

# **HKCP ALUMNI BULLETIN**

## **Issue-IX, MARCH- 2013**

### **From the Editors Desk:**

Dear Alumni,

A great pleasure again in releasing the ninth issue of Alumni bulletin. The National seminar was celebrated on 9<sup>th</sup> February sponsored by SHIMADZU Analytical India Ltd. Students could understand the basics, innovative techniques and also limitations of various analytical instruments. Dr. Nandakumar Bhilare, Head-Quality Operations, Rubicon Research Pvt. Ltd was the chief guest. In his inaugural speech he explained students about the need of learning various advanced instruments to better understand the chemical behavior of the drugs. The poster completion was based on various analytical techniques. The annual day with inauguration of annual magazine was celebrated on 15 February and the chief guest was *suhasi* parikh. Executive Director, S.Zhaveri *Pharmakem* Pvt Ltd, Mumbai.

In 'Success Secret Series' the present issue carries an article- Careers in Pharmacy by Mr Nitin Narkhede, Lecturer - Department of Pharmaceutical Chemistry. The article explains about the various opportunities for pursuing higher studies abroad after completing B.Pharm.

The research updates section includes the news that gives us great hope that a cure for HIV in children is possible and could bring us one step closer to an AIDS-free generation.

As ever we always work towards giving you more and more of news about college, do send us your views and suggestions.

With best wishes

**Sushruta Mulay.**

**President- Alumni Association**

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## Campus News:

- **National Seminar was celebrated on 9 February.** ON advances in instrumentation and applications. Many activities such as poster presentation, oral presentation, model making, essay competition, Debate competition. The chief guest was Dr. Nandakumar Bhilare, Mumbai.
- **Poster Competition was organized on National Seminar Day on the theme- Analytical Methods.** 46 students participated for the poster competition, which were evaluated by Dr. Supriya Mahajan, Professor, C. U. Shah College of Pharmacy; Dr. Vaishali Shirsat, Associate Professor, Bombay College of Pharmacy; Dr. Rakesh Somani, HOD, Associate Professor, VES College of Pharmacy; Mrs. Vineeta Khanvilkar, Associate Professor, BVP's College of Pharmacy, Navi Mumbai.
- **Convocation ceremony was celebrated on 23 February for batch 2012 students.** The programme was graced by Chief Guest Dr. Ajit Bhoje, Senior research scientist Unichem laboratories Ltd.

**Photo Gallery:**





Convocation Ceremony Batch- 2013



Inauguration of magazine – Impulse 2013

# Success Secrets Series:

Article by: Mr. Nitin Narkhede

## CAREERS IN PHARMACY

Contrary to popular perception, a career in pharmacy is not only challenging but lucrative. Traditionally a qualification in Pharmacy was associated with a lifetime career as a chemist. Knowledge and training in Pharmaceutics offers a wide array of career options to the students. The programme is no longer confined to the laboratories or classrooms and goes beyond the curriculum. The career options after the programme are also immense.

### Career options after completing B Pharm or M Pharm

#### 1. Teaching -

B Pharm - First Class students are eligible to teach as lecturers in the D Pharm programme, whereas M Pharm, First Class students can get a lecturer's job in pharmacy degree colleges. It takes about 5 years to reach the grade of Sr. lecturer and about 10 years to become Assistant Professor and about 12 years to become Professor or a Principal of a college. While in teaching profession they can do research in pharmaceutical field and strive to become a well-known Research Scientist.

#### 2. Pharmacist –

Being in the health-related field, the B Pharm graduate can be Health-system Pharmacist or Hospital Pharmacist or Community Pharmacist

#### 3. Quality Assurance Health Manager –

The Pharmacy graduate can play an important role in the development of clinical care plans, can investigate adverse medication events and in some cases can suggest preventive measures. He can play a key role in spreading awareness amongst the people about AIDS and the preventive measures to be taken.

#### 4. Medical Transcription –

The B Pharm graduate can work with medical practitioners to maintain the patient treatment history, the drug to which he/she is allergic etc.

#### 5. Analytical Chemist of Quality Control Manager –

The pharmacy graduate can play a crucial role in controlling product quality. The drug and the Cosmetics Act (1945), Rules 71(1) and 76(1) says that the manufacturing activity should be taken up under the supervision of a technical man whose qualification should be B Pharm, B Sc, B Tech or medicine with Bio-Chemistry.

