

Sr. No.	Name of University	Title of Patent	Patent Registration No.	Country of Registration	Patent Validity Period	Commercialization Status (Yes/No)	Current Status (Active / Expired)	Provide link if the Patent is enlisted in WIPO Patentscope or IPO Pakistan Website	Name(s) of Patent Holder(s)	Name(s) of Patent Inventor (s)	Designation(s) & Department(s) of Inventor(s)	Phone No.	Email	Additional Remarks
1	University of the Punjab	BIOCIDAL COMPOSITION FOR CONTROLLING COLLAR-ROT DISEASE IN CHILI PLANTS	Acceptance Number: 144446	Pakistan	NA	No	Active	A01P100 & A01P100 https://www.wipo.int/patentscope/publications/en/wipo_pub_947_3-rech3.xlsx	Dr. Anna Shoaib, Professor and Ghawwa Riaz, Researcher (Pakistan)	Dr. Anna Shoaib, Professor and Ghawwa Riaz, Researcher (Pakistan)	Professor, Dept of Plant Pathology	3004056772	anna.iaq@pu.edu.pk	-
2	University of the Punjab	Method and Composition for Iron-Amended Algal Microcapsules containing Pseudomonas Chlorophylls for Biocontrol of charcoal Rot Disease in Tomatoes	Acceptance Number: 144447	Pakistan	NA	No	Active	A01G13/00, A01G7/06 & A01P3/00 https://www.wipo.int/patentscope/publications/en/wipo_pub_947_3-rech3.xlsx	Dr. Anna Shoaib, Professor; Huma Shafique, Researcher and Dr. Samina Mehboob, Professor (Pakistan)	Dr. Anna Shoaib, Professor; Huma Shafique, Researcher and Dr. Samina Mehboob, Professor (Pakistan)	Professor, Dept of Plant Pathology	3004056772	anna.iaq@pu.edu.pk	-
3	University of the Punjab	Methods for determination of protein and DNA contents for detection of <i>Bacillus thuringiensis</i> in plant products	7.9.2002 Patent No. 138279	Pakistan	6.9.2022	-	6.9.2022-Expired	List of Expired Patents (Page 2022).pdf	CEMB	1. Dr. S. Riazuddin 2. Dr. Tayyab Husnain	Professors, CEMB	0321-4087024 0321-8429448	tayyabhusnain@yahoo.com riazradding@aimrc.org	-
4	University of the Punjab	Development of Basmati Rice Containing Multiple Transgenes	7.9.2002 Patent No. 138287	Pakistan	6.9.2022	-	6.9.2022-Expired	List of Expired Patents (Page 2022).pdf	CEMB	1. Dr. S. Riazuddin 2. Dr. Tayyab Husnain	Professors, CEMB	0321-4087024 0321-8429448	tayyabhusnain@yahoo.com riazradding@aimrc.org	-
5	University of the Punjab	An improved Codon Optimized Human Interferon	18.7.2007 Patent No. 140574	Pakistan	17.7.2027	-	17.7.2027-Active	-	CEMB	1. Dr. S. Riazuddin 2. Dr. Ahmad Usman Zafar	1. Dr. S. Riazuddin, Professor 2. Dr. Ahmad Usman Zafar Associate Professor CEMB	0300-4176705 0321-8429448	ahmad.usman@cemb.edu.pk riazradding@aimrc.org	-
6	University of the Punjab	A process for improving transgenic cotton plants (Commercialized)	18.7.2007 Patent No. 140649	Pakistan	17.7.2027	Yes	17.7.2027-Active	-	CEMB	1. Dr. S. Riazuddin 2. Dr. Tayyab Husnain	Professors, CEMB	0321-8429448 0321-4087024	riazradding@aimrc.org tayyabhusnain@yahoo.com	-
