



**MINUTES OF THE BRAINSTORMING MEETING ON INDUSTRY PLATFORM FOR  
BIOTECHNOLOGY AND LIFE SCIENCES**

A Brainstorming meeting to introduce and debate the concept of Industry Platform for Biotechnology and Life Sciences and to assess its worthiness was held on 3<sup>rd</sup> April 2008 at Hotel Leela Kempinski, Mumbai. The meeting was attended by the following:

**Department of Biotechnology (DBT)**

Dr. M.K. Bhan, Secretary

Mrs. Prachi Saroop, Director

**FICCI**

Sh. V.K. Topa, Advisor to Secretary General

Ms. Bishakha Bhattacharya, Additional Director

Sh. Navneet S. Tewatia, Assistant Director

**ABLE**

Dr. Shrikumar Suryanarayanan, Director General

**Industry**

As per list at **Annexure I**

2. Sh. V.K. Topa, Advisor to Secretary General, FICCI introduced the basic concept of Industry Platform and brought out its potential for the benefit of the country. He stressed upon the point that the academia partnered Industry Platform would be led by the industry in focused research areas and also encourage in creating links between academia and industry. The concept is based on European Technology Platform (ETP), but would be simpler to implement in India since there are no likelihood of any inter-country linkages. Adding to this Dr. M.K. Bhan, Secretary, DBT elaborated on the need to engage with the industry and work together through Public Private Partnerships (PPP). The Secretary also gave details of the current DBT schemes which are industry specific viz,

- i) SBIRI
- ii) BIBB
- iii) The first CRO in agriculture being created by ICRISAT

He mentioned that the Department of Biotechnology plans to earmark funds in the coming 5 years for the PPPs and underlined the proactive role of industry in fructification of such investments. He also highlighted the need for priority funding of projects that develop technologies capable of addressing the market demands. He elucidated the steps required to make the Platform operational. Dr. Bhan clarified to the participants on the need to create an appropriate functioning organization called the Industry Platform. He further explained that:

- A vision document would need to be prepared that would outline the roadmap for the Industry Platform.
- Next step would be the creation of the Strategic Research Agenda (SRA). This could be done by using the best minds available in the country and elsewhere in the world.
- The Platform would have to be set up by the industry itself. Important issues to be resolved would include the kind of arrangement that would work in Indian environment and the mechanism to drive the Industry Platform which will treat the members equitably. Final decision for funding a project would be with the Governing Body / Steering Committee of the Platform and the objectivity could be brought in by co-opting experts who are not Platform members.

3. He then summarized the important questions that required answers for a successful Industry Platform, namely its functioning, commitment of members to its success, observance to identified timelines and milestones etc. Secretary, DBT also brought out the need for training to handle Intellectual Property (IP) and details on various related issues concerning IP like IPR, code of conduct etc. He specifically indicated that DBT would only act as a facilitator for the Platform. The Department will provide various support measures such as for training, workshops, for tech-transfers etc.

4. The industry responded enthusiastically and agreed to identify the upcoming challenges of the next 5 years, engage in public private partnership as well as private-private partnerships. The industry appreciated that the biggest challenge would be the time frame and milestones in research. It was also agreed that the Industry Platform should look at generic issues, which affect industry and its competitiveness, and not get swamped by conflicting issues. There was an overwhelming agreement on setting up Industry Platform to enhance industry competitiveness on the global stage.

## 5. Sector-wise break-out session

There was a sector wise break-out session – Bio-Pharma, Agri Biotech, Industrial Biotech and Medical Devices. Each group pointed out the likely areas for a potential industry platform to adopt. Sector specific deliberation proceeds are detailed in **Annexure II**.

## 6. Action Points for setting up the Platform

The agreed action points for setting up of Industry Platform are as under:

- I. FICCI in consultation with DBT and the industry will formalize the launch of the Platform through following steps:
  - Prepare a document describing what the Platform is, its organizational structure and functions of the Governing Board and Steering Committees
  - Communicate the concept to the entire Biotech industry in the country.
  - Organise web based consultation and feedback mechanism on the Industry Platform document
  - Amplify the document based on feedback from the industry and other stakeholders.

The aforementioned actions are required to be completed by June 10th, 2008, in collaboration with the Industry and their active participation.

- II. Updation of website that has already been created with the document, meeting minutes and other discussions.
- III. Industry to respond actively in this consultation process.
- IV. Organise a meeting of Industry and Academicians to agree and finalise the Industry Platform document in the month of June 2008.
- V. Impose a nominal membership fee of Rs. 25000 / annum for the Industry Platform participants.
7. Meeting ended with a vote of thanks to and from the Chair.

