1. Name of the Department: PHARMACEUTICAL SCIENCE
2. Year of establishment: 1951
3. Is the Department part of a School/Faculty of the university? Constituent college of Andhra University and Faculty of Pharmaceutical Sciences
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
   U.G (B.Pharm), P.G-M.Pharm in Six Specializations and Pharm D (P.G.), Ph.D
5. Interdisciplinary programmes and departments involved
6. Courses in collaboration with other universities, industries, foreign institutions, etc.
   Alcorn State University (USA), Indian Institute of Chemical Technology (Hyderabad), King George Hospital, Visakhapatnam.
7. Details of programmes discontinued, if any, with reasons
   Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System
   Semester end with continual assessment
9. Participation of the department in the courses offered by other departments
   Food, Nutrition and Dietetics Department
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

<table>
<thead>
<tr>
<th>Designation</th>
<th>Actual (including CAS &amp; MPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Assistant professors</td>
<td>05</td>
</tr>
<tr>
<td>Others</td>
<td>03</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualification</th>
<th>Specialization</th>
<th>No. of Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. D Gowri Sankar</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Analysis &amp; Quality Assurance</td>
<td>30</td>
</tr>
</tbody>
</table>

Andhra University, Visakhapatnam
<table>
<thead>
<tr>
<th>Name</th>
<th>Qualification</th>
<th>Specialization</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. B. Ganga Rao</td>
<td>M. Pharm. Ph.D. (India) Ph.D. (UK)</td>
<td>Pharmacognosy and Phytochemistry</td>
<td>20</td>
</tr>
<tr>
<td>Dr. J. Vijaya Ratna</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Technology</td>
<td>32</td>
</tr>
<tr>
<td>Dr. P. Rajeswara Rao</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmacology</td>
<td>29</td>
</tr>
<tr>
<td>Dr. K.V. Ramana Murthy</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Technology</td>
<td>29</td>
</tr>
<tr>
<td>Dr. Y. Rajendra Prasad</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Chemistry</td>
<td>20</td>
</tr>
<tr>
<td>Dr. A. Annapurna</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmacology</td>
<td>20</td>
</tr>
<tr>
<td>Dr. V. Girija Sastry</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Chemistry</td>
<td>07</td>
</tr>
<tr>
<td>Dr. G. Girija Sankar</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Biotechnology</td>
<td>07</td>
</tr>
<tr>
<td>Dr. K. Eswar Kumar</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmacology</td>
<td>07</td>
</tr>
<tr>
<td>Dr. A.K.M. Pawar</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Analysis &amp; Quality Assurance</td>
<td>07</td>
</tr>
<tr>
<td>Dr. P. Sailaj</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Technology</td>
<td>07</td>
</tr>
<tr>
<td>Dr. M. M. K. Kumar</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmaceutical Chemistry</td>
<td>06</td>
</tr>
<tr>
<td>Dr. B. Veera Raghavulu</td>
<td>M. Pharm. Ph.D.</td>
<td>Pharmacy Practice</td>
<td>1</td>
</tr>
</tbody>
</table>

12. **List of senior Visiting Fellows, adjunct faculty, emeritus professors**
   Nil

13. **Percentage of classes taken by temporary faculty**
   Pharm D – 22%, B.Pharm – 10%

14. **Programme-wise Student Teacher Ratio**
   UG – 1:15, PG – 1:15

15. **Number of academic support staff (technical) and administrative staff**
   23

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

   **Pharmaceutical Technology**
   - Development and evaluation of New formulation excipients from natural sources
   - Pharmacoeconomics and Outcomes research
   - Preparation and evaluation of Novel drug delivery system for TB

   **Pharmacology**
   - Evaluation of Anti-inflammatory, Anti-oxidant and hepatoprotective activity of medicinal plants
   - Studies on Pharmacokinetic and Pharmacodynamic drug interactions of antidiabetic drugs
   - Evaluation of cerebroprotective, cardioprotective and anticancer activities of bioflavonoids and other agents, Screening of diabetes and Prediabetes.
Pharmaceutical Analysis

Studies on Impurity profiling of drugs and formulations
Development of analytical and bioanalytical methods for drugs and formulations

Pharmaceutical Chemistry

Synthesis, characterization and biological evaluation of various drugs from ocean
Synthesis, characterization and biological evaluation of Chalcones and their derivatives and applications of CADD.

