

Entrepreneurship and IP Strategy
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Lecture No. 10
Case Study II - Biotechnology

A very warm welcome in the fifth module of the week 2 of the course Entrepreneurship and IP Strategy titled case study 2 Biotechnology. So, in the earlier modules we have concentrated on innovation, types of innovation, innovation market IP, then invention, creativity. Now, this is the last session in this week and we are concentrating on a case study that is related to biotechnology and we will see the journey of a Biocon, a very inspiring journey it is and this case studies we can say, that yes definitely it is a IP focused case study. Now, you probably know the name of founder of a Biocon, Miss Kiran Mazumdar Shaw.

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Now, you also might have seen the news that, she has won the Ernst and young world entrepreneur of the year 2020 award. She is the first woman entrepreneur from India and third Indian to win this title, that is a EY World Entrepreneur of the year and that is in the last 20 years, she is like a third Indian. Now, I will request you to just browse through Google and find out who are the two other Indians who have received this award maybe, you can write in the discussion forum that particular thing.

Now, please watch this video we generally keep such inspiring and interesting videos in later part of the session. However, in this session we are just sharing it here so that you can just see the glory of this award. You are aware about the international ceremonies, award ceremonies

like, miss world or Oscar, you just get the feel of this EY world entrepreneur awards. So, you can just see this video and see the glory of this prestigious award and how this ceremony is every year what we can say happen in the world and they choose the best entrepreneur in the world, watch this video please.

I hope, you enjoyed this and know that now, you are very eager to go into details of how particularly this Biocon, what we can say how it is developed and how she has achieved this so, that she became the first women in the you know what we can say who has received this award.

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So, Srimati Mazumdar she always say that she is a accidental entrepreneur. This is true as, she could not get the job due to traditional mindset so, if you see the background she is a graduate in zoology and she was not sure about what exactly she should pursue after graduation, she is form Bangalore and then her father suggested her to do a course in a breweries, a fermentation related activity microorganisms are involved up.

So, she explored that and as for her father's suggestion she has done this course from Australia her father is like working in that industry only. So, he suggested to her that ok you explored this area. Now, as we know that brewery something more like what we can say that particular industry is man dominated and it is very difficult that accept that that women is entering into that sector as a manager and she is controlling that particular activities in that industry it is not acceptable at that time.

So, no one was ready to hire her in spite of her credentials. So, it was a gender issue definitely it was a long what we can say long back that scenario is like it is in 70s this scenario was there and this probably resembles the famous story of respected Sudha Murthyji and we are very well aware about her story also that how she entered into Tata Motors where it was very clearly said that women is not allowed to means they should not apply also something like that was written in the advertisement and then what we can say the respected Sudha Murthyji she contacted directly to Mr. Tata and that story everybody knows.

So, same thing happened here with the Miss Kiran Mazumdar. So, what she has done that then, she started looking jobs outside India and then she got some position in Scotland and then before moving there in that what we can say the industry, she met the founder of Biocon Chemicals it was already there in Ireland and she met the founder Auchincloss and then she had some conversation that for 6 months I will check if, I could able to do that particular activity and if, I could not able to exhibit that activity in India successfully you will give me the job similar of that kind. So, she was not in any way ready for this entrepreneurship activity.

Now, this company which is a Biocon which is already there in Ireland this was engaged in what we can say production of enzymes and that enzymes will be used in brewing, food packaging and textile industries. Now, he she joined there and this Auchincloss he was looking for a partner who can start organization in India. So, that was like a background there and then when she joined Mazumdar joined there and then she started activities she returned India and she started this Biocon India in 1978.

So, she started something as always we know that any big company is started in the garage, same thing happen here that was her rented house and in that rented house she started with the capital of Rs. 10,000 in 1978. So, she decided to have this venture because already she was not getting jobs in India, she is tried there and then she was like pretty well, I am ready to start this entrepreneurial activity and she came back and she started this activity.

Now, the major hurdle at that time was like a fund generation and no bank was ready to support because, two things are there she was interested in that breweries, second thing is that women, third thing is like she is exploring biotechnology. Biotechnology was like a just started what we can say in India and she is like a first to start this organization which is based on biotechnology and nobody it was not a proven technology and so, banks were also reluctant to fund this particular activity.

Now, at that time where that if we see that scenario of 1978 and we in 2020 if, you see the scenario now, banks are ready to give loans there are so many startup activities are there and so many government initiatives are there so, we are pretty lucky in the scenario that we have everything to start entrepreneurial activity, we have to just have that passion and a problem which we want to solve and here in 1978 when she started that particular activity nothing no that kind of facilities are available and she tried in that adverse scenario we can say compared to this 2020 scenario now we are seeing.