## List of Industry Participants

1. Mr. Sanjeev Saxena CMD Actis Biologics Pvt. Ltd.
2. Mr. V.T. Gopinath VP - Strategic Business Units Actis Biologics Pvt. Ltd.
3. Dr. P.N. Venugopalan Actis Biologics Pvt. Ltd.
4. Mr Chandrakant L Rathi Managing Director Advanced Enzymes Technologies Limited
5. Dr. Rama Mukherjee Managing Director Ara Healthcare Pvt. Ltd. (AHL)
6. Mr. Biswanath Mazumdar Shaw GM Bejo Sheetal Seeds Pvt. Ltd.
7. Mr. Suresh O. Agrawal MD Bejo Sheetal Seeds Pvt. Ltd.
8. Dr. Nandkumar S. Kunchge Sr. Biotechnology Scientist Bejo Sheetal Seeds Pvt. Ltd.
9. Dr. Krishna Ella CMD Bharat Biotech International Ltd.
10. Mr. Durgaprasad Annavajjula Director-Technical Biovel Life Sciences Pvt.Ltd.
11. Mr. P. Sudhakera Naidu CMD Biovel Life Sciences Pvt.Ltd.
12. Dr. Ramavana Gururaja President - R&D Camson Biotechnologies Ltd.
13. Ms. Gita Sharma Head - Biotech R & D Claris Lifesciences Limited
14. Dr. Arun Bhatt President ClinInvent Research Pvt Ltd
15. Dr. Mrinalini Chaturvedi Medical Director Cryobanks International India
16. Dr. M.C. Gopinathan Director -R&D and IPRs, Technology (Global) EID Parry (I) Ltd
17. Mr. R. K. Prabhu Executive Director Embio Research Centre( a division of Emmellen Biotech Pharmaceuticals Ltd.)
18. Dr. A.G. Swaminathan Sr.Group Leader-Biotechnology Embio Research Centre( a division of Emmellen Biotech Pharmaceuticals Ltd.)
19. Dr. Rashmi Mishra Sr. Manager - Biotech and R&D Gencrest Ltd.
20. Mr. Surendra R. Bade Regional Sales Manager Genencor (A Danisco Division)
21. Mr. K V Balasubramaniam Managing Director Indian Immunologicals Ltd. (National Dairy Development Board)
22. Dr. Jitender N. Verma Managing Director Lifecare Innovations Pvt. Ltd.
23. Mr Raju Barwale Managing Director Maharashtra Hybrid Seeds Co. Ltd (MAHYCO)
24. Mr. Shirish Barwale Maharashtra Hybrid Seeds Co. Ltd (MAHYCO)
25. Dr. Bharat R. Char Lead, Biotechnology Research Maharashtra Hybrid Seeds Co. Ltd (MAHYCO)
26. Dr. Amarjit Singh President R&D (Pharmaceutical Research) Panacea Biotech Ltd
27. Dr. Abhijit Ray Director - Pharmacology, New Drug Discovery Research Ranbaxy Labs. Ltd.
28. Mr. M. Ramasami Managing Director Rasi Seeds (P) Ltd.
29. Dr. V.T. Subramanian VP - Biotechnology Rasi Seeds (P) Ltd.
30. Mr. N.G. Badari Narayan MD Relisys Medical Devices Ltd.
31. Dr. Ramakrishna Rao Director Relisys Medical Devices Ltd.
32. Mr. S.S. Adkar Sr. Manager - Biotech Rossari Biotech
33. Mr. Edward Menezes Director Rossari Biotech
34. Dr. Chandra P. Sharma Senior Scientist G & Head, Biosurface Technology Division, Assoc.Head Sree Chitra Tirunal Institute for Medical Sciences & Technology
35. Dr. Satish Totey Chief Scientific Officer Stempeutics Research Pvt Ltd
36. Dr. B.N. Manohar President Stempeutics Research Pvt Ltd
37. Dr S.K. Dasgupta Principal Scientist Sungro Seed Research Limited
38. Mr. Ajay Vasant Pitre MD SUSHRUT SURGICALS PRIVATE LIMITED
39. Dr. Rajgopal Srinivasan Head, Bio-IT, TCS Innovations Labs TATA Consultancy Services Ltd.
40. Dr. Rammanohar Puthiyedath Director of Reseach The Arya Vaidya Pharmacy (Coimbatore) Ltd
41. Dr. U. Indulal Deputy Director - Technical The Arya Vaidya Pharmacy (Coimbatore) Ltd
42. Dr. Vijay Chauthaiwala General Manager (Discovery Research) Torrent Pharmaceuticals Ltd.
43. Dr. K. G. Rajendran Associate Vice President - Knowledge Cell USV Limited
44. Dr. Niranjana M. Kumar Senior VP, Biotech manufacturing Wockhardt Limited
45. Dr. Maharaj Kishen Sahib Director – Genomics & Biotechnology Wockhardt Limited, Wockhardt Research Center,
46. Mr B V Ravikumar Managing Director XCyton Diagnostics Ltd