Pharmacognosy and Phytochemistry

Phytochemical and pharmacological evaluation of medicinal plants
Formulation development of herbal drugs

Pharmaceutical Biotechnology

Screening and isolation of Marine microorganisms producing bioactive metabolites, enzymes, bio surfactants etc.
Bioremediation of industrial waste by using microorganisms

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. :

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the Research Project Scheme</th>
<th>Funding Agency</th>
<th>Cost (Rs.)</th>
<th>New Scheme or Revision of old Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AICTE</td>
<td>15.0 Lakhs</td>
<td>2012-13</td>
</tr>
<tr>
<td>2.</td>
<td>Prof. J.Vijaya ratna WOS-A, DST project on “Development of NSAIDs loaded mucoadhesive nanoparticle for sustained ocular drug delivery”</td>
<td>DST</td>
<td>23.10 Lakhs</td>
<td>October 2012-2015</td>
</tr>
<tr>
<td>3.</td>
<td>Prof P.Rajeswara Rao “Pharmacological screening and evaluation of naturally occurring selected bioflavonoids against Phenytoin induced adverse drug effects and their therapeutic applications,”</td>
<td>AICTE, (RPS)</td>
<td>17.80 Lakhs</td>
<td>2013 to 2015</td>
</tr>
<tr>
<td>4.</td>
<td>Prof.Y.Rajendra Prasad Up gradation of Pharmaceutical Chemistry lab to suite current teaching and research scenario</td>
<td>AICTE-MODROB</td>
<td>16.00 lakhs</td>
<td>2013-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AICTE-MODROB</td>
<td>16.75 Lakhs</td>
<td>2013-2014</td>
</tr>
<tr>
<td>6.</td>
<td>Dr V.Girija Sastry Chemical Examination and Biological Evaluation of Mangrove Lichens</td>
<td>MOES</td>
<td>25 Lakhs</td>
<td>2013-2016</td>
</tr>
</tbody>
</table>
| 7 | Dr. A.K.M. Pawar,  
1. Impurity profiling of anastrazole and capecitabine and effect of impurities on their pharmacological activities.  
2. Impurity Profiling of Anticancer Drugs Pazopamib, Nitafinib, Gemcitabine, Ironotecan and effect of Impurities on their Pharmacological Activity | AICTE  
RPS | 21.0 Lakhs | 2013-15 |
| --- | --- | --- | --- | --- |
| 8 | Dr. K. Eswar Kumar  
1. Studies on the role of Incretins (Gastrointestinal hormones) in herbal drug induced insulin release in the treatment of type II diabetes  
2. Isolation, Identification and In vitro / In vivo Pharmacological Evaluation of Active constituents from Selected Indian medicinal plants for Antioxidant and DPP IV inhibitor activities  
3. Minority Health International Research Training (MHIRT programme) under the MoU between Andhra University, Visakhapatnam and Alcorn State University, USA.  
4. Isolation, characterization and phytochemical screening of Indian medicinal plants for their activity against diabetes induced sexual dysfunctional in male wistar rats | AICTE, (RPS)  
UGC (MRP)  
NIH, USA  
AICTE | 20.0 Lakhs  
12.35 Lakhs  
$2400  
17,45000 | 2012-15  
2012-15  
2010-14  
2014-2016 |

18. **Inter-institutional collaborative projects and associated grants received**  
National collaboration : NAIP, MOES  
International collaboration: ALCORN STATE UNIVERSITY  

