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Title: Discussion on the motion for consideration of the Regional Centre for Biotechnology Bill, 2016 (Discussion concluded and Bill Passed).

HON. CHAIRPERSON: Now, Item No. 13, Dr. Harsh Vardhan.

THE MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (DR. HARSH VARDHAN): I beg to move:

"That the Bill to provide for the establishment of an institution of national importance to be known as Regional Centre for Biotechnology and to provide for matters connected therewith or incidental thereto, be taken into consideration."

माननीय सभापति : क्या आप इस संबंध में कुछ बोलना चाहते हैं?

DR. HARSH VARDHAN: Sir, I will just briefly introduce about this Bill. This is basically a Bill for the establishment of a Regional Centre for Biotechnology under UNESCO.

In this Bill, we want to give this Institution importance of national level. I wish to inform all the hon. Members that the genesis of this Bill dates back to 2003. At the 167th Meeting of the General Body of UNESCO, the then Science and Technology Minister of this country, Dr. Murli Manohar Joshi had moved a proposal that a Regional Centre for Bio Technology should be created in India which should coordinate with all the countries of Asia, share their experiences, research and help each other in all the cutting edge technologies. So, the whole thing started at that Meeting. Since then the subsequent Government also took it up. There was a consultative meeting of the member countries. Then it was taken up by the subsequent Cabinet. Since then it has been crawling at a very slow speed. I feel fortunate that the time has finally come when it came to Parliament for passing.

I have to emphasise a few things. The biotechnology today is that branch of science which is the closest to helping human welfare and helping human beings. This is through bio technology that a lot of cutting edge research is happening for vaccine development, for drug discoveries, for health, human genome activities, genetic engineering, agriculture, clean energy, etc. With these advancements, there is a need for sharing of information and knowledge at the international level also. With every day advances in this field, there is always a need for changing in curriculum also; in fact, developing new manpower. This Institution is basically going to focus on the education part, the training part and the research part. There will be a huge number of post-graduates and PhDs created through this Institution and they will further help the people and the manpower all-over the country to train them in various fields. Then there will be good quality coordination with the other countries in the Asian Region.

If I have to sum up, the objectives of this Regional Centre are: to disseminate and advance knowledge by providing instructional and research facilities in such branches of biotechnology and related fields as it may deem fit including technology policy development; to provide capacity-building through education, training, research and development in biotechnology and related academic fields for sustainable development objectives through regional and international cooperation; to facilitate transfer of knowledge and technology relating to biotechnology at the regional level; to create a hub of biotechnology expertise in the countries in South Asian Association for Regional Cooperation region, and more generally in the Asia region, and to address human resource needs in the region; to promote and strengthen international cooperation to improve the social and economic conditions and welfare of the people; to promote and facilitate a network of satellite centres in the region as well as within India.

I have to say that this biotechnology is relatively a new field which emerged in the last 15 years or 20 years in a big way. Around 30 years back, the Department of Biotechnology was created in India. At the moment, we are in a position to become a global leader. This field has a huge potential for societal benefits and economic transformation.

With the coming up and development of this Institute, the level of research that we intend to do in this country under the leadership of Shri Narendra Modi, I think, will go up to the international global standards. We are already in the process of becoming a global leader. By the year 2025 we want to have 100 billion dollars revenue and back up in this industry, that is, biotechnology, in our country.

We have developed several vaccines. The Hepatitis B vaccine is available in this country at 40 times lesser price as compared to the price in the international market. That is why, we can say now that every second vaccine out of three vaccines is from India. We have recently developed the Rotavirus vaccine. A lot of things are happening in the drug discovery field.

We know that we have the problem of the production of pulses. In fact, we grow something like 17 to 18 million tonnes of pulses. Our requirement is 23 million tonnes. With the advancing biotechnology field and with the genetic engineering that we can, in fact, add to, we can certainly ensure that the growth in pulses, its productivity and all these things are improved. So, we have the potential to solve many critical issues of the society which are related to agriculture and health.

Of course, in the clean energy field, our Department has done well, in fact, from waste to wealth. Recently, two days back I was in Kashipur and inaugurated a plant, where we are going to produce 2G-Ethanol. From a plant, with the ten tons of agricultural waste, we are producing thousands of litres of 2G-Ethanol. Then, we have the potential to create plants with 250 tonnes and 500-tonnes, capacity, which we have developed.

I would say that this is a very long pending Bill. If Parliament gives its consent to this Bill, then this Institute can start functioning in a big way and we can train people from all over the country in a big way. We can become Asian hub and also a hub for the whole country for coordinating our activities in the best possible manner.

Thank you.

HON. CHAIRPERSON : Motion moved:

"That the Bill to provide for the establishment of an institution of national importance to be known as Regional Centre for Biotechnology and to provide for matters connected therewith or incidental thereto, be taken into consideration."

DR. SHASHI THAROOR (THIRUVANANTHAPURAM): Thank you very much, Hon. Chairperson. I rise to speak in support- but in conditional support-of the Bill that Dr. Harsh Vardhan ji has just introduced before us.

We all know, as he pointed out, that the growth of technology is revolutionizing the way we all lead our lives. Frankly we are struggling in many ways to adapt to its demands. So, the Bill is important. I was listening attentively to his introduction. Biotechnology, of course, is not really a new Science, in the sense that in earlier forms it has existed perhaps for centuries. But, as he rightly said, in its modern manifestation, Biotechnology involves the manipulation of the genetic structure of organisms and introduction of characteristics that can actually bring in specific traits that are helpful to human beings. This is relatively a new Science and I am very pleased that India is very much in the forefront in Biotechnology.

One could argue that the development of the field through, for example, the advent of genetics, has opened really exciting opportunities in this sector. There are many applications-and he has given some examples, which I would not repeat- but overall they promote the improvement of human health, food production, reduction of environmental or damage. Insulin and Hepatitis vaccine have already been mentioned. BT cotton has been a big success story. We used to be short of cotton, now we are exporting cotton. It is one of the great satisfactions of the UPA Government that we did the work on BT cotton.

I do want to stress, hon. Chairperson, that in this new era in the history of mankind that we are talking about, biotechnology is going to increase rapidly in India. There is no question about it. The applications of modern biotechnology have a great future here, the same for around the world. It holds great potential to give us new solutions, solutions we cannot perhaps even imagine today, for the health and quality of life of our Indian citizens, plus, of course, the significant improvements in agricultural productivity that he mentioned, more nutritious food as well as sustainable development. Sustainable development means development where we pay regard to the environment, and that may be easier to do with biotechnology.

I am increasingly convinced that biotechnology has the potential, Mr. Chairman, to replace information technology as the main engine for development of India and, indeed, of the world. This is why I am quite pleased to welcome the points made here by Dr. Harsh Vardhan. I would add to those, gene therapy, another tool that holds great potential for hope. Even though we do not know enough about it yet but the prospects are there. Xeno transplantation, which involves transplanting body parts from animals into human beings, is being talked about. We are not yet there in that area. The Chinese are ahead of us. Nano technology is in a process of transition here. Then, of course, from a security point of view, the risk of bio-terrorism cannot be underestimated. We are facing such serious terrorism threats in our country, and the fact is that there are serious implications if biological agents can be used to harm our people.

I agree with the hon. Minister that India is poised to emerge as a force, a real force to reckon with, in the biotechnology sector. We are well on the way to being a 10-billion dollar industry already. That is why the industrial applications are important. It is a great opportunity for companies in the private sector as well, and they need to work with academic institutions to network and develop ties between universities and industry so that our growth of biotechnology can proceed in both areas.

This is why, Mr. Chairman, I am so pleased to welcome the Bill as it has been put forward to us here by the hon. Minister. Nonetheless, there are a few things that I want to bring to his attention as he moves forward with this Bill. That is why I spoke of conditional support.

Firstly, we still need to do a great deal more, Mr. Minister, in improving the quality and quantity of our biotechnology graduates to meet the demands of the biotech industry. There is an independent report by Ernst & Young, which is actually quite critical both of the number of biotech graduates that we have -- perhaps because of the paucity of institutions -- and also of the quality of many of these graduates. I think, we need to address that.

Secondly, the Government itself is lagging behind. Dr. Harsh Vardhan said that this has taken a long time. There are other things that have taken a long time. I think that the Indian Government quickly needs to enact regulatory reforms and do much more on the infrastructure front as well, as well as providing more incentives to biotechnology.

I will come back to regulation in a minute. But inadequate infrastructure is pointed to by everybody. Even the existing leaders of the biotechnology industry such as the founder chairman of Biocon, Kiran Mazumdar-Shaw, said in an interview that 'it is really a crying shame' what our infrastructure is. And, I am sure that Dr. Harsh Vardhan will want to talk to his colleague, the Finance Minister, about providing some financial incentives to the biotech industry, which frankly, are simply not present, right now.

The hon. Minister mentioned that this Bill will grant the new institution in Faridabad set up in 2009, the status of an Institution of National Importance. That is very important. I welcome that. But I do want to point out that in my Constituency, Thiruvananthapuram, the Rajiv Gandhi Centre for Biotechnology, which Dr. Harsh Vardhanji had visited with me a few months ago, was established seven years before the institution in Faridabad, in 2002. I have also been requesting its upgradation to the status of an Institution of National Importance. We know the case for the Faridabad centre is that it would provide them with facilities such as ease of technology transfer, recognition as a global platform, the right to give degrees, resources for conducting quality research. But in their welcome focus on this new institution, they should not forget the earlier ones, and I am sure that Dr. Harsh Vardhan, who had a very positive visit to the Rajiv Gandhi Institute in Thiruvananthapuram, will agree with me that we do not want to leave a pioneer in this area by the wayside. I really feel that we need to offer this kind of support.

I want to point if I may, to Wikipedia, which has a ranking of the top 10 schools/universities offering courses in biotechnology in India. Number one is the Institute of Chemical Technology in Mumbai and number two is the Rajiv Gandhi Centre for Biotechnology in Thiruvananthapuram. I am afraid the

Faridabad Centre does not get featured in the top 10. So, we have a long way to go. I am not in any way speaking against an institution. I want more institutions in our country and I want them all to be good. But please honour the ones that are doing well; that are working well; and that require support.

I also want to point to one particular point in the Bill that Dr. Harsh Vardhan did not mention in his remarks. He mentioned the various objectives in the Bill and I do not think we have any fundamental problem with them. But one of the functions spelt out in Section 9 is, "to develop and implement a policy for Intellectual Property Rights (IPR) with equitable and just provisions for all stakeholders". Now, this is a priority function, as you know, Mr. Chairman. The preservation of intellectual property is a broad principle that India is committed to but the Intellectual Property Rights of biotechnology research has been a major concern, partly because of the complexity of provisions in IPR laws around the world, and certainly our own IPR laws have left something to be desired.

Now, in this context I do want to mention that there are a whole number of issues with regard to TRIPS. Our patent laws do not match the trade related intellectual property laws that we have signed up to as a Government and I would urge the Minister to pay some serious attention to this question of reconciling trade related intellectual property rights to our Indian patent laws, and if necessary, moving to amend our laws as appropriate or if not, at least then to put conditions on our accession to the TRIPS because this again becomes a significant factor in the growth of the biotechnology industry.

Mr. Chairman, then, I want to express some concerns. Many of us have some disappointment that this House has not enacted a Bill from the UPA era, the Biotechnology Regulatory Authority of India Bill, 2013. We introduced it in the Lok Sabha in April of 2013. It was referred to a Committee. It never came back to the floor with all the various disruptions of the House and in the end it was not adopted. Of course, the Bill that was introduced in the Lok Sabha lapsed when the previous Lok Sabha got dissolved. I would like to urge my good friend, the hon. Minister to take up this issue.

The question of regulating biotechnology has to move side by side with all the enthusiasm that he has rightly shown for this creation of the institute in Faridabad. And, in regard to the new Bill, I am all in favour of us cooperating with UNESCO. I have welcomed the fact that we want to be a hub for the other countries of South Asia and South East Asia. All that is fine. But what is the regulatory framework under which our biotechnology work is going? This institute has not been planted out of nowhere. There is a context. The context lies in the laws, rules and regulations of India, which, very frankly in our own estimation as a Government, when we were in Government we felt, were inadequate for the challenges that the country faces, and, we, therefore, produced a draft Bill for regulation.

Now, we are not wedded to one particular Bill or former Bill. But we would urge the Minister to go back to that Bill, resurrect it, taking into account the findings of the Committee that looked into the Bill in 2013, which I believe, has submitted its report and then to see whether we cannot move both side by side. Yes, we can go ahead and adopt this Bill today. But as part of the process, you are creating institutions. You are saying they are of national importance. Let us also, as part of that process, have an adequate regulatory framework. That is also of national importance. This is required by the Convention on Biological Diversity which we are a signatory of. It is also a part of the Cartagena Protocol on Biosafety because after all, regulation is not only about control or command and control. It is about safety as well. I myself am not a great fan of command and control systems. What we are worried about is, under what framework will these institutions grow and how can we ensure that we are also kept safe in the process?

The purpose of regulation must be the protection of the Indian people just as the purpose of the growth of biotechnology must be the prosperity, the health and the wellbeing of the Indian people. So, I think we cannot disagree with the objectives. We are all of the same view. We do know that some of our friends in the environmental NGOs have a slightly more challenging notion of some of these issues when it comes to us and when it comes to issues of biotechnology.

I do not want to enter into all those debates here because we will needlessly take up the time of this House. It is certainly worth returning to this debate on a later date because very recently, one of our major media outlets had an interesting column attacking the political establishment for having been so backward in its attitude towards biotechnology in relation to agriculture. I am sure that many would agree that we can be more imaginative in extending the benefits of biotechnology.

Having said all this, let me once again welcome this Bill and request the hon. Minister to, along with it, look at the Regulatory Authority Bill, to look at the patent structures in the country, to look further at the inadequate infrastructure that is hobbling our biotechnology companies and, finally, to encourage our biotechnology companies and academic institutions to work together. When you have an institution like this one in Faridabad, it would be very helpful if they were encouraged – indeed permitted in the first place – to have a relationship with private sector companies so that they can do collaborative research with industrial applications and marketing potential. Can you imagine a situation where a company goes to this institute and says that 'we have here 'X' number of rupees to offer. If you have the right kind of Ph.D. students, we want you to research this and we will help you. Then, if you actually find a solution, we can patent it together or you can patent it and we can produce it and we can share the profits.'? This kind of thing happens routinely in the Western world. It does not happen enough, if at all, in our country. I urge the hon. Minister, in administering this institution, to ensure that all these possibilities are also included.

With these words, Mr. Chairman, I would like to express our support for the passage of this Bill and hope that these other ideas will be taken forward in its implementation in the years to come.

Thank you.