Now, she was just 25 year old girl and without 10,000 rupees she has started this activity. Now, when she has started that activity that innovation one bank obviously they have tried and this is very interesting this things that Mr Wagul from ICICI, he helped in that, he just realized the value in that particular venture and he given the first what we can say funding to her and but, unfortunately the thing what happened is that her first activity related to that organization failed and that was not affordable for her that time and she was little bit what we can say under fear that now, if this is a failure and how bank will look into this.

But, the scenario is like that Narayanan Wagul, he just invested, what we can say in that organization he has helped and he has want we can say encouraged her to what we can say, do that activity and when in 1987 what the thing happened that whatever stakes Mister Wagul has taken, he has taken the stakes equity in that or whatever the activity she was doing and Unilever you can just imagine in India this activity is going on in Bangalore. Unilever that what we can say they come to know something about this activity and then Narayan Wagul he just sold all his equity to Unilever and within year time that value was like a quadrupled.

You can imagine the value realized by outside India Organization because, they have seen that potential IP in the organization. Now, this is like a turning point in this organization history what we can say and then later like she expanded this organization in 3000 square foot shed and that went well then particular what we can say with the enzyme development and all that it is grown further. Now, initial project was a **papain** development and then **isinglass** development.

Now, within a year of inception this Biocon you can just imagine that they have exported the enzymes in US and Europe and this is the first Indian company to do that export and as I have already mentioned in the first year at the end of that first year she was able to expand it into 20 acre property.

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Now, you can just see that after that enzyme when she was doing that particular activity, started with that enzyme she transcribed that enzyme company into a Biopharma. So, you can just imagine the journey the course in zoology, then in bravery, no job, went to Ireland, came back and then started this what we can say activity in Bangalore with 10,000 rupees, just 25 old girl and then eventually she started developing that enzyme, first failure was there and then ICICI bank comes into the picture, funding and then that that organization grows.

And now, this enzyme company which is focusing on enzyme production transcribed into the Biopharma the difference in this Biopharma when it comes to Biopharma gestation period is long then large capital is required ,IPO is required once that kind of activities are necessary when that kind of expansion is there. Now, she spearheaded Biocon evolution from an industrial enzymes manufacturing company to fully integrated Biopharmaceutical company with a well-balanced portfolio of products and a research focus was on diabetes, oncology and anti-immune diseases.

So, then that she established two subsidiaries like Syngene which provides early research and development support services on a contract basis and then **Clinigene** which focuses on the clinical research trials and then lateral **Clinigene** was the merged with a Syngene. Now, Syngene it is listed in store what we can say BSE and NSE and 2015 and current market cap of Syngene is like a 14,270 crores. In 2004 after, seeking the advice of Mister Narayan Murthy, Mazumdar Shaw she decided to list Biocon on the stock market.

Now, her intent was to raise capital to further development of Biocon research now, she is a that is a if, you see by this is the first biotechnology company in India to issue IPO. Now, what we can say that if you can see that IPO activity it is like a in the Biocon this it is a second Indian company to cross something around 1 billion dollar mark on the first day of a listing that is what we can say a very historical moment in the what we can say in the history of this organization then currently if, you see the scenario of Biocon it is like this; Mister Siddharth Mittal is current CEO of this what we can say Biocon organization.

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Now, the company has almost 9200 that is a staff is there, it is in Bangalore and then the over the years now, this Biocon systematically leverage the technology platforms from this enzymes to small molecules to recombinant proteins and antibiotics. They can just imagine that they started with the enzyme and now, it is in a biopharmaceuticals.

Now, they provide what we can say if you see the organizations offering it is like a high quality cost competitive services they are giving worldwide. It produces diabetic agents means that like **Acarbose** then they are like in the biological segment produces insulin, Erythropoietin then, Streptokinase is there monoclonal antibodies are there then the few drugs if we want to mention it is like a **sirolimus** and then **tacrolimus** these are the few drug in the portfolio of this organization.

Now, the producers and that market mix of specialty in industrial enzymes for industries like paper and brewing industry, then beverages industry food industry textile industry, distilling.

So, whatever the enzymes which are required in this all kind of industries this is also provided means this is a another what we can say a product portfolio of a Biocon.