19. **Departmental projects funded by ICAR, DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received**  
- Number of projects carried out by the Faculty from 2008-2013 : 32  
- Funding Agencies- APCOST, UGC, AICTE, MOES, DSIR, DST, DBT, ICMR, NAIP/WHO, NIH (USA).  
- Total grants received from various funding agencies in the last 5 years: 574.66 lakhs  

20. **Research facility / centre with**  
state recognition : Yes  
national recognition : Yes  
international recognition : Yes  

21. **Special research laboratories sponsored by / created by industry or corporate bodies**  
MoES, NAIP, DST-FIST  

22. **Publications**  
Number of papers published in peer reviewed journals (national / international) : 256
23. Details of patents and income generated

PATENTS OF PROF. K.V. RAMANA MURTHY


PATENTS OF Y. RAJENDRA PRASAD

- Title of the invention: Synthesis of piperazine nucleus containing novel chalcone derivatives and their antihistaminic activity
- Name of the applicant: Abdul Rahaman Shaik
- Name of inventors: Prakash Katakam
- Rajendra Prasad Y
- Phanikumar kola
- Date of filling the application: 20/06/2011
- Application number: 2076/CHE/2011 A
- Publication date: 28/12/2012

PATENTS OF PROF. J. VIJAYA RATNA

1. Date of filing- 17-07-2008  
   Date of publication-22-01-2010  
   Inventors- Setti mogallapalli and J.Vijaya Ratna  
   Title- Novel controlled release tablet of poorly soluble drug.  
   Patent No.- 1720/CHE/2008 A  
   Patent awaiting examination

2. Date of filing- 29-12-2008  
   Date of publication-09-07-2010  
   Inventors- P.Sabitha and J. Vijaya Ratna  
   Title - Controlled Release Formulations of Anti-tubercular Drugs using different Biodegradable Natural Polymers.  
   Patent No. 3305/CHE/2008  
   Status- patent awaiting examination

3. Date of filing- 13/08/2010  
   Date of Publication- 22/06/2012  
   Inventors- C.Raghunadhagupta and J. Vijaya Ratna  
   Title- Time and pH Dependent Colon Specific Sustained Release Pharmaceutical Composition for once-a-day Therapy for the treatment of Rheumatoid Arthritis.  
   Patent No.- 2432/CHE/2010  
   Patent awaiting examination
4. Date of filing- 27/02/2014
Date of Publication- still awaiting
Inventors- Ch. Ram Venkatesh, K. Lakshmi Sirisha and J. Vijaya Ratna
Fast dissolving sublingual film of Tapentadol chloride.
Patent No.- 950/CHE/2014
Patent awaiting examination

24. Areas of consultancy and income generated:
Faculty of the college are doing honorary consultancy work for small scale pharmaceutical and cosmetics industries. The college is having MOUs with various organizations - Krishna IVF clinic, Suraksha Pharma, Natco Pharma, Gland Pharma, Aptitude Laures and King George Hospital.

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Prof. K. V. Ramana Murthy as part of “International Study and Research Grant” visited USA during November 2, 2006-January 1, 2007 and underwent training in the design and conduct of bioequivalence clinical trials at M/s. Mallinckrodt Inc., Tyco Healthcare, St. Louis, USA. Also visited M/s. Kalypsys Inc., San Diego, USA and had an opportunity to see the first hand drug screening technologies using robotic ultra high throughput screening systems, 1536 well plate technique etc.

Dr. B. Veera Raghavulu completed Clinical Pharmacy training in Children’s Hospital of Eastern Ontario, Ottawa, Canada with sponsorship from International Pharmacy Federation for a period of 1 month during September and October’ 2013.