श्री जगदम्बिका पात (दुमरियागंज): अधिष्ठाता महोदय, मैं आपका अत्यंत आभारी हूँ कि आपने एक अत्यंत राष्ट्रीय महत्व "टी रीजनल सेन्टर फॉर बायोटेक्नोलॉजी बिल, 2016" जिसको माननीय मंत्री जी ने अभी सदन के समक्ष प्रस्तुत किया है और उस राष्ट्रीय महत्व के उन विषयों को अन्तर्राष्ट्रीय और अपने सार्क कंट्रीज के सदस्यों के साथ जिस तरह से एजुकेशन में, रिसर्च में, ट्रेनिंग में एक-दूसरे की नॉलेज को शेयर करने के सम्बन्ध में एक अग्रेडमेंट लेकर आए हैं, मैं निश्चित तौर से इसका स्वागत करता हूँ।

अभी थरूर साहब ने इस बात को खुद स्वीकार किया कि आज इस बायोटेक्नोलॉजी के क्षेत्र में दुनिया में हमारी एक बड़ी हिस्सेदारी बढ़ी है। यकीनन हमारी क्रेडिबिलिटी भी बढ़ी है। आज इस

बायोटेक्नोलॉजी के क्षेत्र में इस बिल का जो उद्देश्य है, इसीलिए आज हम चार प्रमुख उद्देश्यों को लेकर इस बिल में हमारी सरकार संशोधन कर रही है। The first objective is of disseminating knowledge by providing teaching and research facilities in biotechnology and related fields. The second one is to facilitate transfer of technology and knowledge in the SAARC region and generally, Asia. The third one is to create a hub of biotechnology expertise. The fourth one is of promoting cooperation at the international level. स्वाभाविक है कि इसके महत्व को परिभाषित करने की आवश्यकता नहीं है कि आज इसको यह रेखांकित किया जाए, क्योंकि निश्चित तौर से जो माननीय मंत्री जी ने अपने संबोधन में शुरू किया था और कहा था कि वर्ष 2006 में एक मेमोरैंडम ऑफ अन्डरस्टैंडिंग, जिसमें भारत भी उस समझौते में शामिल हुआ, with United Nations Educational Scientific and Cultural Organisation, UNESCO regarding establishment of the Regional Centre for Biotechnology Training and Education in India. उस वर्ष 2006 के एमओयू को साइन करके भारत अपने सार्क कंट्रीज के साथ, यूनेस्को के साथ एक समझौते में और फिर वर्ष 2009 के सापेक्ष गवर्नमेंट के एग्जिक्यूटिव ऑर्डर से हमने हरियाणा के फरीदाबाद में एक राष्ट्रीय स्तर का बायोटेक्नोलॉजी ट्रेनिंग एंड एजुकेशन सेंटर खोला है।

लेकिन सम्मानित सदन भी जानता है, थरु साहब भी जानते हैं कि वर्ष 2009 में एग्जिक्यूटिव ऑर्डर से जिस बायोटेक्नोलॉजी रीजनल सेंटर को हमने खोला था, तो कोई भी एग्जिक्यूटिव ऑर्डर से स्वाभाविक है कि उस सेंटर में एक गवर्निंग बॉडी हो या कन्ट्रोलिंग बॉडी हो, वह गवर्नमेंट ऑफ इंडिया की ही होती है। जब तक हम उसको स्टेट्यूटरी बॉडी नहीं बनाते हैं, उसकी ऐसी सैल्यूटरी नहीं होती है। एग्जिक्यूटिव ऑर्डर से बनाई गई किसी संस्था की वह स्वायत्तता नहीं होती, उसकी ऑटोनॉमी नहीं होती है। वह गवर्नमेंट ऑफ इंडिया की स्वीट विल पर ही काम करती है। अगर कोई वेन्जेज करने हैं तो वह गवर्नमेंट ऑफ इंडिया की ही राय से किये जाते हैं और उसमें गवर्नमेंट ऑफ इंडिया का हस्तक्षेप भी रहता है। आज मैं समझता हूँ कि माननीय मंत्री जी ने जो संशोधन किया है, वह पूर्णतया इस रीजनल सेंटर को एक लैजिस्लेटिव बैंकिंग करने के लिए किया है। इस बिल के पास होने के बाद मैं निश्चित तौर से कह सकता हूँ कि जहाँ शक्ति थरु जी कह रहे हैं कि हम इसका कंडीशनल सपोर्ट करते हैं, आखिर किस बात का? अभी तक यह बॉडी जो भी रेगुलेट हो रही थी या कोई भी रेगुलेशंस बना रही थी, वह गवर्नमेंट ऑफ इंडिया बना रही थी।

अब जिस दिन से यह अमेंडमेंट बिल अगर यह सदन सर्वसम्मति से पारित करता है तो निश्चित तौर से इस बिल के आने के बाद इस रीजनल सेंटर की एक तरह से स्वायत्तता हो जाएगी, अपने को खुद रेगुलेट करने के लिए वे अपने रूल्स और रेगुलेशंस बनाएंगे। निश्चित तौर से गवर्नमेंट एक लैजिस्लेटिव अधिकार उस बॉडी को देने जा रही है। प्रायः 2009 में यह बना था। मैं समझता हूँ कि अगर वाक्यी इसको विधायी ताकत देनी थी कि पार्लियामेंट से ही कोई वेन्जेज हो सके तो यह काम शायद पिछली सरकार में कर देना चाहिए था। हम तो आज मोदी जी की सरकार को बधाई देने कि राष्ट्रीय महत्व की इस संस्था को आज एक विधिक ताकत देने का काम किया जा रहा है, एक लैजिस्लेटिव बैंकिंग देने का काम किया जा रहा है।

मैं सोचता हूँ कि आखिर इसका महत्व क्या है। अगर आप देखें तो निश्चित तौर पर इसमें जो एजुकेशन है, रिसर्च है या ट्रेनिंग है, आखिर उसका दायरा केवल बायोमैडिकल साइंसेज तक या फार्मास्यूटिकल तक ही सीमित नहीं है। इसका बहुत ब्राड रेंज हो गया है कि आज हम इस सेंटर से बायोमैडिकल साइंसेज की भी पढ़ाई करते हैं, उसकी ट्रेनिंग करते हैं, उसकी रिसर्च करते हैं, मॉलीक्यूलर एंड सैल्यूलर बायोलॉजी पर भी इसमें काम हो रहा है। बायोइंजीनियरिंग एंड डेवाइसेज पर भी काम हो रहा है। बायोकैमिस्ट्री पर, बायोफिजिक्स पर और इंडस्ट्रियल बायोलाजी पर भी काम हो रहा है। वलाइमेट साइंसेज पर जिस पर सबसे ज्यादा मोदी जी ने अंतर्राष्ट्रीय कॉन्फ्रेंसेज में जिस तरह से ग्लोबल वार्मिंग और वलाइमेट वेन्जेज पर काम किया है और जिस तरह से भारत ने एक तरह से नेतृत्व किया है और हमारी बात पर आज पूरी दुनिया सहमत हो रही है - कार्बन उत्सर्जन को घटाने पर, उस वलाइमेट साइंस पर भी काम हो रहा है। एग्रीकल्चर एंड एनवायर्नमेंट पर भी काम हो रहा है। बायोटेक्नोलॉजी रेगुलेटरी अपेयर्स या आईपीआर जिसकी चर्चा कर रहे थे और उसकी पॉलिसीज पर स्वाभाविक है कि आज ये रीजनल सेंटर फॉर बायोटेक्नोलॉजी आज जितना महत्वपूर्ण हो रहा है और जिस महत्व को न केवल एक क्षेत्र तक, बल्कि दुनिया आज उस क्षेत्र के महत्व को परिभाषित कर चुकी है तो स्वाभाविक है कि आज अगर हम एक बिल लाकर, एक अमेंडमेंट लाकर उस संस्था को एक विधायी ताकत और लैजिस्लेटिव बैंकिंग देने जा रहे हैं तो निश्चित तौर पर इस संस्था के लिए भी अपने आप में एक ऐतिहासिक दिन है। क्योंकि जिस तरीके से आज यह जो बिल है, इसको लैजिस्लेटिव बैंकिंग करने के बाद इसका जो स्टेटस हो जाएगा, वह इसकी नेशनल इंपॉर्टेंस का होगा और यह नेशनल इंपॉर्टेंस का होगा जिससे ये साइंटिफिक हो, टैक्निकल एजुकेशन हो या डिग्री ग्रांट करने में जो पावर्स हो जाएगी रीजनल सेंटर की, वह पावर्स भी निश्चित तौर से बढ़ जाएगी। The powers of the Regional Centre will include providing for Masters Degree, Post-Graduate Diploma and Doctoral Degrees in Biotechnology and related subjects including biological, medical, agricultural and engineering and other relevant sciences; instituting academic positions like Professorship and appointing persons to such positions; determining standards of admission to the Regional Centre; and fix, demand and receive payment of fees. तो इन सारी चीजों में एक स्वायत्तता होगी।

आज निश्चित तौर से जब तक एग्जिक्यूटिव बाडी के रूप में यह संस्था काम कर रही है, उसमें आप इस बात से सहमत होंगे कि उसमें डे टु डे भी एक इंटरप्रेरेंस रहता है। जिस दिन से यह विधेयक पारित होगा, उस दिन से निश्चित तौर से गवर्नमेंट अपने हस्तक्षेप को खुद अलग कर रही है। वह उसके डे टु डे अपेयर्स हो या बोर्ड की पावर्स हो या उस बोर्ड के संबंध में जो कानून बनाने की बात हो, वह ताकत, वह स्वायत्तता निश्चित तौर से इस संस्था को इस एक्ट के माध्यम से हम देने जा रहे हैं। इस एक्ट से निश्चित तौर से इस संस्था रीजनल सेंटर फॉर बायोटेक्नोलॉजी को अपने आप में एक ताकत मिलने जा रही है। जब ताकत मिलेगी तो जिस तरह से हमारे विद्वान सदस्य ने कहा कि मैं माननीय मंत्री जी से रिक्वेस्ट करूँगा। मुझे लगता है कि शायद अभी उन्हें यही एहसास है कि यह जो एग्जिक्यूटिव बॉडी की संस्था है, इसमें गवर्नमेंट का या उस तरह का इंटर्फेयरेंस योज बना रहेगा, मुझे लगता है कि आज जिस तरीके से रिक्त डेवलपमेंट की बात हो, जिस तरीके से हमारे बायोटेक्नोलॉजी के क्षेत्र में हमारी सरकार की जो प्राथमिकताएं हैं, हमारी सरकार का एक स्पष्ट एक्टिविटी है कि जो हमारे साइंटिस्ट्स हैं, वे साइंटिस्ट्स रिसर्च के क्षेत्र में या आर.एण्ड डी. के क्षेत्र में न केवल भारत में, बल्कि दुनिया में जिस तरीके से, अभी माननीय मंत्री जी ने खुद उल्लेख किया कि कुछ दवाएं, जो आज हम सबसे सस्ती तैयार कर रहे हैं और वे दवाएं दुनिया में हर तीसरा आदमी इस्तेमाल कर रहा है तो यह कितनी बड़ी उपलब्धि है। शायद हम इसको स्वायत्तता देने तो हम दुनिया के सबसे पायनियर इंस्टीट्यूशन होंगे और यह देश मैडिकल के क्षेत्र में या फार्मास्यूटिकल के क्षेत्र में आज जिस तरीके से ग्रे कर रहा है, उस तरीके हम आगे और ग्रे करेंगे। स्वाभाविक है कि जब हम इस क्षेत्र में ग्रे करेंगे तो इस देश में कहीं न कहीं जो हमारे बायोटेक्नोलॉजी में या बायोमैडिकल फ़िल्ड के हमारे स्टूडेंट्स होंगे, उनके लिए प्लेसमेंट होगा, उनके लिए रिसर्च करने का पूरा स्कोप होगा। उनके लिए ट्रेनिंग का भी बड़ा स्कोप होगा, जो अभी बहुत लिमिटेड है।

आज आप देखिये, हमारे एवसीलेंस को, हमारे इस देश के हुनर को आज दुनिया के तमाम सैण्टर्स पर, बायोटेक्नोलॉजी सैण्टर में अगर आप जाइये तो वहां इण्डियन साइंटिस्ट्स आपको मिलेंगे तो स्वाभाविक है कि आज उस दिशा में यह अमेंडमेंट एक मील का पत्थर साबित होगा। जिस तरीके से माननीय मंत्री जी इसे लाये हैं, मैं माननीय मंत्री जी को निश्चित तौर से बधाई दूंगा कि जो रीजनल सैण्टर की एंथॉरिटी हैं, उसमें अभी इसके एडमिनिस्ट्रेशन का है, फंक्शनलिंग का है, बोर्ड ऑफ गवर्नर्स का है या प्रोग्राम एडवाइज़री कमेटी का है, एग्जिक्यूटिव कमेटी का है, फाइनेंस कमेटी का है, इन सारी चीजों को, मैं इसमें बहुत विस्तार में नहीं जाना चाहता, लेकिन आज क्या है कि तमाम इस तरह की जो एवसीलेंस की बॉडीज हैं या जिस तरीके से हमारी इस तरह की बॉडीज हैं, अगर उनको कार्य करने में योज कहीं न कहीं गवर्नमेंट से एक अनुमति लेनी हो, परमीशन लेनी हो, एपूवल लेनी हो, चाहे उनके किसी पॉलिसी डिज़ीज़न के मामले में, उस डिज़ीज़न के सम्बन्ध वया फाइनेंस लगेगा, वया फंड लगेगा या किस तरीके से उस स्टैण्डर्ड का होगा तो इसमें स्वाभाविक है कि हमारी रिसर्च भी प्रभावित होगी। जब इस सैण्टर का मकसद ही यह था कि इस सैण्टर को हम इस तरीके के सैण्टर के रूप में डेवलप करें, जो हमने इसके साथ समझौते में किया था, स्वाभाविक है कि आज हम सार्क देशों में जब हम अपनी इस संस्था को जितना ऑटोनोमस इसको बना सकते हैं, इसको ऑटोनोमी देंगे, उससे संस्था निश्चित तौर पर वहां पर रिसर्च वर्क का, ट्रेनिंग का काम और एजुकेशन की भी वयालिटी जो होगी, वह वयालिटी ऑफ एजुकेशन बढ़ेगी, गुणवत्ता बढ़ेगी, इसलिए मुझे लगता है कि आज यहां से इस बिल के पास होने के बाद जो गवर्निंग बॉडी भी है, वह अपने आप जो अपने फैसले लेने वाली होगी, वे फैसले लेने में भी उसकी स्वतंत्रता बढ़ जायेगी, उसकी एक इंडिपेंडेंस हो जायेगी तो निश्चित तौर से फिर बोर्ड ऑफ गवर्नर्स आने वाले दिनों में केवल अपने देश के हित में नहीं, वह फिर सार्क कंट्रीज के परिप्रेक्ष्य में और दुनिया के दूसरे मुल्कों में जिस तरह की रिसर्च हो रही है... (व्यवधान) मैं कन्क्लूड कर रहा हूँ।

फिर हमारा एक तरह से हैल्दी कॉम्प्लीशन, प्रीतिस्पर्धा हम दुनिया के साथ करेंगे। मुझे पूरा विश्वास है कि माननीय मंत्री जी के इस बिल के बाद, मैं तो सबसे अपील करूँगा कि सर्वसम्मति से इसे पास करें। इस बिल के पास होने के बाद यही फरीदाबाद, हरियाणा का सैण्टर हमारा राष्ट्रीय स्तर का नहीं होगा, बल्कि अन्तर्राष्ट्रीय स्तर का बड़ा हमारा एक एजुकेशन का सैण्टर होगा।

निश्चित तौर से इसी के साथ जो माननीय मंत्री जी द्वारा बिल प्रस्तुत किया गया है, मैं इसका समर्थन करता हूँ और मैं अपील करूँगा कि इस बिल को तो कम से कम सर्वसम्मति से पास करना चाहिए, न कि कोई सशर्त की बात करें, क्योंकि आज यह तो एक तरह से रेगुलेशंस बनाने की बात है, उसकी आजादी की बात है या उसकी लैजिस्लेटिव बैंकिंग की बात है। बहुत-बहुत धन्यवाद।

DR. TAPAS MANDAL (RANAGHAT): Thank you, Sir, for allowing me to speak on the Regional Centre for Biotechnology Bill, 2016. It is a welcome decision by the Government to introduce this Bill. Though we have enough human resources and world-class laboratories, the point is what its contribution in real terms for the development of biotechnology sector is. We are among the 12 top countries in the world. But what is our

contribution? We have only two per cent of the global trade share. It is almost negligible.