7	University of the Punjab	Heat-Tolerant Cotton Plant Containing Multiple Transgenes	21.1.2009 Patent No. 0380104	United States	-	-	-	US20100196104A1 Heat Tolerant Cotton Plant Containing Multiple Transgenes - Google Patents	CEMB	1. Dr. S. Riazuddin 2. Dr. Tayyab Husnain	Professors, CEMB	0321-4087024 0321-8429448	tayyabhusnain@yahoo.com riazradding@aimrc.org	-
8	University of the Punjab	A process for modification of recombinant human interferon for therapeutic use	24.7.2009 Patent No. 140586	Pakistan	23.7.2029	-	23.7.2029-Active	-	CEMB	1. Dr. S. Riazuddin 2. Dr. Ahmad Usman Zafar	1. Dr. S. Riazuddin, Professor 2. Dr. Ahmad Usman Zafar Associate Professor CEMB	0300-4176705 0321-8429448	ahmad.usman@cemb.edu.pk riazradding@aimrc.org	-
9	University of the Punjab	A method of purification of recombinant protein products,	24.07.2009 Patent No. 140587	Pakistan	23.7.2029	-	23.7.2029-Active	-	CEMB	1. Dr. S. Riazuddin 2. Dr. Ahmad Usman Zafar	1. Dr. S. Riazuddin, Professor 2. Dr. Ahmad Usman Zafar Associate Professor CEMB	0300-4176705 0321-8429448	ahmad.usman@cemb.edu.pk riazradding@aimrc.org	-
10	University of the Punjab	7-Nitro-2-(3--Nitro-Phenyl)-4H-3,1-Benzoxazin-4-one or derivatives thereof for treating or preventing antiviral infections.	7.8.2010 US Patent No. 8,148,368 B2	United States	-	-	-	Patent Public Search Basic 1 USPTO	CEMB	1. Dr. S. Riazuddin 2. Dr. Tayyab Husnain 3. Dr. Ahmad Usman Zafar 4. Dr. Javed Akram 5. Dr. Usman Ali Mushaq 6. Dr. Khalid M. Khan 7. Dr. Atta ur Rehman	1. Professor (CEMB) 2. Professor (CEMB) 3. Associate Professor 4. Former Vice Chancellor (UHS)	0321-8429448	riazradding@aimrc.org ahmad.usman@cemb.edu.pk	-
11	University of the Punjab	Novel Transgenic Approach to Decrease Cost of Cotton Production in Pakistan	Application No. 765/2010 1.9.2010 Patent No. 142243	Pakistan	9.1.2030	Yes	9.1.2030-Active	patented-july-2016.pdf	CEMB	1. Dr. Abdul Qayyum Rao 2. Dr. Idrees Ahmad Nasir 3. Dr. Tayyab Husnain	1. Dr. Abdul Qayyum, Rao, Professor 2. Dr. Idrees Ahmad Nasir, Professor 3. Dr. Tayyab Husnain, Professor	0322-4676161	qayyumabdul77@yahoo.com dr.idrees@gmail.com tayyabhusnain@yahoo.com	-
12	University of the Punjab	3-Amino-2-(4-Nitrophenyl)-4-(3H)-Quinoxalinone or derivatives thereof for treating or preventing antiviral infections	31.12.2011 US Patent No.8,809,354 B2	United States	-	-	-	Patent Public Search Basic 1 USPTO	CEMB	1. Dr. S. Riazuddin 2. Shaheen N. Khan 3. Dr. Javed Akram 4. Atta ur Rehman 5. M. Iqbal Choudhary 6. Usman Ali 7. Usman Adhig 8. Khalid M. Khan 9. Zulfiqar Ali Khan	1. Dr. S. Riazuddin, Professor (CEMB) 2. Shaheen N. Khan, Professor (CEMB) 3. Dr. Javed Akram, Former Vice Chancellor (UHS) 4. Atta ur Rehman (Ex-Vice Chancellor UHS) 5. M. Iqbal Choudhary, (Ex-Chairman HEC)	0321-8429448 0300-4176705	riazradding@aimrc.org ahmad.usman@cemb.edu.pk	-
13	University of the Punjab	Isolation and Identification of Pakistani Cotton Leaf Curl Virus Tolerant Gene.	6.7.2015 Submitted vide App. No. 448/2015	Pakistan	-	-	-	-	CEMB	1. Dr. Bushra Rashid 2. Dr. Tayyab Husnain 3. Beenish Aftab	1. Professor 2. Professor and Students CEMB	0334-4373911 0321-4087024	Bushra.cemb@yahoo.com tayyabhusnain@yahoo.com	-