26. Faculty serving in National committees, Editorial Boards, International committees

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

28. Student projects
percentage of students who have done in-house projects including inter-departmental projects - 85%
percentage of students doing projects in collaboration with other universities/industry / institute - 15%

29. Awards / recognitions received at the national and international level by
Faculty:
State Govt. best teacher awardees:
Prof. E. Venkata Rao, Prof. P. Ellaiah
Prof. KPR Chowdary, Prof. B.Ganga Rao
AP Scientist Award 2007: Prof. KV Ramana Murthy
Best Researcher award IDMA : Prof. KPR Chowdary
IPA Fellowship Award: Prof. K.P.R. Chowdary
Students: M.Pharm student Manikya Lakshmi represented India in international cultural event held in China in 2011.
30. Seminars/Conference Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

Prof. P. Rajeswara Rao - Secretary for National seminar on “RECENT ADVANCES IN PHARMACOLOGY RESEARCH” organized by A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 31-07-2009.

Prof. Y. Rajendra Prasad - organized National seminar on Recent advances in drug design, discovery and development organized by A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 28-02-2009.

Prof. G. Girija Sanakr - organized National Lectures in Pharmaceutical Biotechnology organized by A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 10-04-2010. (Funding Agency- UGC)

Prof. J. Vijaya Ratna organized National Seminar on recent trends in Pharmaceutical Sciences, organized by A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 30-12-2010.


Prof. B. Ganga Rao organized a two day workshop on “Development of Industry and Profession Oriented Curriculum for B.Pharm and M.Pharm Programmes” at A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 09-03-2013-10-03-2013.

Prof. S. Ganapaty organized a National Seminar on Recent Trends in Pharmaceutical Analysis National at A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 30-08-2011.

Dr. M. Murali Krishna Kumar - Conducted a workshop on “Spectroscopy in the structure elucidation of organic molecules” at Sai Siddhardha Pharmacy College, Nuzvid. 12th -13th July 2011.

Dr. M. Murali Krishna Kumar - Conducted a summer workshop for students of Andhra University on “Hands on training on latest tools in CADD” 5th May 2011 to 4th June 2011; Andhra University (Funding Agency- IPA, Visakhapatnam branch).

Dr. M. Murali Krishna Kumar - Conducted workshop on “principles and practice of rational drug design in teaching and research” for M. Pharmacy students, research scholars and faculty of affiliated pharmacy colleges on 28th and 29th December 2013

31. Code of ethics for research followed by the departments:

Animal Ethical Committee for conducting animal experiments
Institutional Ethical Committee for research on human volunteers
Necessary guidelines relating to - ICH, WHO, IRG

32. Student profile programme-wise:

<table>
<thead>
<tr>
<th>Name of the Programme (refer to question no. 4)</th>
<th>Selected</th>
<th>Pass percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>B.Pharm (UG)</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>M.Pharm (PG)</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>Pharm D (UG)</td>
<td>13</td>
<td>17</td>
</tr>
</tbody>
</table>
33. **Diversity of students**

<table>
<thead>
<tr>
<th>Name of the Programme (refer to question no. 4)</th>
<th>% of students from the same university</th>
<th>% of students from other universities within the State</th>
<th>% of students from universities outside the State</th>
<th>% of students from other countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.Pharm (UG)</td>
<td>85</td>
<td>15</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>M.Pharm (PG)</td>
<td>85</td>
<td>15</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Pharm D (UG)</td>
<td>85</td>
<td>15</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PhD (Full-time)/Part time</td>
<td>85</td>
<td>15</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

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

21

35. **Student progression**

<table>
<thead>
<tr>
<th>Student progression</th>
<th>Percentage against enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG to M.Pharm</td>
<td>25</td>
</tr>
<tr>
<td>M.Pharm to Ph.D.</td>
<td>15</td>
</tr>
<tr>
<td>Ph.D. to Post-Doctoral</td>
<td>2</td>
</tr>
<tr>
<td>Employed</td>
<td>70</td>
</tr>
<tr>
<td>Campus selection</td>
<td>90</td>
</tr>
<tr>
<td>Other than campus recruitment</td>
<td>10</td>
</tr>
<tr>
<td>Entrepreneurs</td>
<td>5</td>
</tr>
</tbody>
</table>