16.00 hours (Shri K.H. Muniyappa *in the Chair*)

It is not that hon. Shri Narendra Modiji started research on bio-technology. Biotechnology research is a continuous process. It is a research of long years of glorious past. If we critically examine the history and achievement of bio-technological research in India, our achievement is almost negligible. It is almost zero because there is no significant patent credited to our institutes. They are not filing a considerable number of patents for their credits. There are lots of institutes. But those institutes are only for giving degrees. They do not have sufficient teaching facilities; they do not have laboratory facilities. There are many private colleges, many institutes across the country. Every year, a lot of students are coming out of these institutes. But what is their contribution in the field of bio-technology? That is my first question to the hon. Minister.

It is not a solution to give national importance to an institute. It is better to strengthen all the institutes uniformly. Most of the time, the Central Government is giving importance to North India or South India. The Eastern part of India is being neglected by almost all the Governments. Please try to set up institutes related to bio-technology in West Bengal because West Bengal is very sound agriculturally. It has higher productivity in agriculture sector. But there is no bio-technology institute related to agriculture in the Eastern part of India. Therefore, I would urge upon the Union Minister to please look into the matter. It is good to give national importance to one Institute. But it is more important to give importance to other institutes also so that we can exclusively go towards the destination where we can satisfy our people. We can feed our huge population at large.

The Regional Centre for Bio-technology was established in 2006 by the Department of Science and Technology under the auspices of UNESCO. It is not an Institute of national importance right now. It is also not listed among the top ten bio-technology institutes. However, Faridabad is blessed with this Institute where the Central Government paid their attention. In West Bengal, there is an Indian Institute of Chemical Biology. A good quality research work is going on there. But the Central Government is not taking care of that Institute. So, wherever we have bio-technology institutes in India, please ensure that laboratory facilities, teaching facilities and its quality. Otherwise, those who are passing out from these Institutes may not be the wealth of the nation; they may be the burden of the nation. Even it is a quick growing industry. The Minister is expecting 30 per cent annual growth in the coming years. But we do not have qualified human resource for these upcoming industries. I would urge the Government to please ensure that.

This institute particularly in Faridabad has some important jobs. One is research on the pre-term neonatal deaths. In that field they are doing good work. They have a memorandum of understanding with another important institute of Japan. So, some of the important work they have started but they need to establish sub-centres in different States where it is required. And they should develop laboratories in different parts of the country so that they become really a nationally important institute. Otherwise, if you equip this Faridabad institute and do not look at other institutes, it will not work. My submission is that an agriculturally sound State like West Bengal may be given due importance in the field of setting up biotechnology institutes. This way you can serve the nation.

The mandate of this centre is to provide a platform for biotechnology education, training and research at the interface of multiple disciplines. The programmes of the centre will be designed to create opportunities for students to engage in a multidisciplinary research where they learn biotech science while integrating engineering, medicine and science to provide solutions for human and animal health, agricultural and environmental technologies.

We have reservations to accept new innovative sciences and discoveries. Bt Cotton, Bt Brinjal are simple examples. This is not accepted by a section of society and some are advocating for that. A uniform decision is not taken by the Government. We do not know. It is important as to what regulations, what guidelines are to be incorporated. I think personally that regulation in the field of research is not working. Scientists do their work independently. Research should be fundamental and no Government interference should be there. But guidelines should be imposed on a certain section. But Government should take a decision whether biotechnologically engineered crops or genetically modified crops are advocated or not, are advisable to cater to the needs of society or not. That should be decided by the Government. That is my request to the Government. Please look into the matter. Make regulations, make guidelines, but there should be certain limits. You should not interfere with the fundamental research and you should not give instructions to scientists. They independently do their own work. And it is not that this present Government has started research on biotechnology or other sciences.

Nanotechnology is equally important but that is not given due importance.

As biotechnology, the modern science, has a glorious past and an untapped great future, it should be allowed to develop. Simultaneously, there should be one nationally important nanotechnology research centre in India so that we can at least cater to the needs of the coming years of this country. Thank you.

SHRI TATHAGATA SATPATHY (DHENKANAL): Sir, I have in my hand a 26-page Bill brought forward by most respected Minister Shri Harshvardhanji. Amazingly, all these 26 pages are full of hows, whens, whos and about how to run an institution. All of that boils down to three lines at the end of the Bill which says, 'This is a Bill. I am talking about the Regional Centre for Biotechnology Bill 2016- a Bill to provide for the establishment of an institution of national importance to be known as Regional Centre for Biotechnology and to provide for matters connected therewith or incidental thereto.'

That is very good. My question to the Government and to the hon. Minister is how long we would continue with creating these stand-alone and isolated institutions whose investment is high? The youngsters who pass out, who are trained, who are educated there and who have done research, are brilliant. But if you go to Google and you search Indian scientists, you will be surprised to get a plethora of names of Indian scientists. But the interesting fact is that all of them have done research and found very interesting things. Where? In the US, in Germany, in England, in some other country except India. Sadly, there are many brilliant scientists in India who have invented usable things which can actually be very beneficial to our agriculture, to our healthcare system. But there is no connect between the outputs of those institutions such as the one we are now going to vote and obviously pass because they are in a brute majority, and the ground level as far as a doctor is concerned or as far as a farmer is concerned.

I would like to point out just one small example of a thing called pheronom which has been developed by very young and very capable scientists at Bhubaneswar in Odisha. These are like little plastic pallets and each one costs around Rs 4 to 5. For an acre of land, all you have to do is to put four of these tablets at four corners and one in the middle. Amazingly, for a whole season, you will not have the problems of pests attacking your crops. Pesticides which are very expensive, which are damaging to the health and environment and are destroying the groundwater of this country will not be required to be used. But because of this massive disconnect between our researchers, our brilliant scientists, however few they may be but their practical inventions at the ground level, we are not actually benefiting from these stand-alone institutes.

At the very outset, I am not opposing this Bill. That is not my intention. I am a positive man. I do not oppose for the sake of opposition but I oppose because over so many years in Parliament I am seeing that our policy has been such that we do not take cognizance of what is required at the ground, what we can do, and how we can benefit the poorest of the poor.

As you know and as the hon. Minister said so, vaccines developed by Indian agencies are 40 times less expensive than the international brands. I hope I am correct. Some of the medicines are actually going down to the public and are benefiting them. There is no doubt about that. Some of them which you sell for Rs. 210, a SmithKline or a Hoechst or a Merck would be selling for Rs. 3,000 or Rs. 4,000.

There is also the other aspect about the generic medicines. Our generic medicines, if you see their packaging, are not necessarily packaged as the international brands are. But whatever their packaging is, if a price of Rs. 140 is written on it, when you go and buy it, they sell it to you at Rs. 20 or Rs. 40. Now, there is confusion among the users: Is this genuine? Can I depend on this medicine? Will it save my life?

Generic medicines developed in India have been able to produce antibiotics, TB, HIV and anti-malaria medicines. All of these have been done India but because we do not take care of the smallest need of what has been done at the retail level, we are losing out. When we are losing out, our people are losing out on the benefits that the system is offering. It does not reach the people. They are suspicious of generic medicines.

On the one hand our brother-doctors are very hesitant to prescribe generic medicines because doctors themselves need to be made aware of what the generic medicines are capable of. Some of them are frightened. Some of them are influenced by multinational pharma companies. I will not blame the whole doctor brotherhood and sisterhood just because a few bad apples do not spoil the whole bunch. It is the same here amongst politicians also. There is a bad bunch here or there but it does not mean all of us are bad. So, all doctors are not bad. But generic medicine is not generally being prescribed which makes them out of reach or it does not reach the people.

Big corporate hospitals are generally not going for generic medicines. This Institute is coming up in Faridabad. You have to take care whether the Jats will not bring it down or not; will it produce something that will benefit the public; and if it does produce something does it actually sink down and come to the people. This is one thing we have to take care where the functionality of our inventions and our creations are concerned.

The other part that really concerns me and bothers me is the weak-kneed approach of our Government. I am talking about the Government of India; I am not talking about the UPA Government or the NDA Government. It is all the same. They were bowing down before the US; these people are kneeling down before the US. There is no difference for me. ...(*Interruptions*)

SHRIMATI SONIA GANDHI (RAIBAREILLY): There is a difference. ...(*Interruptions*)

SHRI TATHAGATA SATPATHY: But Madam with all respect, you know we were all happy and proud of this Government and our administrators that they had the courage to give visa to a Chinese dissenter. I personally thought that this Government had the gumption and courage and has the – what you Hindi people say – *manobal*, the innate strength to stand up to the bully that China has evolved itself into.

But, lo and behold, last night they revoked that visa. It is a shame. Either you did not give the visa at all from the beginning so you know you have a policy or if you did give it you should have the courage to stand by it, where also you fell flat.

Therefore, the other concern for me is, today the 25th of April, 2016 in Perth, Australia there is a free trade talk starting between the big leagues. Some of the social activist groups have produced data from leaked documents which says that pharmaceutical companies and the US Government directly are putting pressure to ensure that generic medicines will become far more difficult and far more expensive to be accessed in Asia and particularly in India. When these international NGOs are trying to talk to the Indian Government and convince them not to falter, not to bow down before the US because our generic medicines are not only being sold in India they are being sold in Thailand, Vietnam and in many other neighbouring countries and that is where you should actually prove that you are a super power. It is another matter that you cannot give a glass of water to your citizens, that you do not have potable water. That failure is amazing but that is not the issue.

The issue is, Sir, that when pressure will mount on you what will these single stand alone institutes do. It is your policy that will decide the fate of this country. It is your courage that will decide the fate of this country.

So, before I wind up, I will wind up Sir I am disciplined, I would like to plead before the Government – I am willing to kneel down before you but I do not wish you to kneel before China – and say do not kneel before the US, do not kneel before the multinational pharma companies. They may bribe, may give favours to many people around. Let us stand up and let us take a stand that we will make generic medicines and biotechnology as a science accessible to our farmers and to our poor, to the unhealthy, to the health care system.

These two things I believe biotechnology will cover very intensely. I expect you to make up your mind whether you want to address these issues and take the country forward on a path to become a super power which seems like a very far away dream because we do not even have drinking water. So, all these things, all these paraphernalia, that we are showing now as being achievements of the Government, I would request the Government to reconsider whether all this investment is worth or not and if you are making these investments what will be the result of those investments. Thank you, Sir.

SHRI MUTHAMSETTI SRINIVASA RAO (AVANTHI) (ANAKAPALLI): Thank you, Sir. I rise to support the Regional Centre for Biotechnology Bill, 2016.

The Government has brought this Bill because India had entered into an agreement in 2006 with the UNESCO to set up a Regional Centre for Biotechnology at Faridabad, Haryana, to serve the member countries of UNESCO. So, this Bill provides a legislative backing to the regional centre. Moreover, it confers upon the status of an institution of national importance.

Sir, as the House is aware an institution of national importance is an institute that imparts scientific and technical education and is empowered to grant degrees. The objective of the Bill is laudable. It aims at disseminating knowledge by providing teaching and research facilities in bio-technology and related fields. It also aims at facilitating transfer of technology and knowledge in the SAARC region and Asia. It will also create a hub of bio-technology and create expertise and promote cooperation at the international level. There are already a number of biotechnology research centres in various universities and institutes in the country including the CCMB at Hyderabad. I feel there should not be any duplication of work, particularly in respect of research publications. If possible, the hon. Minister may consider inviting foreign faculties as guest speakers to meet the shortage of staff in these centres.

Sir, the Board of Governors do not have in its Board a public representative. Perhaps, the hon. Minister may think of considering this suggestion of including a public representative in the Board of Governors. Regarding review of the functioning of the centre, review should be held every two years instead of four years by persons appointed by the Central Government. The hon. Minister has not mentioned about the funds, particularly about the contribution of the UNESCO to the centre. Government of India is spending a sum of Rs. 55 crore on this centre and the recurring expenditure on this centre would be around Rs. 25 crore. So, while setting up of a centre in Southern India in near future, the Government may consider setting up of such a centre in the State of Andhra Pradesh because of the rich bio-diversity of the State and because of the scope of scientific development in the place, particularly at Visakhapatnam.

My friends spoke about research and development. First of all, I would like to appreciate the Government of India for allocating a sum of Rs. 7280 crore in the Union Budget 2016-17 for conducting research which is an increase of Rs. 793 crore as compared to the Budget of 2015-16. Many exemptions like Service Tax and others have been provided. My colleagues in the House have already mentioned that the Indian Bio-Tech industry holds merely 2 per cent share of the global Bio-tech Industry. We have nearly 800 bio-tech companies in India which are growing at an average rate of about 20 per cent. But there is scope for improvement in both research and development. Some of my friends mentioned about education. First of all, we have to think about stopping the brain drain that is taking place.

Once upon a time India was the source of inventions. There has been mention about the ICBM but the first rocket was invented and used in 1790 in the war fought by Tipu Sultan in Mysore. NASA has the records in this regard. Our hon. Minister is a doctor by profession and he understands the importance of scientists and research and development. Many Indian scientists are going abroad because of so many reasons. Even in recent times there are instances of scientists leaving the country. In the universities now we are witnessing a lot of political interference. There is castism, regionalism, communalism in the universities. So, the universities should work independently without any political interference, without any disturbances and it is then only that we can stop this brain drain.

The other point is that we should also increase the Budget for research and development, not only in the field of biotechnology but in other spheres of research also. If you look at the developed countries like the USA, Europe or China, you would find that because of advantage of technology, these countries have developed so much. We have a lot of human resources in the country. About 60 per cent of our population are below 35 years. So, these people have a lot of energy, courage and potential but we have to guide them in the right way. If they are guided properly, then India will definitely become a super power.

Some of our friends mentioned about bio-terrorism. We have to take care of that as well. It is because our neighbouring countries are more focussed on spreading terrorism, instead of development. For any institution, be it this institution or any private institution or Government institution, industry-institution interaction is very important. If we are simply focusing only on training without industrial expectations, after finishing their degree or post graduation or Ph.D. again it will be a problem to the students. So, on par with education and research, if they have industry-institution interaction as a part of the curriculum, definitely, it will help the students so that after they finish their studies, they will join the industry and be useful to the industry.

Then, Biotechnology Regulatory Authority Bill should be introduced because biotechnology or biopharma are one of the thrust areas in society. Without a Regulatory Authority, we cannot proceed further. With the country offering numerous comparative advantages in terms of R&D facilities, knowledge, skills and cost effectiveness, the biotechnology industry has immense potential to emerge as a global key player.

India constitutes around 8 per cent of the total global generics market by volume indicating a huge untapped opportunity in the sector. Outsourcing to India is projected to spike up after the discovery and manufacture of formulations. Hybrid seeds, including GM seeds represent new business opportunities in India based on yield improvement.

India currently has a marginal share in the global market for industrial enzymes that is estimated to reach about 4.4 billion US dollars by 2015. Hence, there is an opportunity in focused R&D and knowledge-based innovation in the field of industrial enzymes which can innovatively replace polluting chemical processes into eco-friendly processes that also deliver environmental sustainability.