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The slide features the Biocon logo in the top left corner. To its right is a small portrait of a woman with dark hair, wearing a patterned top. The background of the slide is a scenic view of a city with tall buildings and mountains in the distance. In the bottom right corner, there is a video inset of a woman with dark hair, wearing a patterned sari, who is speaking and gesturing with her hands. A yellow text box on the left side of the slide contains the following list:

- Anti diabetic agents
- Industrial enzymes for industries
- Drug portfolio



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29 November 1978 - incorporated
1979 –first Indian company to manufacture and export enzymes to USA and Europe.
1989 - Unilever acquired Biocon Biochemicals Ltd
1994 – Syngene
1998 – Unilever-Biocon an independent entity.

Then further if, you see if we want to see the how exactly Biocon grown that is like on grown that is like on twenty ninth November 1978 this Biocon India was incorporated as a joint venture between Biocon biochemical limited of Ireland and like Miss Kiran Mazumdar Shaw in Bangalore they have started that activity in 1978. In 79 it became the first Indian company to manufacture and export enzyme you can see that how fast this biotechnology and that particular activity is proved and export is started and it is obviously that basis there in Ireland and that help to develop that particular activity.

But, in India it was like a definitely it was a challenge. Then in 1989 I just mentioned you about Mister Wagul and how exactly he has given the motivation to her to develop her venture and how he has helped her by giving the confidence like I am not only funding I am

taking the equity in your organization and he also get benefited that he has taken that something around 1987 and 89, Unilever acquired that particular shares whatever there or equity and he got the benefit in one year quadrupled that particular earnings which he has invested nothing like that.

So, Unilever acquired this Biocon Biochemical Limited in Ireland and merged it with its subsidiary and obviously that approach what we can say that decision Unilever has taken because, they have seen the IP potential of this organization. In 1994 the company established Syngene we have just seen that the development of a Syngene, then in 1998 they agreed when Unilever agreed now, this is very important step that Unilever agreed to sell its shareholding in Biocon to the Indian promoters and hence, making a Biocon an independent entity.

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Now, if you see further in 2001 this become a first Indian company to be approved by USFDA. It is a landmark again the act what we can say, achievement by this organization. In 2003, this become the first company worldwide to develop a human insulin on a **Pichia expression system**. So, that is again the next achievement is there. In 2006, BIOMAb EGFR first indigenously developed humanized monoclonal antibody and that was for head and neck cancer it was launched in 2006 and that is again a great achievement.

In 2008, the company Biocon acquired German company. Right? 70 percent stake in that organization are acquired by Biocon. In 2009 Syngene Bristol Myers that research facility

was established in Bangalore that what we can say a very strategic collaboration is there and that is started in 2009.

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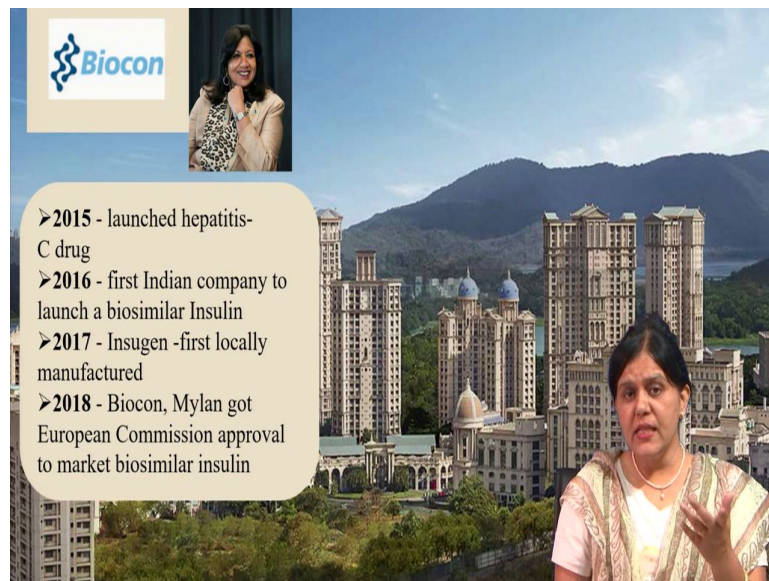


Moving further then the Mylan **announced** strategic collaboration with Biocon to enter Global Generic biological market. In 2010 Biocon expanded to Malaysia, then in 2011 Biocon launched **INSUPen®** a convenient and affordable, reusable insulin delivery, it is like a what we can say it was a very good news for that diabetic patient that it was a very easy to use this and it is like a little relaxation although they are suffering from that disease. But, this is like what we can say some relief that they have this pain kind of what we can say thing at the device which help them and it will be easier for them to take the injections of insulin, that was a what we can say great offering of the organization.