**Sector-wise discussion on possible areas, platform structure and special issues  
Platform specific presentations**

**Pharma Group**

**Purpose:** platform for the global competitiveness and excellence in industry through innovation.

The platforms/facilities that are needed are:

- Knockout the transgenic facilities
- Directory of capability and interest for sharing information and infrastructure between the members
- Arbitration cell with focus capability in biotech to enable and enforce credibility and to tackle with IPRs, licensing and other related issues.
- Platform technology for developing high producing cell lines and vectors and to tackle with IPRs, licensing and other related issues.
- Platform technology for humanized antibodies
- Data bank profiling of disease in our country and mapping of unmet medical needs and patient population in relation to that
- Imaging facility
- Any novel technology first to be offered to this group and giving the right of refusal before going outside
- Indian biodiversity characterization bank and quality control of herbal medicine
- Cell line and vector licensing for government and industry use
- Common library with access to all publication and e-management
- Create a cGMP with use of single usage material

**Structure**

A secretariat having a head and having task forces in following areas :

- Stem Cell
- Drug discovery
- Recombinant therapeutics & vaccines
- Herbal medicine
- Molecular diagnostics

**Major Concerns**

IPR, Project monitoring, Knowledge sharing, sustainability through FICCI and DBT support to share the outcome.

**Agriculture Biotechnology**

**Purpose:** increasing the agriculture production from 220 million tons to 350 million tons in the next 15-17 years. Thoughts of my group are:

**Stakeholders**

- Industry
- Government – Policy makers
- Academic Institutes
- Farmer organization

Platform should address the following requirements

- Infrastructure
- Analytical
- Regulatory
- Access to technology
- Genes and other biological material
- Transformation protocols
- Genetic maps for crops of National Importance

**Administrative structure:**

- Steering committee (S.C)

- Full time professional manager to implement the directives of S.C.
- Funding mechanisms – Initial funding to come from Government but for funding I would suggest that there should be some small funding commitment from industry also so that the seriousness remains there. What will be the percentage for that funding can be discussed later.
- Autonomous entity? Legal advice needed for this

#### **Areas of common interests**

- Drought tolerance - out of our 117 million hectare cultivated area 80 million hectare is drought prone. So working on drought resistant crops will be a good idea.
- Pest resistance - Priorities of the pests need to be worked out so we have not put all the names.
  - Sucking pest – Aphids, Jassids, white fly, Thrips & mealy bug
  - Lepidopteran pest
- Development of molecular maps
- Virus resistance - – I would call it Gemini resistance. I would call it Pan Crops. Quality improvement (sugar content)

#### **Medical Devices Group:**

We need a platform for medical devices.

**Purpose :** The vision is that we should be able to reach to at least the 50 % of the national needs. It is not only the national needs but 80% of the global p[population has the same needs as we have. So it will be global in approach.

#### **Stakeholders**

- Manufacturers – those companies which have at least the reverse manufacturing capability and which use India as the base for doing business elsewhere
- Government – Regulators. Even in USA the industry had faced the same problem due to wrong regulations. So we should not repeat the same thing.
- Industry Associations – why cant we look at the global contributors and the idea came through during discussions.
- Social funding agencies
- Medical Professional & Engineers. Of course they make the devices happen. Testing & Validation: there is huge gap in the country. Some element of reverse migration is required. Hospitals and clinicians and funding agencies.

#### **Organizational structure –**

- Interim committee – Some body who is an iconic person need to lead.
- Suggest a list of name. The steering committee would be small.
- 4 persons from industry
- Some body from government & regulatory
- Funding agencies
- Medical Professional

There would be two type of working groups.

Specialists in Disciplines

A group for providing information related to issues that govern

- manufacturing,
- policy making regulatory,
- validation,
- global IPR, licensing

There is a lack of information and assistance globally. Knowledge sharing on global regulatory practice in IPR and licensing there is complete absence of knowledge on this.

At apex level to fill gaps of local industries we require testing and validating infrastructure. There should be awareness and creating of awareness and knowledge to industry for prospective entrepreneurs who are trying to get in this industry.

#### **Industrial Enzymes**

Industry has manufacturers who have mostly imported technology. The industry is now in the process of developing the technology in house. For that there is a need to develop the strains and there is no facility for screening or reverse engineering. We propose a centre of excellence where

- Industry and DBT can share the cost.

- The IPR generated would be shared between the industry.
- Facility for developing proteomics and genomics so that we can improve the strains
- Work on increasing the yield because the cost of enzymes is going down and down in International markets.
- To compete with international players – a need to bring down the cost of production.

There is no single place where R&D can be carried out, and therefore for access to the right infrastructure the companies for product R&D have to go to different parts of the world after suitable agreements. If it is available at one single place where we can work on proteomics molecular biology etc. then lot of work can be done in this area.

- Thermo enzymes are very crucial for postindustrial processes
- Target specific enzymes, which can be created -would, be need molecular biology techniques.
- It is not just the facility but also the people to run it.