Another interesting field of study is the area of bio-markers and companion diagnostics which will enable to optimize the benefits of biotech drugs.

Lastly, I appreciate the Government and the Minister. Even after seven to eight years, they are giving legality to this institution. I do not know about the students who have already completed their degree and their Ph.D. without this legality.

India has all the ingredients to become a global leader in affordable healthcare. If there is an annual investment of 4 billion dollars to 5 billion dollars in the next five years, the biotech industry can grow to 100 billion dollars by 2025 with a 25 per cent return on investment and set a growth rate of 30 per cent year on year.

With these few words, I support the Bill. I thank you for giving this opportunity.

SHRI KONDA VISHWESHWAR REDDY (CHEVELLA): Sir, we have had some very visionary leaders in the past. Almost 15 years ago, during his term as the Prime Minister, Shri Atal Bihari Vajpayee said: "While Information Technology stands for India Today, Biotechnology stands for Bharat Tomorrow." I think that tomorrow has arrived and we are now discussing the Biotechnology Bill for introducing an institution in Faridabad.

Hon. Minister, Shri Harsh Vardhan himself had said that he believes that this industry has a potential to grow like the IT industry over the next ten years and beyond. We all agree with him. It is not only that. Since early 2000, successive Governments have also contributed and we have reached this point that we have a Strategy of 2015-2020 for developing Centres of Excellence and now, the establishment of the Regional Centre for Biotechnology as an autonomous body. It is a positive step for the development of a country.

Biotechnology will have a huge positive impact on various sectors and some of our colleagues have covered that point. It has impacts on agriculture, healthcare, pharma, vaccines, food processing, sanitation, textiles, mining and other areas like sanitation and garbage management.

The bio-technology actually converts or replaces physical, chemical and mechanical process into a bio-technological process which is environment friendly and uses less energy and has less pollution. There are many examples for that. There are some cutting edge research which is happening the world over and many of them have solutions from Swachh Bharat to Make in India to all the schemes and all the sectors the Government is involved in. I think one of the recent developments is the Delhi garbage burning. There is an enzyme called cellulase that converts cellulose into carbohydrates and carbohydrates into bio-fuels like alcohol, which again has to be used in petrol for blending. We are at that cutting edge. We need a little more impetus. There is an Indian scientist who has discovered bacteria which makes garbage smell like fragrance. There is a stonewash jeans. We actually washed with stones in the past and now we just put some enzymes. These are frivolous. But the more important things are agriculture, healthcare and vaccine. These make huge impact.

While we support this Bill, which is very much required, we need some clarity and we have some suggestions also to make. Clause 6 of the Bill provides that the jurisdiction of this Centre would extend to other Centres as well, new and existing. So, while this Centre will gain autonomy, do existing autonomous Centres lose their autonomy to this Centre? There is a scope where existing Centres can be taken over by this Centre. I think that may not be very desirable. While this has to be encouraged, the other independent Centres at Hyderabad, Thiruvananthapuram and the other 23 Centres also need to be encouraged.

The Department of Biotechnology is providing teaching programmes in 71 universities across the country. Apart from these places, there are other Centres, such as National Agri Food Biotechnology Centre in Mohali and Biotech Genomics in Kalyani, West Bengal. So, there is a biotech centre in West Bengal. Many States like Andhra Pradesh, Telangana and Chhattisgarh have their own biotechnology strategy. Now, are these in conflict with this Centre? I think the Centre needs to take cognizance of the States schemes also and what they are doing because that is very significant.

The Bill is silent on the affiliation of these Centres after the passing of the Bill and also about the integration of the State policy. Is this going to be a nodal Centre for the whole country or is this going to be just one more like the other 23 Centres? I feel it should be one of the Centres of excellence and should not be the nodal agency because that may imply that the other Centres of excellence will lose their autonomy.

Clause 17 says that two members can be nominated by the UNESCO and three members by Member States of UNESCO. Is there a scope of losing the real autonomy that we can have if only the Government of India decides who will be the members? This is a question which you may like to reply. I think there are totally 14 members. Six or seven members can be UNESCO nominees. So, I hope we do not lose our autonomy in this process because I think we need to look at the administrative process, whether it requires a simple majority or two-thirds majority for passing any Resolution of the Board.

Another significant aspect is this. I think Dr. Shashi Tharoor and other hon. Members raised this point. The Biotechnology Regulatory Authority of India Bill was introduced in 2013 and lapsed in the Fifteenth Lok Sabha. I think that needs to be revived. The Bill envisaged setting up an independent authority, the Biotechnology Regulatory Authority of India to regulate organisms and products of modern biotechnology. Having an independent authority would help solve the other issues and ensure focused and efficient research in the field.

Some of the critical areas of biotechnology are missing. Probably they are implied but they are missing in the Bill. While the Centre is already engaged in education and research in the field of bio-drug, discovery science, nano science, medicine, imaging techniques, designer crop, etc., I think it misses the important aspects of bio-fuels, enzymes, and cellulose, which is a cutting edge technique, and vaccine technologies. They are not mentioned in this Bill.

Earlier, today hon. Member, Shri Satpathy and hon. Minister Shrimati Nirmala Sitharaman talked about cell phones here. That is one area wherein China is giving run for our money. But if there is one sector where India is giving run for the money to the Chinese, it is bio-technology. It is not just India - specifically we have to take Hyderabad and Telangana. That itself is sufficient. While the world is bracing itself under Zika virus, a Hyderabad company has already developed a Zika virus vaccine and the same is patented. In the past also, there were several other examples. I think, we have developed HIV vaccine... ..(Interruptions)

DR. TAPAS MANDAL: If we go through international publications having high impact factor, if there are 10 or 11 authors, out of that, seven or eight authors are only from China. So, they are much ahead in bio-technology research than India.

SHRI KONDA VISHWESHWAR REDDY: I will address it. That is the concern and I am coming to that exact concern. But historically if we see, we have been ahead of China and even today, when it comes to very many vaccines and basic bulk drugs, we are ahead. Yes, you are right in the sense that China is overtaking, and that is exactly our concern. But as of today, if in one area, we are giving run for the money to the Chinese, it is the companies in India. We have to continue to keep that edge. This is one of the methodologies and that concern is a valid concern.

We developed the rotavirus vaccine at 50 per cent of the cost available in the US. The cheapest vaccine for Hepatitis B was developed in Hyderabad.

There are many stories born out of Hyderabad.

In Hyderabad, we already have a policy; we have the Bio-Technology Centre. Recently, our hon. Chief Minister, Shri KCR announced a pharma city. It is very important to ensure that institutions and academicians work with the industry and that is what generates good research.

While I do support the Faridabad one, I think, the Bio-Technology Centres in Hyderabad – they are two of them – are doing good work. One is to do with the fingerprinting, and the other is to do with animal bio-technology. These are not taking the full advantage that Hyderabad and Telangana presents to the nation and to the world. So, we need to focus on the area of bio-technology concerning vaccine and drug discovery cycle in Hyderabad. That would really add and keep up our continued cutting edge over the Chinese competition.

Lastly, the Programme Advisory Committee should have equal voting rights. The UNESCO, the funding agency, probably should not have any additional voting rights. That is not mentioned as to who will have the voting rights in this.

In the end, I think that re-introduction of the Bio-Technology Authority Bill will be very beneficial. Thank you so much, Sir.

SHRI SANKAR PRASAD DATTA (TRIPURA WEST): Sir, I rise to speak on the Bill, the Regional Centre for Bio-Technology Bill, 2016. All of us know that in this modern era, bio-technology has been recognized globally as a rapidly advancing science using molecular technique in the development of healthcare and solutions for human, animal, environment and other technological fields. We know that in this era, bio-technology is gradually increasing throughout the world. But it is a matter of sadness for us, for the Indians that as we see we are having a population of 18 per cent but till now we can engage only two per cent amount of money in the field of bio-technology in the global era.

Sir, we see that in India only 800 companies are involved in the field of biotechnology. But in the field of medical science biotechnology could provide 64 per cent of the total revenue. When we see the Budget of 2015-16, the allocation to this sector was only a meagre sum of Rs. 7,288 crore. We hope to expand to about 100 million dollars by 2025 in the field of biotechnology. To achieve this, each and every year 30 per cent increase should be there in budget allocation. But if we see the Budgets of 2014-15 and 2015-16, only 20 per cent increase was there.

Sir, in the case of generic drugs, in new discoveries and in product development, biotechnology is being used and it is being used for recognising diseases also. So, for boosting the production of generic medicines, for boosting agricultural production and productivity of our country, for boosting energy production and water supply in our country, biotechnology plays a very important role. As we see today, many of our States are facing drought this year. So, biotechnology is being used in many fields. For the advancement of biotechnology in our country, the Government should look into this matter seriously and sincerely so as to strengthen the field of biotechnology and for this to happen, it is necessary that public investment in this field should be enhanced.

With these words, I hope the Government would look into the matter in all seriousness and see that biotechnology advances in our country in the near future.

श्री हुकुम सिंह (कैथान) : सभापति जी, मैं इस विषय पर बहुत संक्षेप में अपने विचार रखना चाहता हूँ। मैं मंत्री जी को बधाई देना चाहता हूँ कि बहुत लम्बे सफर के बाद आज यह विधेयक इस स्थिति में आया है कि लगभग सभी सदस्यों की राय इसे पास करने की है। प्रतिपक्ष के माननीय सदस्यगण ने भी कमोवेश इसका समर्थन ही किया है।

यह बिल केवल एक संस्था तक सीमित नहीं है, इस बिल के पारित होकर कानून के बाद वह संस्था अंतर्राष्ट्रीय स्तर पर अपना एक बहुत महत्वपूर्ण रोल अदा करने में सक्षम होगी, उसे विचार-विमर्श का मौका मिलेगा और यूनेस्को की जितनी भी संस्थाएँ हैं, उनके साथ विचारों के आदान-प्रदान हो सकेगा। इस कारण से मैं उम्मीद करता हूँ कि एक विधायी दर्जा मिलने के बाद उस संस्था का अपना महत्व होगा।

मान्यवर, जहाँ हम साठ और सतर के दशक में इंतजार करते थे कि किस देश से अनाज लेकर जहाँ दिनदुस्तान में आएगा, किस बन्दरगाह पर उतरेगा, कितने लोगों को उसका अनाज मिल सकेगा और तत्कालीन प्रधानमंत्री जी ने विवश होकर एक व्यवस्था दी थी कि दफ्ते में एक दिन हम एक समय ही खाना खाएँ। आज यह बायोटेक्नोलॉजी का ही परिणाम है कि हमारे देश में न गेहूँ की कमी है, न चावल की कमी है, न चीनी की कमी है, न दूध की कमी है, वास्तव में हमें अपने वैज्ञानिकों को इसके लिए बधाई देनी चाहिए, जिनके कारण आज we are the largest milk producer in the world, we are the largest fruit producer in the world and we are the largest sugar producer in the world.

हम यहाँ तक कैसे पहुँचे हैं? हमने विज्ञान की कजह से, टेक्नोलॉजी की कजह से यह स्थान प्राप्त किया है। हमारी कई राज्य सरकारों ने सस्ती दरों पर भोजन की व्यवस्था की हुई है। गरीब आदमी वहाँ जाकर सस्ते दामों पर खाना खा सकते हैं, क्योंकि हमारे पास अनाज बहुतायत में है। इस कारण से हम लोग इसमें कामयाब हो पाए हैं। फलों में भी यही झल है।

मान्यवर, मैं आपके माध्यम से मंत्री जी से एक आग्रह करना चाहूँगा कि टेक्नोलॉजी की आवश्यकता है और टेक्नोलॉजी के बिना कोई देश या राष्ट्र सर्वाङ्ग करने वाला भी नहीं है। लेकिन टेक्नोलॉजी के दो पहलू हैं। अगर हम टेक्नोलॉजी के एक पहलू पर ही काम करते रहेंगे, अधिक अनाज, सब्जी, फल और दूध पैदा करते रहेंगे। लेकिन उनकी गुणवत्ता पर ध्यान न दिया जाए तो फिर हमारा अधिक उत्पादन करने के बावजूद भी भला होने वाला नहीं है। आज हमारे देश में किस-किस प्रकार की बीमारियाँ आयी हैं। उन बीमारियों के फैलने में क्या हम जो बिना गुणवत्ता वाला अनाज, सब्जी और फल खा रहे हैं, उनका इसमें योगदान है या नहीं? इस पर भी विचार करने की आवश्यकता है।

महोदय, आज हमारे यहाँ होड़ लगी हुई है कि हमारे देश में भी 40 लीटर एक वक्त में दूध देने वाली गाय होनी चाहिए, क्योंकि यूरोप में है। हम उनसे तुलना करना चाहते हैं। लेकिन हमें यह भी देखना चाहिए कि यूरोप में प्रकृति के साथ खिलवाड़ नहीं किया गया है। नरलें तो वहाँ विकसित की गयीं, लेकिन उसके साथ ही साथ उनके लिए पर्याप्त चरागाह, उनके घूमने के लिए मैदान बने। लेकिन हमारे देश में इस तरह के मैदानों पर मकान बनाने और उन पर कब्जा करने की होड़ लगी हुई है ताकि उन पर बस्तियाँ बसायी जा सकें। गाय की परवरिश की गयी, बड़े-बड़े डेयरी फार्म भी खुले, लेकिन उनको वह स्थान नहीं दिया गया जो उनके लिए आवश्यक था, इससे हमने प्रकृति के साथ खिलवाड़ किया, इसका परिणाम क्या हुआ? मैं एक उदाहरण देना चाहता हूँ कि आज जो लोग गौ वंश से जुड़े हुए हैं और गाय पालने का काम करते हैं। अगर उनके यहाँ 40 लीटर दूध देने वाली गाय है तो उसको रखना, उसकी देखभाल करना, लगभग असंभव है। मैसाटाइटिस का रोग है, जो होकर रहेगा, क्योंकि केवल सिम्प्टोमेटिक इलाज हमारे पास है। मैं चाहूँगा कि इस पर हम एक संतुलन कायम करें। बिना संतुलन के हम यह सब पैदा करते रहें, तो उसका कोई फायदा नहीं है।

फलों की स्थिति भी ऐसी ही हो गयी है। हमने फलों को देखने में सुंदर बना दिया है। टमाटर का साइज दुगुना कर दिया है, उसका रंग बहुत आकर्षक कर दिया है, लेकिन उसमें गुणवत्ता कितनी है? एक समय था जब देश में देसी टमाटर हुआ करता था। आप इन दोनों की तुलना करके देखें? टेक्नोलॉजी के क्षेत्र में आज गुणवत्ता पर भी बल दिया जाना चाहिए। ऐसा मेरा आग्रह है।

मान्यवर, मैं आपके माध्यम से मंत्री जी का ध्यान इस दिशा में आकर्षित करना चाहता हूँ कि उत्तर प्रदेश देश का सबसे बड़ा प्रदेश है और बायोटेक्नोलॉजी के नाम पर लखनऊ में एक पार्क है। उसके साथ कहां तक न्याय हुआ है? आप कृपा करके उधर ध्यान दें। अगर फरीदाबाद में राष्ट्रीय स्तर का संस्थान हो सकता है तो राष्ट्रीय स्तर के और भी संस्थानों की आपको आवश्यकता पड़ेगी। मुझ से पूछें कि वहां तक आते-आते भी इस बात को कहां तक हमारे यहां जो प्रोड्यूसिंग संस्थाएं खुली हुई हैं, जहां बायोटेक्नोलॉजी पर काम करने की कोशिशें चल रही हैं, वहां बायोटेक्नोलॉजी की किस स्तर की पढ़ाई है, इस पर भी ध्यान देने की आवश्यकता है। वह केवल सर्टिफिकेट देने के केंद्र हैं। वहां बच्चों का ज्ञान नहीं बढ़ता है और न ही किसी प्रकार के रिसर्च की वहां कोई सुविधा है। हमारे दिमाग में चीन का फोबिया ऐसा आ गया है कि हम हर चीज की तुलना चीन से करने लगते हैं। चीन अपने स्थान पर है। चीन की अपनी एक कार्य पद्धति है। वहां लोकतांत्रिक विचारधारा नहीं है। वहां पूर्णतः तानाशाही है। जबकि भारत एक लोकतांत्रिक देश है। इस लोकतांत्रिक देश में काम करने की हमारी अपनी सीमाएं हैं। उन लोकतांत्रिक सीमाओं का ही परिणाम है कि यह बिल कितने समय के बाद और हर स्तर पर विचार होने के बाद लोक सभा तक आ पाया। राज्य सभा की स्टैंडिंग कमेटी को रेफर हुआ, वहां इस पर विचार हुआ। उन्होंने कितने ही वैज्ञानिकों से इस पर चर्चा की। उनकी राय आती और उसके बाद यह बिल एक अच्छा स्वरूप लेकर के आज हमारे सामने आया है। मैं चाहूंगा कि मंत्री जी इन बातों पर ध्यान दें। हमें इस बात पर गर्व होना चाहिए कि हम हर क्षेत्र में स्वावलंबी होते जा रहे हैं। लेकिन स्वावलंबन के साथ-साथ हम इस बात का भी ध्यान रखें कि हम जो पदार्थ पैदा कर रहे हैं, उसकी गुणवत्ता कितनी है?