In 2012 again the strategic collaboration with Abbott right..and that that is like that collaboration was with Syngene to open a first nutrition R&D center in India.

In 2013, Biocon launched biological drug. Now, that was again what we can say the great achievement by Biocon then they have launched the World's first Bio similar drug to treat a breast cancer in 2014.

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Then that achievements and what we can say the activities of Biocon's continued in 2015 Biocon launched a Hepatitis C drug in India and that was again the what we can say now, very affordable what we can say offerings by the organization. In 2016, recently they become the first Indian company to launch a bio similar insulin, then the next in 2017 they were the first locally manufacturing bio similar product and yes it is approved for sale by the Malaysian drug regulator, USFDA approved this particular thing also.

2018, very recently Biocon, Mylan got European commission approved to make Bio similar insulin. So, it is like a great achievements by this organization every year some or the other very what we can say, innovative products offerings are given by this organization. So, we can you can just imagine the journey started with the enzyme and as she, Miss Kiran Mazumdar she has said, that yes I am the accidental entrepreneur, zoology to that what we can say breweris to enzymes and to Bio forma and then this whole journey till this today what we can say with that award which is received like a first Indian women to get this award in 20 years like this is a big achievement.

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Biocon

IP Management

1. IP portfolio Building
2. IP awareness throughout organization
3. IP databases
4. Strictly monitors own IP activity
5. Strictly monitors IP activity competitors.
6. Knowledge sharing session

Now, as per a Biocon's perspective if we see the IP management of the organization they are building IP portfolio by filing patent applications, covering product processes and formulation whatever it be but, they are taking caution that everything will be IP protected. Strictly protect IPs including brand names, designs and copyrightable matters also, IP awareness which is a very important it is not limited to R&D but, new joiners whosoever is there and that is a very important step of the organization that IP awareness is throughout the organization.

Product portfolio if, we see they show the what we can say broad product portfolio is like lifesaving Bio Pharmaceuticals for diabetes cancers autoimmune disorders cardiovascular diseases that kind of a whole offerings are given and yes everything is protected by patents if, we see the number of patents there are 1250 patents are there and 820 trademarks are there which are in the what we can say, portfolio of this Biocon.

Then further if, you see the IP activities and the management if, you see they comply with the international IP system obviously, means whenever IP system is a very harmonized, there you can see the IP portfolio there are patents they are filing patents in obviously now, various countries 17 patent families are there in that portfolio if we see. Then they have advanced whatever IP databases are there or whatever that what we can say software available for IP management are there definitely Biocon is following that particular thing.

Then they are doing the knowledge sharing sessions like, within organization they will discuss IP case laws and then the lawsuits extensively especially, IP department will be within

IP department that activity will be there but, also within organization wherever it is necessary to pass that information they are passing this information within organization through knowledge sharing sessions.

There is a continuous up gradation about IP development in the organization then, if we see further that if required for generate generic what we can say, market obviously, they are following that para 4 certifications and they are also strategizing although that is not part of the what we can say IP but they are following that FDA related activities.

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Now, if we see this award related means they are doing all these activities and definitely they have won several awards related to IP like Asia Elite Award is there and that is Aisa Elite forum in 2016, this is only Indian Bio Pharma Company who have received this award. Then there is a Asia IP if we see that IP team of the company won best In-house IP team of the year award in the global IP conclave held in 2015, they have also received a Pharmexcil Gold patent award 2014-15 in the biotech category for filling the highest number of patents.

It is a very good number that is when we say that 1250 patents are there it is a very good number we can say.

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Now, just means to get the idea how Miss Mazumdar has done this develop this what we can say organization please watch this video that how she is sharing her what we can say views how exactly her journey is.

It is very inspiring so, I hope that you enjoyed this inspiring journey of Biocon which we have seen just now.s

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Started with enzyme to Bio pharma revenue current revenue if, you see it is like a 5658.8 crores that is a current revenue of this organization started with a Rs.10,000 you can see the journey 1250 patent, 820 trademarks and it is still growing. So, you can just imagine that how

this organization, yes it is growing in the Biotech sector the good portfolio protected by what we can say, IP and that helps them to give the competitive advantage in the market.

So, with this we come to the end of this session and obviously we are completing the second week also from the next week we are focusing on IP types. Now, you got now the pretty idea about the entrepreneurship IPs relationship, innovation, types and how exactly it is so, we got that idea now, we will concentrate on IP from next week and each type of IP will be covered in one week and that way you will get the idea how this IP that what we can say law is there, that procedural part is there, what is the infringement, that all you can see in the upcoming sessions see in the next session. Thank you

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Biocon

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