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'Catalyst for biotech growth'

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On completion of its one year of incorporation on March 20, 2013,Â the Biotechnology Industry Research Assistance Council's (BIRAC) chose to discuss an approach for addressing national unmet needs and successfully delivering, affordable products through innovation research, industry - academia partnership and strategic global alliances. The overall mood of the participants was upbeat at the three day high level scientific and industrial conclave organized as a part ofÂ BIRAC first foundation day celebration at New Delhi. Present at the meeting were 300 scientists, industrialists, policy makers, representative of global philanthropic organizations, start-ups and entrepreneurs.

The meet was inaugurated by the minister of science and technology and earth sciences, Mr Sudini Jaipal Reddy. Dr K VijayRaghavan, chairman, BIRAC and secretary, DBTÂ was present alongwith Dr M K Bhan, former secretary, DBT and Ex Chairman BIRAC who advised the BIRAC to break barriers in funding innovations and lend a helping hand to new comers in the industry. Dr Renu Swarup, MD, BIRAC traced the journey of BIRAC and highlighted some key initiative taken during the last one year which include, launch of the Ignition Grant, signing of over 100 public private partnership research agreements, supporting nearly 50 industry academia partnership collaborations and technology acquisition for nutritional crop improvement.

Most of the experts agreed that BIRAC should work to bridge the gap among researchers and industry. They pointed out towards the need to evolve better understanding and partnership between Indian Council for Medical Research (ICMR), Department of Biotechnology (DBT) and Indian Council for Agricultural Research (ICAR). It was felt that BIRAC can play a crucial role in laying out a long term concrete vision for meeting the targets set for growth of the sector.

Expert advice:What can BIRAC do to strengthen major pillars of biotech?

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While BIRAC completed its one successful year, the industry leaders, policy makers, prominent academicians and scientists listed out the recommendations for shaping its vision for future.

Topic: Science for family health securing maternal and child health in India: Science interventions for improved survival and development

Experts:
Dr Vinod Paul, Chairperson, Pediatrics Unit, AIIMS; Dr M. K. Bhan, Former Secretary, DBT and Founder Chairman, BIRAC; Mr. Keshav Desiraju, Secretary, Health & Family Welfare; Dr Rajesh Jain, Joint Managing Director, Panacea Biotec

Recommendations:
Ã¢â??Â BIRAC should act as process engine and engage with various disciplinary people like engineers, clinicians, industries and academicians.
Ã¢â??Â It should play a role in creating transformative tool between industries and regulators.
Ã¢â??Â It should act as connector between the Demand and Supply organisations of India.
Ã¢â??Â It should closely work with DBT and Health secretory to put in Human resource training in the area of Indian regulatory system. Through these training workshops "Quality Feedback Mechanism" should be developed.
Ã¢â??Â BIRAC in collaboration with various Research Agencies, ICMR and industries should form a committee on design of adequate Regulatory systems.
Ã¢â??Â It should form a Optimization delivery cell for optimising existing technologies to increase its impact at social level.

Topic: Addressing agri-biotech challenges and improving food productivity and nutrition

Experts:
Dr. Vijay Raghavan, Sathguru Management Consultants, Dr Nagarajan, Ex Director General, Indian Council for Agricultural Research (ICAR), Dr K S Charak, Adviser, DBT; Prof. Deepak Pental, Ex-Vice Chancellor, DU; Dr Usha Zehr, Director, Mahyco Research Foundation; Dr Arvind Kapur, CEO, Rasi Seeds

Recommendations:
Ã¢â??Â Accelerate investments in tech. acquisition
Ã¢â??Â Enhance access to proven inventors (not limited by number)
Ã¢â??Â Energize the translational effort -Rapid weeding, acceleration of candidates, time bound results

Ã¢â??Â Drive delivery by converging dialogue, investments and rewards

Topic Securing maternal and child health in India: research and development in critical disease and development areas:

Experts :
Dr Harish Iyer, CEO, Shantha Biotechnics; Dr Gagandeep Kang, Christian Medial College Vellore; Dr S Sinha, Adviser, DBT; Dr Shinjini Bhatnagar, Professor, Translational Health Science and Technology Institute (THSTI); Dr Divya Bijlwan, Vice President, Biological E, Dr. Siddharth Ramji, Professor (Pediatrics), Maulana Azad Medical College, New Delhi