36. **Diversity of staff**

<table>
<thead>
<tr>
<th>Percentage of faculty who are graduates of the same university</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>from other universities within the State</td>
<td>1</td>
</tr>
<tr>
<td>from universities from other States</td>
<td>1</td>
</tr>
</tbody>
</table>

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

2

38. **Present details of departmental infrastructural facilities with regard to**

a) Library – Yes
b) Internet facilities for staff and students - Yes
c) Total number of class rooms - 12
d) Class rooms with ICT facility - 4
e) Students’ laboratories - 12
f) Research laboratories - 8
39. **List of doctoral, post-doctoral students and Research Associates**

3

40. **Number of post graduate and research students getting financial assistance**

35

41. **Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology**

Pharm D was a new course which was started in 2010. This course was started as there was consensus at a national level that pharmacy profession must make forays into the healthcare field with much more emphasis. In response to the national yearning to contribute actively to the healthcare field, Pharmacy Council of India introduced the Pharm D course with syllabus and regulations that are identical all over the country. Hence Pharm D course was started in order to train young pharmacy graduated to play the role of clinical pharmacist in modern hospitals.

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, the College obtains feedback on curriculum and on teaching – learning – evaluation from faculty of AU College of Pharmaceutical Sciences as well from faculty of affiliated colleges. A workshop was held on March, 2013 to interact with faculty regarding curriculum and teaching – learning - evaluation. Based on the proceedings of this workshop, the syllabi and regulations of B.Pharm and M.Pharm were modified in 2013.

b) **students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?**

Yes, feedback is taken from the students on staff performance, curriculum and teaching – learning-evaluation both in a formal and informal manner. Informal level feedback is utilized to modify teaching learning process. Formal level feedback is utilized by the university to place on record the performance of the college.

c) **alumni and employers on the programmes offered and how does the department utilize the feedback?**

Yes, this feedback is utilized to enhance the performance of the college.

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

1. C. Gopala Krishna Murthy, Former Director, Drugs Control Administration, Andhra Pradesh.
2. Dr. M. Venkateswarlu, Former Drugs Controller General of India.
3. V. Chowdary Nannapaneni, Managing Director, Natco Laboratories, Hyderabad.
4. R. S. Prasad, Former Vice-President, Dr. Reddy’s Laboratories and Consultant.
5. Venkat Jasti, Chairman, Suven Laboratories, Hyderabad.
6. Gokaraju Ganga Raju, Managing Director, Laila Impex, Vijayawada.
7. Rao. V. Vaddamudi, President, Indian Pharmaceutical Association
8. Dr. Krupakar Paul Tadikonda – CEO, Eminent Services Corporation, USA.
9. Mr. P. Nagabhuashanam – Director, AP Drugs Control Administration
10. Dr. T.V.Narayana, Chairman, IPA Education Division and Secretary, Indian Pharmaceutical Congress Association

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

- Prof. B.Ganga Rao organized a National workshop - A Holistic Approach to Identify Bioactive Molecules from Natural Origin at A.U College of Pharmaceutical Sciences, Andhra University, Visakhapatnam on 21 -11 - 2011 to 4 – 12 - 2011. (Funding Agency- NAIP/ICAR)
- Dr. M.Murali Krishna Kumar - Conducted a workshop on “Spectroscopy in the structure elucidation of organic molecules” at Sai Siddhardha Pharmacy College, Nuzvid. 12th -13th July 2011.
- Dr. M.Murali Krishna Kumar - Conducted a summer workshop for students of Andhra University on “Hands on training on latest tools in CADD" on 5th May 2011 to 4th June 2011; Andhra University (Funding Agency- IPA, Visakhapatnam branch).
- Dr. M.Murali Krishna Kumar - Conducted workshop on “principles and practice of rational drug design in teaching and research” for M. Pharmacy students, research scholars and faculty of affiliated pharmacy colleges on 28th and 29th December 2013.

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

Interactive Classroom teaching, projects, practical classes, project internships and training of students in the wards of the King George Hospital.