मान्यवर, मैं गेहूं की बात करना चाहता हूँ क्योंकि गेहूं से ही हमारे देश में हरित क्रांति आयी थी। हमने मेक्सिको और अमेरिका से बीज मंगाया था। मुझे यह बात स्मरण है क्योंकि मैं भी एक कृषक हूँ। वह बीज आया और उससे बहुत पैदावार बढ़ी। लेकिन जब उस समय का यानी 30 साल पहले का और आज के गेहूं का परीक्षण किया गया। उसमें एक प्रतिशत एक पार्टिकुलर प्रोटीन होता था, जो भोजन के लिए सबसे अच्छा होता था, सुगन्ध के लिए सबसे अच्छा होता था। इसमें उसी प्रोटीन की मात्रा छः प्रतिशत होगी, जो हमारे यहां ओबेसिटी बढ़ा रहा है और डाक्टर्स ने तथा अन्य बहुत से लोगों ने राय देनी शुरू कर दी कि आप गेहूं खाना बंद करिये, सब्जी खाइये, फल खाइये। कारण क्या है, अगर हम इस पर ध्यान नहीं देते और इस प्रकार के भोजन करते रहेंगे तो हमारे यहां मैडिकल क्षेत्र में कितनी भी रिसर्च हो जाए, कितने ही हमारे हॉस्पिटल्स बन जाए, कितनी हमारी दवाइयां बन जाए, बीमारी को नियंत्रण करना असंभव हो जायेगा।

इन्हीं शब्दों के साथ मैं अपनी बात को समाप्त करते हुए पुनः इसी बात पर बल देता हूँ कि प्रकृति के साथ खिलवाड़ न करके टेक्नोलॉजी को विकसित करें, लेकिन प्राकृतिक बातों का ध्यान रखकर भी एक अच्छा संतुलन उसमें स्थापित करें। इसके साथ ही मैं इस बिल का पूर्णतः समर्थन करता हूँ और मंत्री जी को बधाई देता हूँ।

SHRI VARAPRASAD RAO VELAGAPALLI (TIRUPATI): Sir, thank you very much for giving me this opportunity. As a PhD degree holder in Chemistry, I wholeheartedly welcome this Bill. In fact, it is a delayed one. I would like to thank the hon. Minister for bringing this Bill in this House.

After Independence, in fact, the first Prime Minister had mentioned: The research institutes are the temples of modern India. Precisely, what we require is such type of research institutions. The bio technology broadly encompasses the bio technology, micro biology, genetics, etc. In the past also we have wonderful centres of excellence like IITs and IIMs. Another one, which is really a centre of excellence for science, is the Indian Institute of Sciences and the CCMB in Hyderabad. It is more relevant to a country like ours for the simple reason that year after year the population of India is increasing. Therefore, to feed the ever increasing numbers, we need research, research and research. We need more research in the agricultural sector. Thanks to the good policies of our country, we are able to produce adequate grains to match with increase of population. In fact, we are looking forward for another Green Revolution. We also need modern technology every time. Technology needs to be upgraded every time. Therefore, the Centre for Bio Technology is extremely relevant. But somehow, I am not able to understand the usage of the word 'regional'. Is it for the Asia or is it for the world? I am not able to appreciate the word 'regional centre'. We are also extremely happy for giving an autonomous status for these kinds of institutions. We always interfere with the research institutions. In fact, that is one of the reasons why we are lagging behind in research in India. The temperament of scientists, generally, is very sensitive. Therefore, autonomy in a true sense means that we should respect for the institutions as well as the people who are going to do research there.

According to the present day standards, the funds that we are allocating are extremely meagre. The allocations that we are making for health and education in India are much lesser. When other countries are going forward in this field, we are allocating fund which is really a pittance. Therefore, if you really want to see the quality of research or if you want to attract the best scientists, you need to give them the best salaries and wonderful benefits. It is because they may be working for 20 years. In all the 20 years, they may not produce anything worthwhile but we never know on the 21st year, they may be producing it. So, that is the importance of research. Therefore, we must respect the quality research and the funds and grants should be adequate. Today we have some of the best institutions like AIIMS, JNU, etc., for the simple reason that funds are generously given to these kinds of institutions.

Therefore, it is extremely important that funds are given very generously.

17.00 hours (Shri Hukum Singh *in the Chair*)

Sir, I did mention that the freedom for scientists is extremely important in India. We have to see why several of our young scientists are going abroad. At least we were seven in our Andhra University institution. But for me, where I have other interest like the social interest, all other people have gone abroad, maybe to Australia, Canada, U.K. and USA, for the simple reason that there is no adequate infrastructure in India. For a country like ours, we have to sustain ourselves means we need to establish more and more such types of Centres of Excellence. As my earlier colleagues mentioned, we need to have more such Centres. In fact, South India is looking forward to have such kinds of institutions, and Andhra Pradesh is one with wonderful biodiversity.

Sir, genetics is another important thing, which is now very broadly used by all countries not for one purpose but for various purposes. Genetics is a part of Biotechnology which is used for various purposes, production with intensive agriculture and where you want to have more output and all that. Therefore, it is extremely relevant in the field of genetics as well.

I hope that the Centres of this type will definitely curtail the brain drain and also might reverse the brain drain as well because most of our young scientists are going abroad for the simple reason that we do not have proper atmosphere, proper infrastructure and proper ambience. If these types of Centres are established, I am sure that we will have so much of manpower. India has the third largest manpower in the world. Therefore, we will have to make use of the manpower that we have so that they do not go abroad and we can also attract Indian brains that are settled outside.

The earlier speakers have mentioned that new diseases like cancer virus, bacteria are coming up everyday. Different kinds of diseases are coming up. Producing a vaccine for a particular disease is taking a longer time now. By the time the vaccine is invented, we have lost several lives. So, we have to keep in touch in that way. Suppose we have the Centre of Excellence like this, research could be done quickly the moment the virus

appears and appropriate vaccine for that disease could be developed.

Another important thing here is ethics. Ethical part is extremely important and I want to bring this to the kind notice of the hon. Minister who is sitting here, and particularly in medicinal drugs, which is also related to this. Very poor people, tribals and people in the hilly areas are being used as Guinea pigs. We certainly agree that it has to be tested ultimately on human beings and there is no doubt about it. It can be tested on human beings after testing adequately on animals and all that, and with proper permission from the Government. The kind of people that are going to be used for this has to be properly mentioned. That research before the drugs are put into use should be properly followed because now and then we see in the newspapers that the poorest of the poor and the tribals in the hilly areas are being used as Guinea pigs. That needs to be regulated.

The national importance is quite relevant. We greatly admire taking the initiative to accord national importance.

The last point which I want to mention is that since Andhra Pradesh is always leading with lots of Centres of Excellence and advanced institutions like Andhra University, Osmania University – although it is now Hyderabad – we request the hon. Minister to take immediate steps to establish one of this kind in Andhra Pradesh.

Thank you very much.

SHRI K.H. MUNIYAPPA (KOLAR): Sir, Shri Varaprasad Rao ji has mentioned Biotechnology Institute as the modern temple of India. The modern temples, as called by Pandit Jawaharlal Nehru, are the industries. Industrial Revolution was started during the First Five Year Plan. Construction of dams, agricultural research, Indian Institute of Science and industrial development were all started during the time of Pandit Jawaharlal Nehru. Of course, Biotechnology is a part of it. It is not a modern temple. The modern temples of industries were started by Pandit Jawaharlal Nehru. It is just a clarification. Thank you.

डॉ. अरुण कुमार (जहानाबाद) : इस अति महत्वपूर्ण बिल पर मुझे बोलने का आपने मौका दिया, इसके लिए आपका धन्यवाद।

महोदय, ज्ञान-विज्ञान आज आधुनिक दुनिया का सबसे बड़ा केन्द्र है, जो इससे महसूस रहेगा, निश्चित तौर से भारत की एक बड़ी आबादी महसूस होगी। एक लम्बी पड़ताल के बाद और परीक्षण के बाद, लेजिस्लेटिव सिस्टम से गुजरते हुए, वैज्ञानिकों की राय से, बुद्धिजीवियों की राय से सारी समीक्षा के बाद यह बिल लाया गया है, मैं सरकार को इसके लिए धन्यवाद देना चाहूँगा। बायोटेक्नोलॉजी के फ़िल्ड में भारत दुनिया के स्तर पर जो प्रतिस्पर्धा है, उसमें सही स्थान बना सके। यह एक ऐसा फ़िल्ड है, जहाँ से हम अपने शास्त्र का, हम अपने जीवन रक्षा का, हम अपने भोजन खाद्य पदार्थों का सारी चीजों का समेकित रूप से और व्यवस्थित तरीके से विकास के रास्ते पर जा सकते हैं। यह क्षेत्र आज विज्ञान की जो एक नकारात्मक प्रगति हुई है, उस प्रगति से जो हैजार्ड मानव-जीवन के लिए पैदा हुआ है, उसका भी समाधान हम बायोटेक्नोलॉजी के माध्यम से कर सकते हैं। चाहे वह वायरस हो, जो आज इतनी तरह की वायरल डिजीज पैदा हो रही हैं और जो हमारे जीवन की वैज्ञानिक पद्धति, नैसर्गिक पद्धति के विपरीत आवरण की वजह से हो रहा है। इन चीजों का समाधान भी बायोटेक्नोलॉजी के माध्यम से हो सकता है।

हमारे पुरखे बड़े वैज्ञानिक थे, उन्होंने अपनी जीवन पद्धति को वैज्ञानिक तरीके से संवारा था और परम्परा में उसे ढाला था। आज दुनिया की होड़ में हमने उन परम्पराओं को खण्डित किया है, जिसकी वजह से हमारे जीवन में बहुत सारे अवसाद पैदा हुए हैं। इन सारे अवसादों को भी हम बायोटेक्नोलॉजी के माध्यम से रद्द कर सकते हैं। निश्चित तौर से जहाँ हम दुनिया को दिशा देते रहे हैं और आज ठीक ही माननीय सदस्य कह रहे थे कि पंडित जवाहर लाल नेहरू ने एक बड़ी उच्च सोच के तहत दुनिया के सामने एक सकारात्मक प्रतिस्पर्धा और भारत को उस दिशा में ले जाने के लिए विभिन्न वैज्ञानिक संस्थानों को विकसित करने का काम किया था। लेकिन पिछले कुछ वर्षों में इसकी अद्योगति हुई है। इस सरकार ने एक संकल्प के साथ उन सारी संस्थाओं को, उन वैज्ञानिक विद्याओं को जीवंत करने का संकल्प लिया है। माननीय मंत्री महोदय, जो खुद भी डॉक्टर हैं, वैज्ञानिक हैं तो इन्होंने एक सद्दृष्टि के साथ इस प्रयास को शुरू किया है। इससे एक सकारात्मक प्रतिस्पर्धा में भारत भी शामिल हो सकेगा, ऐसा इस बिल से प्रावधान बनता है।

इस दृष्टि से हमें यह देखना होगा कि पिछले 25-30 वर्षों में जो ज्ञान के क्षेत्र में भारत कमजोर पड़ा है और ऐसा नहीं है कि भारतीय कमजोर हैं, हमारी संस्थाएं कमजोर हुई हैं। हमने एक तरफ वशिष्ठ नारायण सिंह जैसे गणितज्ञ को पैदा किया है, जिसका सैटेलाइट के क्षेत्र में दुनिया के विकास में बड़ा योगदान है। डॉक्टर सुखाना जैसे लोगों ने, जिन्होंने आज हेल्थ सेक्टर में, जेनेटिक सिस्टम में एक बड़ा कान्ट्रिब्यूशन किया है। इसी तरीके से और भी सारे क्षेत्रों में हमारे भारतीय वैज्ञानिकों ने दुनिया के अन्य वैज्ञानिक इंस्टीट्यूट्स में जाकर के अपने ज्ञान का झंडा लहराया है, स्थापित किया है। ब्रेन ड्रेन को भी हमें रोकना चाहिए। हमारे यहाँ ज्ञान पर भी कई तरह के काले बादल छाए हुए हैं, कई साथियों ने इस बात को चिन्हित किया है, मैं विस्तार से उसमें जाना नहीं चाहता हूँ। लेकिन इस पर गौर जरूर करना चाहिए कि हमारे यहाँ की प्रतिभा क्यों पलायित हो रही है? इस पर कैसे रोक लगाई जाए। इन सारे सबालों को लेकर जिस तरह से आईटी एक हब बना और उसमें यहाँ के युवाओं ने बड़ा कंट्रीब्यूशन दिया, लेकिन संसाधनों के अभाव में जितना इसका शोषण भारत के पक्ष में होना चाहिए था, वह नहीं हुआ, दुनिया के विकसित राष्ट्रों ने हमारे ज्ञान का शोषण किया और उससे उन्होंने धन भी कमाया और धाक भी जमाई। इसी तरह से बायोटेक्नोलॉजी के क्षेत्र में भी हमारे पास प्रतिभा है, चाहे कोई देश कितना भी पेपर क्यों न सबमिट कर ले।

हमारे यहाँ यदि वातावरण का निर्माण हो तो निश्चित तौर से हमारे जो वैज्ञानिक हैं, जो युवाशक्ति हैं, जिनमें प्रतिभा है, वह दुनिया को एक सकारात्मक वातावरण में जीने के लिए बायोफोर्स को एक वाचेबल फोर्स के रूप में बना सकते हैं। इसलिए इस बिल के माध्यम से हमें इस दिशा में बढ़ने का एक सुनहरा मौका मिलेगा। हम सरकार को और माननीय मंत्री जी को इस बिल को लाने के लिए बधाई देते हैं।