Recommendations:
Ã¢â??Â Create an innovation landscape through specially designed science meetings in thematic areas to structure the process of innovation.
Ã¢â??Â BIRAC newsletter that is widely accessible, publishes relevant literature, dialogues will be trans formative.
Ã¢â??Â Explore medical, science, engineering and management interdisciplinary networks/collaborations.
Ã¢â??Â Collaborate with the organizations such as THSTI, Gurgaon to enable creation of platform technologies.
Ã¢â??Â Support research fellows having mentors from the industry, academia, through scholarships.
Ã¢â??Â Develop expertise in specific areas like product profiling, market evaluation cost effective analysis, statistical modelling.
Ã¢â??Â Augment National Regulatory to help evaluate new products, etc
Ã¢â??Â Need to evaluate demand for new products in public health

Topic: New technologies for improving productivity of Indian crop varieties

Experts:
Dr Seetharam Annadana, Syngenta; Dr Ajay Parida, Executive Director, MSSRF;
Dr J P Khurana, Professor, Department of Plant Molecular Biology, University of Delhi; Dr M Udayakumar, Professor, University of Agricultural Sciences; Dr Paresh Verma, Managing Director, Bioseeds Research India, Dr. Vilas Parkhi, Senior Scientist, Advanta India

Recommendations:
Ã¢â??Â Focus on theme of drought (water relations, cellular tolerance, floral biology, stay green) and radiation use efficiency(photosynthesis efficiency, source to sink)
Ã¢â??Â There is need to address the gaps between QTL and MAS for drought/abiotic stress. Ã¢â??Â A concept of establishing a repository for validated QTL,donor lines and deregulated events has merit.
Ã¢â??Â Phenotype for drought and radiation use efficiency is a challenge andhence we need state of the art capacity and innovation in phenotyping methods
Ã¢â??Â There is a huge amount sequencing data that is available. Using this,we should invest in comparative genomics and identify genes,allele and markers for key traits.
Ã¢â??Â Complex traits need projects at idea, proof-of concept, early development and late development.Low hanging fruits must be harnessed to support long gestation projects.

Topic: Surveillance, detection and prevention: Keeping India healthy through smart diagnostics and devices

Experts:
Mr Chandrasekhar B Nair, Director and CEO, Bigtec Labs; Dr Navin Khanna, Group Leader, ICGEB; Dr Alka Sharma, Director, DBT; Dr Om P Manchanda, CEO, Dr Lal Pathlabs; Dr. Nandakumar S, CEO, Perfint Healthcare; Dr Avijit Bansal, SIB Fellow Dr. Sidhant Jena, CEO, Janacare Solutions; Dr Melissa Densmore, Researcher, Microsoft Research India

Recommendations:
1) Healthcare:
Ã¢â??Â Importance of preventive health care in peoples minds
Ã¢â??Â Increase in % spending on healthcare
Ã¢â??Â Health reforms for providing insurance coverage
Ã¢â??Â Making accreditation of diagnostic labs compulsory

2) Research
Ã¢â??Â Scaling-up research operations on advanced technologies Optics, Microelectronics, Industrial Design, Nanotechnology, Bimolecular recognition, Materials science, Micromachining
Ã¢â??Â Novel binders for pathogens, Molecular diagnostic
Ã¢â??Â Joining company resources and university research to benefit all.

Topic: Treatment affordability: Pathways to genomics driven personalized medicine in India

Experts:
Dr Vijay Chandru, Chairman and CEO, Strand Life Sciences, Dr T. S. Rao, Adviser, DBT, Dr Abraham Kuriakose, Mazumdar-Shaw Cancer Centre, Dr Anand Anandkumar, Chairman & MD, Cellworks Research India; Dr Mallikarjun Sundaram, President & CEO, Mitra Biotech; Dr Binay Panda, Head, Ganit Labs

Recommendations:
Ã¢â??Â Facilitate regulation / IP Issues among various stakeholders
Ã¢â??Â Should appoint mentors (at different levels, starting from young rolling the sleeve type to experienced senior entrepreneurs) who will work with new/young entrepreneurs from pre-funding to commercialization stage.
Ã¢â??Â Fund those young/new entrepreneurs who has partnered with proven mentors (no mentor means no funding).
Ã¢â??Â Should encourage young/new entrepreneurs to incentivize mentors through equity stake in their companies.