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

By conducting regular sessional examination, evaluation of practical’s and quiz competitions among students.

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

Prof. B.Ganga Rao –Honorary President, Progressive Organization for Rehabilitation, Training, Education and Research,
Blood donation camps, Health Screening camps, Patient Counselling at Andhra University dispensary, Prof.K. V. Ramana Murthy and Prof. J. Vijaya Ratna – MYBO, Dr. K. Eswar Kumar – AAMTK trust, Vizayanagaram,

48. Give details of “beyond syllabus scholarly activities” of the department

Student seminars conduction, teacher student seminars, participation in ecompetitions, participation in POWER activities, paper presentation, poster presentation.

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

ISO 9000 certified institution, Pharmacy Council of India

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

The college plays a big role in generating new basic and applied knowledge by its active participation in research. Every year significant number of PhD’s and research papers are produced. The college has nearly 12 patents in process. It has MoUs with King George Hospital and many Pharmaceutical companies.
51. **Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.**

**Strengths**
- Industrial pharmacy unit houses some of the equipment needed to produce formulations
- The alumni of the college are in very good positions, both in India and in other countries.
- One alumnus of this college, Dr. Krupakar Paul Thadikonda donated to the college, a new building, along with furniture, and is also meeting the maintenance charges of the building. The total worth of this donation is more than four crores.

**Opportunities**
- To grow horizontally by encouraging its staff to attain greater heights in careers, teaching, research, professional bodies and in pharmacy networks. It can encourage its students to achieve better within the college and among different colleges and across the country.
- To grow vertically and expand its scope, by going full scale into clinical pharmacy. It can start Pharm D (post baccalaureate) and M. Pharm in Pharmacy practice.
- Organizing medical camps, blood donation camps; patient counselling centres and free health screening camps.
- The faculty can do research better provided they have access to more sophisticated equipment and better laboratories.

**Challenges**
- The emergence of a very high number of pharmacy colleges, many of which have sub-stranded teaching-learning process, is a major threat to the progress of established centres like AU college of Pharmaceutical sciences. The students who emerge from these institutes compete for positions in the industries and often succeed in getting them, to the detriment of our students.
- There is continuous turbulence in the society for the last four years and especially in the last one year. This instability is a great impediment to the teaching learning process.
- A number of interdisciplinary sectors (biochemical engineering, M.S. in Pharmaceutical sciences) have emerged in the society which competes for the same positions as our M. Pharm students. This undermines the chances of our students.
- Industry seems to be somehow trying to overcome the drugs & cosmetics act, which lays down that every production division in every production division in every pharmaceutical industry, should be headed by a pharmacy graduate.

52. **Future plans of the department.**
- Significant contribution to research in pharmaceutical sciences. A grant of Rs 84 lakhs has been received from different sources like UGC, DST, AICTE, and this will be spent on purchasing sophisticated equipment and in carrying out useful research.
- Utilizing the grant of Rs 41 lakhs, given by UGC Assistance on Innovative Programme, to start M.Pharm. (Pharmacy Practice) course.
- Introducing Pharm D (Post Baccalaureate) course
- Enhancing the scope of activities being carried out in our Pharmacy Practices Room in KGH, by introducing activities like Adverse Drug Reaction Monitoring and providing Drug Information to Doctors.
Andhra University, Visakhapatnam

- Enhancing the scope of our community reach activities by organizing lectures on radio stations, medical camps in villages, patient counselling in selected areas in Visakhapatnam, blood donation camps and rallies with focus on health care in the city.
- Organizing a better industry academia interaction, by requesting industries to give short term training/workshops to our teachers and by taking our students on visits to industries.
- Enhancing community oriented research such as Outcomes Research.
- Encouraging faculty to attend seminars/workshops at National and International Level.
- Attempting to hold the prestigious 66th Indian Pharmaceutical Congress at Andhra University.
- Strengthening our role in professional associations.
- Requesting the University authorities to recruit the vacant faculty positions during this academic year.