श्री दुष्यंत चौटाला (हिसार) : सभापति जी, मैं आपका धन्यवाद करता हूँ कि आपने मुझे रीजनल सेंटर फॉर बायोटेक्नोलॉजी बिल 2016 पर बोलने का मौका दिया।

सभापति महोदय, जहाँ हम इस रीजनल सेंटर की चर्चा करते हैं, जितना मेरा संज्ञान है, 2003 के अंदर यूनेस्को की बैठक में डॉ. मुस्लीमनोहर जोशी जी ने एक एग्रीमेंट साइन किया था जिसके तहत पूरे एशिया का एक रीजनल सेंटर हमारे देश के अंदर स्थापित होना था। आज 13 साल बाद उसके लिए पूरे तौर पर एक बॉडी और फंड आज हमारी पार्टियामेंट अलॉट करने जा रही है, मैं बधाई देता हूँ सरकार को कि डेर आवर दुरस्त आवर, 13 साल तो लगे। 2009 में इसकी एस्टैबलिशमेंट शुरू हुई। उसके बाद गुड़गाँव से उठाकर इसको फरीदाबाद ले जाया गया और फरीदाबाद में जाकर पूरी तौर पर इसको गठित करने के लिए सरकार द्वारा 55 करोड़ रुपये लगाए गए।

सभापति जी, जहाँ हम बायो टेक्नोलॉजी की बात करते हैं, आज किसान के लिए सबसे लाभदायी कोई चीज आई तो बीटी सीड्स आए, खास तौर से कॉटन के अंदर जहाँ देसी वूड से बायोटेक वूड को हम लेकर आए। चूँकि कृषि मंत्री भी यहाँ बैठे हैं, मैं कहना चाहूँगा कि इन्होंने देखा कि जो बीटी सीड्स थे, उन पर भी इंसेक्टिसाइड्स वगैरह का प्रभाव नहीं पड़ा और सफेद मक्खी की वजह से बहुत बुरा हाल बायोटेक्नोलॉजी सीड्स का हुआ। यहाँ देसी सीड्स ही काम आए। हम टेक्नोलॉजी को ला रहे हैं और इस देश के अंदर इतना ब्रेन है मगर हम उसको पूरी तौर पर डेवलप नहीं कर पा रहे हैं। अमरीका जैसे विकसित देश आज बीटी 15 की काटन सीड्स यूज करता है और हमारा देश अभी बीटी 3 पर रुक बैठा है। हमारे देश के अंदर इतनी रोक-टोक है कि जो हमारे वैज्ञानिकों को पूरी तौर पर रिसर्च नहीं करने देती।

आज बायोटेक्नोलॉजी केवलमात्र एग्रीकल्चर फ़िल्ड में कामयाबी नहीं दे रही है। आज चाहे मैडिसिन हो, वलीन एनर्जी हो, हर फ़िल्ड के अंदर बायोटेक्नोलॉजी का अपना एक रोल है। मैं उम्मीद रखूँगा कि यह जो रीजनल सेंटर पूरे एशिया का हमारे देश के अंदर और खास तौर से मेरे प्रदेश हरियाणा के अंदर बनाने जा रहे हैं, यह रिसर्च को उस तैल पर लेकर जाए कि विदेशों से आकर साइंटिस्ट हमारे देश के इस रीजनल सेंटर पर रिसर्च करने का काम करें। मगर जब मैंने इस बिल को पढ़ा तो पता चला, केवलमात्र 25 करोड़ रुपये एनुअली हमारे देश के अंदर इस रिसर्च सेंटर को चलाने

के लिए दिया जा रहा है। मैं माननीय मंत्री जी से पूछना चाहूँगा कि 25 करोड़ तो कंसॉलिडेटेड फंड ऑफ इंडिया से दिया जाएगा। इसके साथ-साथ यूएनस्को कितना देने का काम करेगी, वह भी बताएँ। अगर यूएनस्को की तरफ से फंडिंग नहीं आ रहे हैं, और टोटली वह हमारे कंसॉलिडेटेड फंड पर डिपेंडेंट है तो ज़रूर इसको बढ़ाकर सौ करोड़ रुपये करने का काम किया जाए, क्योंकि अगर हमारे साइंटिस्ट अपने पैसे से रिसर्च करने तो जो प्रोजेक्ट आएगा, उसको भारत देश के अंदर पेटेंट कराकर उस पैसे को हमारे देश में रखेंगे। क्योंकि हमें देखने को मिलता है कि बड़ी बड़ी कंपनियों विदेशों से हमारे देश में आती हैं। हमारे देश के रिसोर्सेज को यूटिलाइज़ करती हैं, प्रोजेक्ट निकालती हैं और प्रोजेक्ट निकालने के बाद अमरीका और इंग्लैंड जैसे विकसित देशों में जाकर पेटेंट कराकर करोड़ों कमाने का काम करती हैं। एनर्जी हमारी यूटिलाइज़ होती है और फायदा उन देशों को मिलता है।

मैं उम्मीद रखूँगा कि इस रीजनल सेंटर के अंदर पढ़ने वाला और रिसर्च होने वाला हरेक पदार्थ हमारे देश के अंदर पेटेंट हो। और जो स्टूडेंट रिसर्च करके इस सेंटर से जाये, उस पर एक प्रतिबन्ध हो कि एडमिस्ट्रेशन दस साल वह इस देश की सेवा करने का काम करे, किसी विदेशी कंपनी के लिए काम न करे। जहाँ रीजनल सेंटरों की बात करते हैं, आज एवर वैजिंग एनवायरनमेंट है, हर रोज़ टैक्नोलोजी बदल रही है और बाँयो टैक्नोलोजी तो एक ऐसा क्षेत्र है, जहाँ सैकिण्ड्स के अन्दर कोई नया वायरस विप्रेत हो जाता है और हमारे साइंटिस्ट्स को दिन-रात मेहनत करके उसके ऊपर रिसर्च करनी पड़ती है। मेरे से पहले रेड्डी जी बता रहे थे कि हैदराबाद के अन्दर जो जीका वायरस आया, उसके ऊपर वैक्सीन डेवलप करने का काम किया। मेरे खुद के लोक सभा क्षेत्र के अन्दर जब स्वाइन फ्लू हमारे देश के अन्दर आया था तो नेशनल सेंटर फॉर इन्फ्लूएंजा ने एनप्लुएंजा करके एक मैडीसिन डेवलप करके पूरी दुनिया को देने का काम किया था, जिससे उसके ऊपर हमें फायदा मिल पाया और उस बीमारी को हम रोक पाये। इस तरह की डेवलपमेंट हमारे देश में निरन्तर होती है, मगर हमें इन इंस्टीट्यूट्स को बढ़ाना पड़ेगा।

आज हमारे देश के अन्दर केवलमात्र 71 ऐसी यूनिवर्सिटीज़ हैं, जो बाँयो टैक्नोलोजी के ऊपर डिपार्टमेंट्स रखे बैठी हैं, 26 ऐसे एवसीलेंसी के सेंटर हैं, जो बाँयो टैक्नोलोजी पर रिसर्च करते हैं। हमें इन्हें और फंड्स देने पड़ेंगे। बाँयो टैक्नोलोजी रिसर्च का भी पर्यटन है, डेवलपमेंट का भी पर्यटन है। अगर आज वलीन एनर्जी की बात की, निरन्तर हम देखते हैं कि अलग-अलग क्षेत्रों के अन्दर हम सोलर एनर्जी की बात करते हैं, हम विंड एनर्जी की बात करते हैं, अब तो दिल्ली के अन्दर ऑड ईवन के नाम से पोल्यूशन कम करने की भी रिसर्च की जाती है। मगर बाँयो टैक्नोलोजी एक बहुत बड़ा स्कोप है, वलीन एनर्जी का, ग्रीन एनर्जी का और अगर इस पर इन्वेस्ट किया जाये तो आने वाले समय में हमें इन मुद्दों पर लड़ाई नहीं लड़नी पड़ेगी। हमें छोटी-छोटी चीज़ों पर पब्लिसिटी नहीं लेनी पड़ेगी, मगर हमारे वैज्ञानिक हमारे देश को आगे ले जाने के लिए अपना पसीना बहाने को तैयार रहेंगे।

मैं आखिर में इतना ही बोलना चाहूँगा, क्योंकि इसकी जो बाँडी बन रही है, उसके अन्दर अलग-अलग सदस्यों को माननीय मंत्री जी ने दिखाने का काम किया है। हमारे देश के अन्दर कोई भी बाँडी बनती है, चाहे वह एम्स हो, चाहे वह सरकारी फंडेड यूनिवर्सिटी हो, चाहे आई.सी.ए.आर. ही क्यों न हो, हर बाँडी के अन्दर इस सदन के और राज्य सभा के सांसद मैम्बर होते हैं तो मैं आग्रह करूँगा कि जब हम आज इस बिल को बना रहे हैं तो एक एग्जेंटेड डालकर एडमिस्ट्रेशन दो लोक सभा के और एक राज्य सभा के सदस्यों को भी इसकी गवर्निंग बाँडी का सदस्य बनाया जाये, क्योंकि पब्लिक एक्सपैक्ट से जब पैसा लग रहा है तो उसकी मोनेटरिंग करने के लिए भी हमारी ओर से तुने हुए प्रतिनिधि हमारी मोनेटरिंग पूरे तौर पर कर पायें।

दोबारा आपने मुझे इस अहम बिल पर बोलने का मौका दिया, मैं आपका आभार प्रकट करता हूँ और उम्मीद करता हूँ कि यह सदन पूर्ण तौर पर इस अहम बिल को सर्वसम्मति से पास करने का काम करेगा। बहुत-बहुत धन्यवाद।

श्री कौशलेन्द्र कुमार (नालंदा) : सभापति महोदय, आपने मुझे प्रादेशिक जैव प्रौद्योगिकी केन्द्र विधेयक, 2016 पर अपने विचार व्यक्त करने की अनुमति दी है, इसके लिए आपको धन्यवाद।

सरकार द्वारा 20 अप्रैल, 2009 के कार्यपालिका अध्यादेश के माध्यम से स्थापित विद्यमान प्रादेशिक जैव प्रौद्योगिकी प्रशिक्षण एवं शिक्षण केन्द्र, फरीदाबाद को प्रादेशिक जैव प्रौद्योगिकी केन्द्र के रूप में कानूनी एवं वैधानिक मान्यता देने के लिए यह विधेयक सरकार ने पेश किया है, जो स्वागतयोग्य कदम है। मैं मानता हूँ कि सरकार का यह सार्थक कदम होगा और इससे देश में जैव प्रौद्योगिकी के क्षेत्र में काफी तेजी से विकास होगा। आधुनिक जैव प्रौद्योगिकी से मानव एवं पशु क्षेत्र के लिए स्वास्थ्य सम्बन्धी देख-रेखा समाधानों का विकास कार्य करने में भी मदद मिलेगी। देश में कुशल मानव संसाधन विकास होगा और विश्व में भी हम अपनी पहचान बनाने में सफल होंगे। यह एक स्वागत संस्था होगी, जिससे इसे अपना कार्य करने में सरकारी रुकावट नहीं होगी, यह अच्छा कदम है।

मैं सरकार से एक बिन्दु पर ध्यान देने के लिए निवेदन करना चाहता हूँ। यह संस्था स्वास्थ्य के क्षेत्र में काम करती है, चाहे वह मानव स्वास्थ्य हो या पशु स्वास्थ्य सम्बन्धी हो, किन्तु आज फार्मास्युटीकल्स के क्षेत्र में तूट मची हुई है। सभी तरह की दवा, उपकरण एवं उपचार सामग्री इतनी महंगी हो गई है कि आम नागरिकों को स्वास्थ्य सुविधा नहीं उपलब्ध हो रही है। गरीब लोग असाध्य बीमारियों का इलाज करने में सक्षम नहीं हैं। सरकार ने तो वैसे करीब 12 सौ दवाओं पर अध्ययन कर 350 तरह की दवाओं को बंद भी कर दिया है। मेरा मानना है कि सभी 12 सौ दवाओं को तत्काल बहाल करना चाहिए। आप ऐसी व्यवस्था करें कि दवाएं, उपकरण एवं स्वास्थ्य उपचार सामग्री का दाम तर्कसंगत एवं सस्ता हो, जिससे कि गरीबों का इलाज हो सके।

मैं सरकार का ध्यान एक और महत्वपूर्ण विषय की ओर दिलाना चाहता हूँ कि विज्ञान और प्रौद्योगिकी मंत्री जी इस सेक्टर का आई टी सेक्टर की तरह उज्ज्वल भविष्य देखा रहे हैं और लक्ष्य निर्धारित किए हैं कि वर्ष 2025 तक जैविक प्रौद्योगिकी क्षेत्र से संबंधित उद्योग एक सौ अरब डॉलर तक पहुँच जाएंगे। मैं माननीय मंत्री जी से जानना चाहता हूँ कि वर्ष 2019 तक आप कहां तक पहुँचेंगे, कहां तक आप सक्षम होंगे? इसको भी दर्शाना चाहिए। यह सभी संभव होगा जब सरकार आई टी की तरह जैव प्रौद्योगिकी के संस्थान भी सभी राज्यों में स्थापित हों। मैं बिहार से आता हूँ। इसी क़म में मेरा माननीय मंत्री जी से आग्रह है कि बिहार में भी जैविक प्रौद्योगिकी प्रशिक्षण और शिक्षण संस्थान खोलने की दिशा में कार्यवाही करें। धन्यवाद।

श्री पृथ्वी सिंह पटेल (दमोह) : सभापति महोदय, आज मैं पूरे आत्मविश्वास के साथ सरकार के मुखिया और आदरणीय प्रधानमंत्री जी को और विभाग के मंत्री जी को हृदय से धन्यवाद देना चाहता हूँ। यह इसलिए नहीं कि मैं उस पार्टी का सदस्य हूँ, बल्कि मुझे खुशी इस बात की है कि जब मैं कॉलेज में पढ़ता था, तो वर्ष 1975-76 के दौरान हमारे विश्वविद्यालय में बायो साइंस पढ़ती बार आया था। उस समय मेरे ही साथ पढ़ने वाला एक छात्र आज अमेरिका की जीएस पर जो काम चल रहा है, उसकी 14 लोगों की टीम में वह भी शामिल है। जब वह 3 साल पहले आया और हम सारे पुराने छात्र बैठे तो उसने मुझसे कहा कि मैं धन कमाना नहीं चाहता, वहां पर रहकर अपनी प्रतिष्ठा के बजाए मैं देश में कुछ करना चाहता हूँ और मैं वापस आना चाहता हूँ। मैंने निराश होकर उसको मना किया कि तुम्हारे लायक यहाँ काम कहां है? आज जब यह बिल आया है तो मैं आश्चर्यतः हुआ हूँ कि शायद प्रतिभा पलायन का जो क़म था, वह रुक जाएगा।

सभापति जी, आपने भी अपनी बात कही है। इसमें बड़ी जिम्मेदारी से कहा गया है कि जैव प्रौद्योगिकी की जो शिक्षा है, उसका प्रशिक्षण और अनुसंधान, तीन शब्दों का उपयोग किया गया है। इस केन्द्र से इसको अवसर मिलेगा। मैं एक बात और जोड़ना चाहता हूँ कि प्रमाणीकरण की इस देश को जरूरत है। अनुसंधान तो उनका होता है, जो हमारे पास होता नहीं है। हमारे पास है और पहले भी था। दुर्भाग्य यह रहा है कि हमारे पास प्रमाणीकरण का कोई आधार नहीं था, कोई संस्था नहीं थी, जो इस बात को तय कर सकती कि वास्तव में यह विद्या हमारी अपनी विद्या है।