#### 6. Sales and Marketing –

Ambitious achievers with pleasant personality and good communication skills can opt for the job of Medical Sales Representative. The companies prefer pharmacy graduates for this job, as they have a good knowledge about the drug molecules, their therapeutic effects and the drug – drug interactions.

#### **7. Clinical Research –**

B Pharm/ M Pharm degree holders can take up career in clinical research. The human testing phase is called the clinical trial. A pharmacist can work as clinical research associate or clinical pharmacist and can rise to the position of project manager. The clinical research associate plays an important role of monitoring and overseeing the conducts of clinical trials, which are conducted on healthy human volunteers. They have to see that the trials meet the international guidelines and the national regulatory requirements.

#### **8. Data Manager –**

A pharmacist can seek employment as “Data Manager” to store the data in the computer and process it using software developed for the purpose.

#### **9. Regulatory Manager –**

A pharmacy graduate can work as “Regulatory Manager”(RM) in companies and contract research organisation. As an RM he has to oversee regulatory documentation such as Clinical trial approval permission, marketing approval permission etc.

#### **10. Career in Regulatory bodies –**

A Pharmacist can be absorbed in the Regulatory bodies like Food and Drug Administration. Pharmacist having experience in clinical trial centres can also work as an inspector to inspect the clinical trial process. For these government jobs the student needs to appear and pass the MPSC examination.

11. Biotechnology is a fast growing branch and the B Pharm graduates can opt for post graduate diploma programme in Bioinformatics.

12. They can handle the job of monitoring the conduct of clinical trials that are conducted on human volunteers. It is their responsibility to see that the clinical trials are carried out as per the international guidelines.

13. The B Pharm Science programme is considered as a paramedical programme. The B Pharm Science graduates can therefore work in hospitals as hospital pharmacist or community pharmacist.

14. Since they have a good knowledge of therapeutic effects of drugs and that of drug-drug interaction, they are more suitable for a job in clinical research. They can opt for the post of clinical pharmacist or clinical research associate in a clinical research laboratory.

#### **Further studies in India:**

To improve the job opportunity and for better placement, the value-added and career-focused programmes offered by the different institutes are as under: -

1. National institute of pharmaceutical education and research, NIPER, Mohali, Chandigarh
2. Institute of chemical technology, Mumbai
3. BITS pilani, Ranchi, Goa, Hyderabad,
4. Vellore institute of technology, Chennai
5. Manipal college of pharmaceutical sciences Manipal
6. Bombay college of pharmacy, Mumbai
7. K M Kundanani college of pharmacy, Mumbai, Banaras Hindu university, Varanasi

### **Further studies abroad:**

One may even consider venturing into pursuing higher studies abroad in order to make their careers even more lucrative and challenging.

**1. USA** - One may consider opting for pursuing higher studies abroad. After graduation from a recognised university, the students can appear for their GRE (Graduate Record Examination) and TOEFL (Test of English as a Foreign Language) for entry into foreign universities. US universities offer assistanceship for undergraduate programmes. Students have to apply well in advance since visa procedure also takes time; The US visa takes around four weeks and a visa to Australia takes around six weeks. In USA they can give “Pharmacy Equivalent Examinations.” For example FPGEE (Foreign Pharmacist Licensure Examination) followed by internship and then finally NAPLEX (North American Pharmacist Licensure Examination) both these examination can be cleared in about one year and there one can practice retail pharmacies, which are expanding very fast in USA. In USA M Pharm plus Ph.D. is essential to enter industry or academic institution.

### **2. Australia –**

Indian students know most of the universities in USA. Very few know and try for the postgraduate studies in Australia. University of the South Australia is the largest university in the South Australia. There are about 300 programmes and about 10,000 International students are studying in Univ. SA. It offers Degree in medical radiation, occupational therapy, pharmacy, physiotherapy, environmental toxicology, etc. It is top ranking university for innovative research linked to industry.

