429                        | 9793                          |
| 40             | T40               | 219                        | 10012                         |
|                | <b>Total</b>      | <b>10012</b>               | <b>10012</b>                  |

Figure 3.4 depicts the total number of citations present in each thesis. It is observed that the highest number of citation 703 is appended in the thesis number T04 followed by 504 numbers of citations present in thesis number T28 and 500 numbers of citation found in the thesis number T39. The 63 and 96 numbers of citations were found in the theses number T14 and T19 respectively which are least as compared to others.



Figure 4.4. Thesis wise No. of Citations

### **4.3. CONCLUSION**

In this chapter a brief description about the School Life Sciences, Assam University Silchar was given. The details of the research outputs during the period 1996 to 2012 from different departments under School of Life Sciences were represented with tables and charts. It is revealed that the scholars in the School Life Sciences are actively involved in research activity by taking diversified topic. The research trend is increasing with more number of research guide and more number of research scholars.