मुझे सदन में दो अवसर और मिले हैं। मैं आज अटल जी को स्मरण करना चाहता हूँ। जब वे प्रधानमंत्री थे, तब पौध भिन्नता का कानून भी इस सदन में पास हुआ है, जैव विविधता का कानून भी इस सदन में पास हुआ है और उसके बाद आज जैव प्रौद्योगिकी की बात यहाँ पर आई है। इसलिए मैं उन तमाम मित्तों से कहना चाहता हूँ कि सब सरकारों ने अच्छे काम किए होंगे, लेकिन देश को जिन बातों की पहले जरूरत थी, शायद उसको लाने में हमने विलम्ब किया है, इस बात को सदन को स्वीकार करना पड़ेगा। हम जिस प्रकार से चीन के लोगों की सूची गिनाते रहते हैं, मैं उनसे बड़े आग्रह के साथ कहना चाहता हूँ कि जितने भी पेपर हिंदुस्तान में इस बायो टेक्नोलॉजी को लेकर हैं या बायो डायवर्सिटी की अगर हम बात करें तो मैं उसको लिंक करना चाहता हूँ, मैं मंत्री महोदय से कहना चाहता हूँ। यदि कोई अनुसंधान होगा, अगर बायो डायवर्सिटी नहीं है, अगर उसकी कीमत को आप नजरंदाज करेंगे तो बायो टेक्नोलॉजी के बारे में ज्यादा सोच नहीं पाएंगे। आपको सॉ-मैटेरियल चाहिए। वह किस देश के पास में है? अगर पौध भिन्नता की बात की जाए तो मैं चरक का नाम लेना चाहता हूँ। हमने चरक को कितनी गंभीरता से लिया? चरक ऐसे व्यक्ति थे, जिनके पास चरक संहिता में पौध भिन्नता की सूची है। आजाद भारत के इतने लंबे काल खंड में हमें विज्ञान में बहुत सफलता अर्जित की है, उसके बाद भी हमारी जानकारी में लगभग 16,000 पौधे हैं, लेकिन चरक संहिता में उनसे ज्यादा पौधे हैं।

मैं दूसरा उदाहरण आयुर्वेद का देना चाहता हूँ। कई बार हम अपनी सीमाओं में इतने संकीर्ण हो जाते हैं कि दूसरी बातों को रूढ़ीवादी कहते हैं, जैसा हमारे मित्र अरुण सिंह जी ने कहा था। हमने घाघ और भड़ुशी की कथावतों का मजाक उड़ाया। क्या हम ने कभी प्रमाणीकरण की कोशिश की? जो आदमी कह कर चला गया कि इस महीने के इस पहर में अगर पूर्व की तरफ हवा चलेगी तो ऐसा होगा और हवा पश्चिम की तरफ चलेगी तो वैसा हो जायेगा। मुझे लगता है कि कई बार हम वैज्ञानिकता की स्थिति को प्रमाणित करने की स्थिति में नहीं थे, शायद इसलिए हम पिछड़ गये हैं। हमने

अंधानुकरण उन बातों का किया, जिन बातों को लेकर हम आश्चर्य ही नहीं थे। उदाहरण के लिए, वह अनाज आया, जिसका उल्लेख आपने किया, वह साथ में 'गाजर घास' ले कर आया। आज 'गाजर घास' मध्य प्रदेश जैसे स्थान के लिए अभिशाप बन गयी। लेकिन उसका समाधान जबलपुर कृषि विश्वविद्यालय के एक वैज्ञानिक ने खोजा। उसने एक कीड़ा बनवाया, यह बकायदा बायोटेक्नोलॉजी का हिस्सा है, वह उस पौधे को खा जाता है, लेकिन हमें उसके आने के परिणाम नहीं पता है कि बाकी चीजों को वह कितना नुकसान करेगा। ऐसा नहीं है कि हमारे यहां बायोटेक्नोलॉजी नहीं थी, लेकिन उसमें मार्यादा की बात सदैव कही गयी है। चाहे हम दिशंकु का उदाहरण लें या अन्य बातों का उदाहरण लें। हम किस सीमा तक किन क्षेत्रों में इसका उपयोग करेंगे, इसके बारे में भी नहीं न कहीं यह तय होना चाहिए।

सभापति महोदय, मैं आपके माध्यम से आग्रह करना चाहता हूँ कि मैं इसमें सिर्फ एक बिन्दु 8(क) को देख रहा था, क्या करने लायक है? इन बातों पर जितने हमारे सेन्टर्स काम करते हैं, उनके बारे में हमने सोचना शुरू किया, सबको एकजुट करने की कोशिश की तो मुझे लगता है कि यह देश के लिए स्वर्णिम अवसर होगा।

मंत्री जी ने भी कहा है कि हम तीडर बनेंगे, हम किस बात में तीडर बनेंगे, क्या इस बात पर विचार नहीं होना चाहिए? ऐसा नहीं है कि हमारे पास यह नहीं है, हमारे पास है, उनको सहेजने की जरूरत है, उनके प्रमाणिकरण की जरूरत है, उनको प्रस्तुत करने की जरूरत है और पूरे आत्म विश्वास के साथ उन बातों का मूल्यांकन करने की आवश्यकता है, तो मैं समझता हूँ कि जो पेपर बनेगा, समाधान बनेगा, वह सिर्फ देश को ही नहीं मिलेगा बल्कि दुनिया को मिलेगा, क्योंकि हमने कभी भी दोहन पर विश्वास नहीं किया है। हमने हमेशा संतुलित समाधान पर विश्वास किया है। इसलिए मुझे लगता है कि जो हमारी अपनी सोच होगी, हमारी धरती से पैदा हुआ होगा, वह ज्यादा महत्वपूर्ण होगा।

मैं एक उदाहरण गाय के बारे में देना चाहता हूँ। जैसे आपने भी कहा है कि दूध के उत्पादन में हम सिरमौर बन गये लेकिन 'ए-टू' कितनों में है? वह ब्राजील की नस्लों में है लेकिन भारत की सारी नस्लों में 'ए-टू' है। क्या यह जेनेटिक्स नहीं है? क्या यह बायोटेक्नोलॉजी के विचार का विषय नहीं है। हमारे पास दूध की मात्रा है, फैट है लेकिन वह चीज नहीं है जो वास्तव में मानव जीवन को मजबूत करने वाली है। वह 'ए-टू' सिर्फ भारतीय गायों में पाया जाता है। हम ने दूध की ववांटी पर बहुत चिंता की है, उसकी ववांटी पर चिंता न करके गतनी हमने की है? उसके आधार पर हम दुनिया के सामने लावारी दिखाये, मैं नहीं मानता की यह ठीक तरीका है।

हमारे मंत्रियों ने जिस आधार पर इस देश के भू-विज्ञान, यहां के जिओलॉजी और जिओग्राफी के आधार पर, हमने अपनी बातें तय की थी, वह ज्यादा महत्वपूर्ण थी। उदाहरण के लिए मैं कहना चाहता हूँ कि बिहार और मध्य प्रदेश में भी एक प्रकार की धान होती थी। खेतों में ज्यों-ज्यों पानी बढ़ता था, त्यों-त्यों धान का ऊपरी हिस्सा बढ़ता जाता था, धान खराब नहीं होती थी, हमने उसको खो दिया। हमने उसे इसलिए खो दिया कि हमने जेनेटिक्स में केवल उत्पादन की चिंता की। हमने अपने उस महत्वपूर्ण गुण को नष्ट कर दिया जो पानी के स्तर ज्यादा बढ़ने के बावजूद भी नष्ट नहीं हो सकती थी। वह हमें जीवन देकर जाती थी, अनाज देकर जाती थी। मैं ऐसे अनेक बातें कर सकता हूँ कि जहां पर बिल्कुल पानी नहीं है, कम पानी में भी हमारे पौधे जिंदा रह सकते हैं, जैसे अलसी है, हम ने उन पर कभी विचार नहीं किया कि उसे कैसे ठीक करेंगे? हमने दूसरी तरफ से आयात किया और खेती और किसान को नष्ट किया, उसका उदाहरण पंजाब और हरियाणा हैं।

सभापति महोदय, हम इसका अभिनंदन करते हैं। मैं इस बात के लिए अभिनंदन करूंगा कि हमारी जो भी प्रतिभा है, वह देश के बाहर पलायन नहीं करेगी, शायद सरकार यह विकल्प देने में सफल हुयी है, इसलिए मैं सरकार को बधाई देना चाहता हूँ। हमने अध्यादेश निकाले हैं, इसलिए मैंने पहले बायोडायवर्सिटी और प्लांट वेरायटीज बिल की भी बात की है। इतने लंबे समय के बावजूद भी बायोडायवर्सिटी कहां है? लोग कहते हैं कि शायद यह हिमालय में होगी, लेकिन नहीं, उसमें छत्तीसगढ़ और मध्य प्रदेश नम्बर वन पर हैं, उनके बाद पहाड़ी राज्य आते हैं। इसलिए मुझे लगता है कि औषधियां भी यहीं पर हैं। अगर हमें उन सभी के बारे में जानना है तो हम सभी को यह चिंता करनी पड़ेगी, केवल उनके बायोलॉजिकल नाम से काम नहीं चलेगा। हमें उनके उन नामों को भी जानना होगा जो स्थानीय तौर पर जाने जाते हैं। यह कहने के पीछे मेरा सिर्फ इतना तात्पर्य है कि जब हम पेटेंट की लड़ाई में जुड़ते हैं, अगर स्थानीय भाषा में वे लिखे गये होते, उनका उल्लेख किया गया होता तो हम कभी पेटेंट की लड़ाई हार नहीं सकते थे। हम चरक के उदाहरण के साथ पेटेंट की अनेक लड़ाई जीते हैं, लेकिन हमने उसे जब तक नजरअंदाज किया तब तक दुनिया की अदालतों में हारते रहे। हमारे पास बौद्धिक सम्पदा की कमी नहीं है, क्षमता की कमी नहीं है, वह ऑलरेडी हमारे पास है। इसलिए मैं कटुंगा कि अनुसंधान का काम होना चाहिए। लेकिन हमारे पास जो है, उसके प्रमाणिकरण का भी प्रबंध होना चाहिए, जो इस बिल का उद्देश्य भी है। मैं इतना कहते हुए अपनी बात समाप्त करता हूँ। आपने इस महत्वपूर्ण विषय पर मुझे बोलने का अवसर दिया, मैं आपका बहुत-बहुत धन्यवाद करता हूँ।

PROF. RICHARD HAY (NOMINATED): Chairman, Sir, I express my thanks for giving me this opportunity to speak on a crucially important subject.

This is an era of science, technology and digital innovation where, for example, scientists have recently discovered an enzyme that can convert all blood groups into the universal blood type 'O'.

At the outset, I compliment the hon. Minister of Science and Technology for taking these bold steps to empower the field of bio-technology in our country.

India, though not a pioneer in this field, is making quantum jumps in this important area of Research and Development in bio-technology. This Centre, I believe, would not only facilitate more practical-oriented research, but would also produce more monumental patents that would gauge the success of this Centre in the long run.

This Centre, we believe, would give a big boost to the bio-technology industry in India, which is presently growing at a rate of 20 per cent and is expected to grow at a rate of 30 per cent in the coming years.

Let me narrate a few plus points. It is going to provide immense potential to our scientists who are forced to go to the West to undertake research in this field. Instead, they can happily take up research on the Indian soil. India will emerge as a big player in the field of pharmaceutical industry in the world. New drugs will be discovered, especially, in diabolic diseases like Cancer, HIV, Diabetes, Hypertension, etc. We can discover new vaccines and find everlasting solutions to communicable diseases too.

The food processing industry, by way of value-added products, will find practical solutions to the many problems being faced by our farmers, especially, to double their income by 2022.

The possibility to extend further research in human stem cells would be yet another fabulous boon to medicine and healthcare. So, there are a lot of plus points here. I specially compliment the hon. Minister and I wholeheartedly support the Bill. Thank you.

THE MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (DR. HARSH VARDHAN) : Thank you, Sir. First of all, let me thank all the hon. Members, namely, Dr. Shashi Tharoor, Shri Jagdambika Pal, Dr. Tapas Mandal, Shri Tathagata Satpathy, Shri Muthamsetti Srinivasa Rao, Shri Konda Vishweshwar Reddy, Shri Sankar Prasad Datta, Shri Hukum Singh, Shri Varaprasad Rao Velagapalli, Shri K.H. Muniyappa, Dr. Arun Kumar, Shri Dushyant Chautala, Shri Kaushalendra Kumar, Shri Prahlad Singh Patel and Prof. Richard Hay -- and forgive me if I have left somebody's name -- for participating in this discussion on this very very important Bill.

I feel extremely grateful to all of you and this House, and express my deep heart-felt gratitude for supporting this Bill.

By and large, the Members were generally very positive. Some concerns were raised and some apprehensions were also expressed, but I felt sorry about two particular comments about which I want to talk in the beginning. Somebody said that we were kneeling before America or China. I fail to understand how by bringing a Regional Centre of Biotechnology in the country, which is going to be one of the state-of-the-art things, for the whole of Asia, we are seen as kneeling before America or China. We can tell the hon. Member that we shall be the last people in this world to ever kneel before anyone. For us, there is only one guiding principle, that is, *Rashtra Dharm, Samaj Dharm and Manav Dharm*. We are only guided by that.

Moreover, this Bill has its origin from the time of our great Prime Minister Shri Atal Bihari Vajpayee. As I mentioned in the beginning, for the character or the DNA of our Government or our leaders, you have to recall that incident in March, 1998. Atalji became the Prime Minister of India and you know what he did on 11th May 1998, in spite of all pressures, for which I think anybody could have been seen kneeling. We enjoy our DNA from that great Prime Minister of India Shri Atal Bihari Vajpayee.

Now, there is another great leader, Shri Narendra Modi, who enjoys the legacy of that great Prime Minister. He is thoroughly committed to our country's welfare; he is thoroughly committed to science; and he is thoroughly committed to science professionals, scientists, and scientific acumen. He has brilliant and innovative ideas. He is committed to promote science in the best possible manner. He is wanting to put everything into ensuring that science is actually connected to the people and science is actually used for the benefit of the people and particularly for the benefit of the poorest of the poor. That is reflected in all the policies that he has framed till now and the various programmes which were deliberated in great detail, whether it was the 'Make in India' or the 'Digital India', or the 'Swachh Bharat', etc. Now, the 'Start Up' and the 'Stand Up' movement with so much of money being put for supporting millions of young people in this country to become entrepreneurs and to develop their own innovative ideas, make programmes, use technology, and give back to the country in the best possible manner. Even in science also, I can say that after we took over, we improved the scholarship of our scientists by about 50 per cent, and so many schemes have been introduced to ensure that people who have already gone out of the country come back happily and institutions are created where they get the most ideal environment to work.

I would tell you that this particular institution is one such institution about which Members have expressed concerns and raised doubts that probably this institution is coming up at the cost of other institutions, compromising with their quality, or it will be sort of a 'bossy' institution over others; it is going to hamper or impair the autonomy of other institutions. It is not like that. It is an institution and the words 'Regional Centre' means that it is a 'Regional Centre' for this region of the world, that is, Asia.