### **3. Ireland –**

Ireland is another ideal destination for students. There are about 400 students for postgraduate studies. The standard of universities in Ireland is similar to UK universities Ireland is a gateway to Europe with no racism problems. Cost of the education is much less than in UK & US. Ireland is amongst the top five producers of pharmaceuticals and fine chemicals. Contrary to popular perception, a career in pharmacy is not only challenging but lucrative as well. No longer in a D Pharm/ B Pharm qualification looked at as a “fallback” option for MBBS rejects, instead, one can witness a breed of young, ambitious minds that wishes to reach newer heights in the field of Pharmaceuticals.

## Research updates

For the first time, a person – a baby aged 2½ – has reportedly been "cured" of HIV infection through treatment with antiretroviral drugs. Although the claim raises the possibility of eliminating HIV infection in millions of babies, questions have been raised as to whether this particular child was genuinely infected in the first place, and whether the "cure" will be permanent. Pregnant women with HIV usually receive antiretroviral drugs that reduce the risk of transmission to their baby from 40 to 5 per cent. If the baby does acquire HIV, he or she will be given one antiretroviral drug.

In this case, the mother's HIV infection was discovered too late in pregnancy for her to receive treatment to make transmission less likely. So, 30 hours after the baby was born, doctors led by Hannah Gay at the University of Mississippi Medical Center in Jackson decided to give the baby a more aggressive treatment. Gay put the baby on three standard antiretroviral drugs. She continued the treatment for 18 months, during which time the baby was supposed to have tested positive for HIV. Then the doctors lost contact with mother and child. When they reappeared months later, doctors were astonished to find that the infant had no detectable levels of the virus, even though she was no longer taking the drugs. This is surprising since people with HIV need to take medication for life because the virus hides away in cells around the body, including in CD4 white blood cells, and re-emerges if drug treatment is discontinued.

"For 10 months she was off treatment, yet there was no trace of the virus," said Deborah Persaud of Johns Hopkins University in Baltimore, Maryland, who presented the results at a conference on [Retroviruses and Opportunistic Infections](#) in Atlanta, Georgia this week. "The child remains off antiretroviral therapy, and this sets the stage for a pediatric cure agenda."

### Time will tell

Some researchers say the claims are premature, however. "Was the child really infected, and is this 'cure' going to be sustained?" says John Frater of the University of Oxford. "Only time will tell if the virus will eventually come back," he says. "They've used very sophisticated tests to look for virus in the blood, but it can also hide elsewhere in the body." "It's been very irresponsible reporting so far," says David Margolis of the University of North Carolina in Chapel Hill. "I've not seen the actual data yet," he says, adding that he believes the child could be a "super-controller", an individual with natural resistance to HIV. Super-controllers, [discovered in the early 2000s](#), have a genetic fault in a white-blood-cell surface receptor called CCR5. Since HIV needs to latch on to this receptor to invade cells, super-controllers are protected from infection. It turns out that about 1 per cent of Europeans have this mutation. Only one person was previously reported to have been "cured" of HIV: a man from Germany who also had leukemia.



In 2007, [he received a bone marrow transplant from a super-controller](#). All his blood cells thereafter carried the faulty CCR5 receptor, which [effectively banished the virus from his body](#).

## **Experimental treatments**

Researchers are experimenting with therapies that use "[gene scissors](#)" to disable the genes that control the production of CCR5 receptors in a person's own blood cells. One person treated this way by a company called Sangamo Biosciences in Richmond, California, showed [promising results after three months](#) but normal treatment was resumed on ethical grounds. Another big hope is using a drug called vorinostat to [flush out dormant HIV from its hiding places](#) in the body, then kill it with antiretroviral drugs. Trials of this drug, including one led by Margolis, are ongoing. Following the World Health Organization's revised guidelines on preventing maternal transmission of HIV, several countries in Africa are now treating all mothers who are infected rather than just those whose CD4 cell count has fallen below 350 per millilitre of blood. A [report last week](#) from the US Centers for Disease Control and Prevention showed that in Malawi alone, this increased almost eightfold the number of pregnant mothers receiving antiretroviral drugs, although evidence is still being gathered on whether this reduces the rate of infection in babies.

If the new triple drug regime shows potential in further studies, it could help millions of infants. In sub-Saharan Africa alone, an estimated 300,000 infants acquired HIV infection from their mother in 2011.

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