It is going to be one of the best collaborating and coordinating centres where we exchange our knowledge, where we exchange our experience in the most optimal manner by sharing of information. This Centre also diagnoses the various problems at various places as to what type of training is required; what type of manpower is to be created; what type of people are required by the industry; and what type of improvement in education for our biotechnology is required. All this is going to be worked out in this Centre. This Centre, with the help of UNESCO and the Member-States is going to actually make sure that our goal of taking biotechnology – which is already moving fast in that direction of becoming a global leader – is achieved well in time.

The other comment about which I felt sorry was this. One hon. Member said that the achievements of biotechnology or of our scientists in this field in our country are literally zero. He used the word 'zero'. I think, this is really a very sorry comment. I have to invite each one of you to these biotechnology laboratories in the country. When I had not visited these laboratories, when I had not seen them or when I had not interacted with the scientists, I could have also said without knowledge that I do not know as to what is happening in India. I can say, for sure, that we have the state-of-the-art laboratories in this country in biotechnology. This Department was created 30 years back. Now after 30 years, you can really boast of the best institutions that this world can have because they are all in India. The type of cutting edge research that the scientists in India in this particular field are doing is absolutely fabulous. Now, our molecular biologists or life scientists have done the total human genome sequencing. This human genome sequencing required ten years back 100 million dollars. Now after ten years, the same human genome sequencing can be done in thousand dollars. This is the achievement of our scientists. Cancer is no longer a dreaded disease. Now our scientists are basically working at the cellular level and we are into the 'Precision Medicine', for which Mr. Obama has spent 220 billion dollars in his country.

Somebody said that we have not done anything in nanotechnology. Right now, our status in nanotechnology internationally is that we are the third best in the world in terms of our publications and our contributions. You have to actually visit all those laboratories, meet those scientists to believe what I am saying. This is about those two unfair comments that were made and I thought I must put the record straight.

Shri Reddy recalled the observations made by Shri Atal ji at that time when in the 90s we were having the IT boom. He said that IT is 'India Today' and BT will be 'Bharat Tomorrow'. It is a right time to recall Shri Atal ji at this time. I have to specially thank Dr. Murl Manohar Joshi also for the suggestion that he made at that UNESCO meeting. Of course, I also thank the previous Government because they took the issue forward. I am the privileged one in the sense that I have got this opportunity to put forward this Bill before you and see that it sees the light of the day now.

I can assure you that the coming up of this institution is not going to in anyway compromise the quality, the support that the Government of India gives to any other institution whether in the Government or in the private sector or in the industry. We help research in biotechnology in all

fields, not only in the government sector. We are helping the IITs and we are helping the industry also. Last year itself we may have helped at least 150 start-ups in the country in the field of biotechnology by giving money and all. So, it is not going to compromise on anything.

Coming up of this institution will ensure that we have a very good quality, state of the art institution which will make sure that we are able to take care of whatever is deficient anywhere, we improve education, we improve training, and we create manpower of all types, all levels, all varieties with the help of this institution and with this institution taking the help of UNESCO and other countries of Asian region. That is basically the purpose of this particular institution.

I will just mention some of the specific concerns that were raised. Dr. Tapas Mandal is probably unaware that we already have an institute of biotechnology in Kalyani, West Bengal. It is the National Institute of Biomedical Genomics (NIBG). He should know about that. I along with the Science and Technology Minister of West Bengal recently inaugurated in Kolkata a new building for the Indian Institute of Chemical Biology in the Salt Lake area. It was only a few weeks back.

At our lab in Lucknow along with the Agriculture Department of West Bengal we have successfully worked on arsenic free rice now. We are already corresponding with Ms. Mamata Banerjee, she is in her election mode, to inaugurate what we have done with the agricultural people in West Bengal. So, it is not that we are not showing our concern for the eastern or north-eastern part of India.

Regarding his comment about Indian scientists, I would say that Indian scientists have done brilliant work in science in India. They have got many top recognitions. We have many world class institutions and we have already had many good quality industrial breakthroughs on record till today.

We also have a very important major agricultural programme in the East and the North-East. There is an initiative which is known as the Institute of Bio Resources and Sustainable Development at Imphal. I have visited that place long back. DBT is also supporting programmes at the Bose Institute in Kolkata and NIBMG in West Bengal as well as at IIT Kharagpur. These are the places which I myself have visited in the last one year. There may be many others.

DR. TAPAS MANDAL (RANAGHAT): Obviously there are some central institutes in West Bengal. The Institute of Biomedical Genomics is around one kilometre from my residence. That is now working in an abandoned hospital. The new building is under construction. They are ready to shift into it. The scientists and the other staff are passing their time. No research work is going on right now.

Secondly, Bose Institute is one of the major institutes in biotechnology in the whole of eastern India and it caters to the needs of the nation also. There are some important institutes like Bidhan Chandra Krishi Viswavidyalaya, a State agricultural university has a very small Department of Biotechnology, no infrastructure facilities, no lab facilities, no equipments. My submission is that West Bengal is very sound in agricultural productivity. In fruit production and vegetable production, West Bengal ranks first or second. So, under these circumstances, is it possible to fund a sizeable amount of money for the university to develop biotechnology lab?

HON. CHAIRPERSON : Don't repeat all the things. You have already said all this.

DR. HARSH VARDHAN: I don't want to enter into any controversy about it. We may have a difference of opinion about the quality or content. I can tell you that I have visited almost all the labs in Kolkata in the last one year. I also feel proud of them like I feel proud of Acharya Jagdish Chandra Bose. You can give any specific suggestions about improvement or having a new building or anything which you feel is already not in the offing. But most of the things that have been brought to our knowledge, we are already in the advanced process of going ahead. But please don't say that we are zero in biotechnology in this country, we have not done anything and our scientists are useless. I think that demoralizes the great people. They are doing excellent work and you belong to a place which can boast of the great Acharya Jagdish Chandra Bose, S.N. Bose and P.C. Ray. So, you should not be talking about that.

You mentioned about nano-biotechnology also. I mentioned that we are third in the world but I tell you that we have a separate special task force on nano-biotechnology and we have a major nano-tech mission and many nano institutes in the country. If you wish, I can organize a visit for you to all these institutions.

Something was mentioned by you about BT cotton and BT brinjal. Let me tell you the factual position about these issues. BT cotton is the only genetically engineered crop which India has approved so far for commercial cultivation in 2002 when Atalji was the Prime Minister. So far, India has approved six events of BT cotton – MON 53, MON 15985, Event 1, GFM Event, BNLA 601 and MLS 921, expressing different insecticidal proteins alone or in combination to control *Helicoverpa Armigera*, a major pest of cotton, and at the same time reduce the excess use of pesticides. These events were developed by both private and public sector institutes alone or in collaboration. By the year 2014, more than 95 per cent of Indian farmers that is 7.7 million adopted BT cotton. Out of 12.5 million hectares of total cotton area in India, 11.6 million hectares is covered by BT cotton by 2015. India tripled cotton production from 13 million bales in 2002, the year it released first BT cotton, to more than 39 million bales in 2014. At present, India is the number one cotton producing country in the world surpassing even the USA and China. This is the factual statement about it.

Now let me tell you about BT brinjal. Mahyco, an Indian seed company has developed the BT brinjal to provide resistance against Lepidopteran insect pest, in particular the fruit and shoot borer. After several years of bio-safety testing, the Genetic Engineering Appraisal Committee has cleared the BT brinjal for commercialization in 2009.

Following concerns raised by some stakeholders and anti-GMO activists, the Government of India imposed a moratorium on its release in 2010.

माननीय सभापति: माननीय मंत्री जी, छह बजने वाले हैं।

â€!(ब्लवधान)

DR. HARSH VARDHAN: In the year 2013, the same Bt. Brinjal event was approved by Bangladesh for commercial cultivation. Some concerns were expressed here also. I can tell you that there was opposition from some groups. We are talking to them and right now the opposition has reduced to the minimal levels and we are developing a consensus. There will hardly be any opposition about the whole issue.

माननीय सभापति : माननीय मंत्री जी की बात पूरी हो जाने दीजिए।

â€¦(व्यवधान)

SHRI MALLIKARJUN KHARGE (GULBARGA): I want to bring to his kind notice that no Member opposed this Bill. Everybody supported it but you are repeatedly saying that some Members are opposing it. You should appreciate that हम बिल को पास करने के लिए तैयार हैं।

माननीय सभापति : मंत्री जी तो इसके लिए आप सभी को पहले ही धन्यवाद दे चुके हैं।

DR. HARSH VARDHAN: I say on record once again, I appreciate the spirit of each and every one of you and express my heartfelt gratitude but as some of the concerns were raised I am just trying to answer them.

श्री दुष्यंत चौटाला (हिसार) : सभापति जी, मैं मंत्री जी से एक स्पष्टीकरण चाहता हूँ।

माननीय सभापति : आप मंत्री जी को अपनी बात समाप्त करने दीजिए।

DR. HARSH VARDHAN: There was a concern raised by Dr. Shashi Tharoor about the biotechnology regulatory Bill. I can tell you that the Bill is already in an advanced process. We are going to bring that regulatory Bill. Moreover, we are not compromising on any of the regulatory mechanisms even without the Bill right now. This is just for the purpose of record.

I have to say on record that this institution is only going to harmonise the relationship with the other institutions in the country and outside the country since this was also one of the concerns raised. No existing centre is going to lose its autonomy. Some issue was raised about the majority voting right, about the Indian members, and all. The majority voting rights in the Board of Governors is with the Indian members. You can be assured about that.

Somebody mentioned about the economic benefits to the country. The Centre is expected to produce highly trained and skilled manpower capable of delivering low-cost, effective healthcare, agricultural and veterinary technologies. The investment would also result in the creation of space, unique infrastructure and critical core facilities which can be shared with other institutions. The Centre would serve as a window for showcasing Indian competence in the global market for economic gains.

Somebody mentioned about industry collaboration, etc. I can tell you that one of the mandates is education will be linked with industry requirements and will be dynamic and based on the industry needs also. The need for this autonomous institution with national importance is that they can make their own curricula; and depending on the advancing changes etc. in the field, they can always make changes to the curricula without any control from any side.

There was a mention where somebody wanted a similar institute in Andhra Pradesh and somebody wanted it somewhere else. This is a different type of institution. It is not something which could be created but obviously if there is a need for a biotechnology facility of great nature which is lacking somewhere and which the Department feels is the need of the hour we will certainly look at it.

18.00 hours

The foreign faculty, etc. are going to be involved in this. There was a suggestion given that the review should be every two years. We can actively consider that. There was a suggestion given about public representatives, that also can be taken care of as to how the public representatives' involvement can be there.

A Member raised an issue about funding that we may be getting from UNESO.

HON. CHAIRPERSON : The time of the House is extended up to the passing of this Bill. I think the House agrees to it.

SEVERAL HON. MEMBERS: Yes, Sir.

DR. HARSH VARDHAN: A Member asked about UNESCO. UNESCO is not going to provide us any fund *per se* but the member States will be giving contributions. The Centre may receive contributions from the member States within the region. They are going to be the voluntary contributions which will add to the core fund.

All non-statutory aspects of the regulatory Bill are being implemented. This is what I have mentioned to you just now.

I think broadly these were the issues which were raised. Shri Hukum Singh, the Chair, mentioned about the biotechnology park in Lucknow. In fact I have to tell you that we have five state-of-the-art science institutions in Lucknow. I have visited all five of them: CIMAP, NBRI, CDRI, Indian Institute of Toxicological Research and the Birbal Sahni Institute of Palaeosciences. So, you need not worry about the facility that the Government of India has created in Lucknow.

There was a mention about the generic medicines. Shri Satpathy is not here. I can agree with him to some extent. We are a leader in generic medicines. There cannot be two opinions about it but with regard to the benefits of those generic medicines, we have to cover a long way to make sure that we make generic medicines available to each and every person in this country and promote the rational prescribing of such medicines amongst our doctors. That of course is something which I agree.

Shri Jagdambika Pal had studied the Bill thoroughly and he answered for me most of the questions that Shri Tharoor had raised.

There were issues raised about the quality and quantity of biotech graduates, regulatory reforms, financial incentives to the biotech industry, upgradation of the centre. I can tell you that these are all concerns which are basically the concerns which have been taken care of by making this institute. We are going to improve all these institutions.

I can talk and talk about biotechnology. It is such a great sector. It is a very fascinating sector. It has a huge potential to help people, mankind, agriculture, farmers, health and, of course, clean energy. You mentioned about cellulose getting converted into 2G Ethanol. Only on 22nd April, two days back, we have inaugurated the first plant of its kind in the whole world, not only in India, where we are converting all that into 2G. It is such a huge plant which converts 10 tonnes right now and we can do that up to 250 - 500 tonnes. We are already in a very-very advanced stage with regard to waste to wealth thing. Under the National Innovation Mission the Department of Biotechnology is leading the Clean Energy Mission with other departments of the Government of India, whether they are the Power Ministry or the Environment Ministry and we are taking a leading and ensuring that with those collaboration we can make sure that - now from 2G Alcohol or 2G Ethanol - we convert that Ethanol into Butanol, the next generation plant that we are working on.

Bigger plants have also been designed with the help of bio-technology. Bio-technology is now on a very strong footing. One of the hon. Members mentioned about how much will be the progress in another five years. He can very well calculate how much it will be in five years. We are trying to move at the fastest possible pace. We are trying to put our heart and soul into whatever we are trying to do. We need the support of everyone. We want all the hon. Members to participate in all the scientific activities in their respective areas.

With these words, I would now once again request the hon. Members to pass this Bill.

Thank you.

श्री दुष्यंत चौटाला (हिस्सार) : सभापति जी, मैं मंत्री जी से एक वलेंटिफिकेशन चाहता हूँ। माननीय मंत्री जी ने अपने जवाब में बताया है कि कॉटन की जो बीटी प्रोडक्ट है, उसकी वजह से कॉटन की गूथ पिछले तीन सालों में बहुत ज्यादा हुई है। आपके साथ कृषि मंत्री जी बैठे हैं, उनसे पूछिए, पिछले साल मद्रास में चाहे सूखे की वजह से हो, अधिकतम तौर पर कॉटन की फसलें, बीटी प्रोडक्ट कॉटन, जो कम पानी में ज्यादा फल देने वाली है, वे फेल रहीं। इसी तरह से नॉर्थ इंडिया के अंदर भी आपके डिपार्टमेंट और बायो टेक्नोलॉजी की यूटिलाइजेशन के साथ जो सीड्स आए, वे न तो उतम क्वालिटी के सीड्स थे और वे व्हाइट फ्लाई जैसे इन्सेक्ट्स की वजह से बर्बाद हुए। क्या आपका विभाग कृषि मंत्रालय के साथ मिलकर इस सेंटर के माध्यम से वहां कोई फायदा पहुंचाएगा?

DR. HARSH VARDHAN: Sir, these are all scientific aspects.

HON. CHAIRPERSON : The question is:

"That the Bill to provide for the establishment of an institution of national importance to be known as Regional Centre for Biotechnology and to provide for matters connected therewith or incidental thereto, be taken into consideration."

The motion was adopted.

HON. CHAIRPERSON: The House will now take up Clause by Clause consideration of the Bill.

The question is:

"That clauses 2 to 46 stand part of the Bill."

The motion was adopted.

Clauses 2 to 46 were added to the Bill.

Clause 1, Enacting Formula, Preamble and the Long Title were added to the Bill.

HON. CHAIRPERSON: The hon. Minister may move that the Bill be passed.

DR. HARSH VARDHAN: Sir, I beg move:

"That the Bill be passed."

HON. CHAIRPERSON: The question is:

"That the Bill be passed."

The motion was adopted.