14	University of the Punjab	A biopesticide for <i>Tribolium castaneum</i> in stored grain products	6.5.2015 (IPO # 259/2015).	Pakistan	-	-	-	-	CEMB	1. Prof. Dr. Kauser Malik 2. Aisha Khalid	1. Professor and Student CEMB	0345-8764999	kausemalik786@yahoo.com	-
15	University of the Punjab	A quick, easy, portable and economic procedure for detection of genetically modified organisms	22.4.2015 (IPO # 229/2015)	Pakistan	-	-	-	-	CEMB	Prof. Dr. Kauser Malik	Professor, CEMB	0345-8764999	kausemalik786@yahoo.com	-
16	University of the Punjab	A process of formation of a biopesticide having deleterious effects on stored grain pests <i>Tribolium castaneum</i>	19.6.2015 (IPO # 389/2015).	Pakistan	-	-	-	-	CEMB	1. Prof. Dr. Kauser Malik 2. Taimoor Arjumand Bano	1. Professor and Student CEMB	0345-8764999	kausemalik786@yahoo.com	-
17	University of the Punjab	Development a Process of PCR Multiplex System for the Simultaneous Detection of Conventional STRs, MiniSTRs and YSTRs.	24.03.2016 Application No. 172/2016	Pakistan	-	-	-	-	CEMB	1. Dr. Tayyab Husnain, 2. Dr. Ahmad Ali Shahid 3. Dr. Ziaur Rahman 4. Dr. Muhammad Shafique 5. Muhammad Sagh Shahzad	1. Dr. Tayyab Husnain, Professor, 2. Dr. Ahmad Ali Shahid (Professor) 3. Dr. Ziaur Rahman (Assistant Professor); 4. Dr. Muhammad Shafique, Associate Professor 5. Muhammad Sagh Shahzad (CEMB students)	0333-6148635 0321-4087024	shafique@cemb.edu.pk tayyabhusnain@yahoo.com	-
18	University of the Punjab	Development of CEMB Transgenic Maize Inbred Lines.	02.05.2017 Application 242/2017	Pakistan	-	-	-	-	CEMB	1. Dr. Tayyab Husnain 2. Dr. Idrees Ahmad Nasir 3. Dr. Abdul Munim Farooq 4. Dr. Bushra Tabassum 5. Dr. Zahida Qumam	1. Professor 2. Professor 3. Associate Professor 4. Assistant Professor and Students CEMB	0321-6021147 0321-4087024	munimfarooq@gmail.com dr.idrees@gmail.com tayyabhusnain@yahoo.com	-
19	University of the Punjab	Novel Plant based Biotechnological approach for the production of edible vaccine against Newcastle disease virus NDV of Poultry	20-04-2018 Application #329/18 Patent No. 144422	Pakistan	-	-	-	-	CEMB	1. Dr. Abdul Qayyum Rao 2. Dr. Nalia Shahid	1. Professor 2. Assistant Professor	0322-4676161 0301-4710358	qayyumabdul77@yahoo.com nalia.cemb@gmail.com	-
20	University of the Punjab	A Novel Technique to Enhance sugar recovery in Pakistani Sugarcane.	19.3.2018 Application No. 109/2018	Pakistan	-	-	-	-	CEMB	1. Dr. Idrees Ahmad Nasir 2. Dr. Bushra Tabassum	1. Professor 2. Assistant Professor	0321-7440016	dr.idrees@gmail.com	-
21	University of the Punjab	Development of Pakistani Sugarcane Containing siRNA Gene Silencing.	16.1.2012 (IPO #26/2012).	Pakistan	-	-	-	-	CEMB	1. Dr. Idrees Ahmad Nasir 2. Dr. Bushra Tabassum	1. Professor 2. Assistant Professor	0321-7440016	dr.idrees@gmail.com	-
22	University of the Punjab	Development of Transgenic Sugarcane for Insect Resistance	27.01.2020 Application No. 59/2020	Pakistan	-	-	-	-	CEMB	1. Dr. Idrees Ahmad Nasir 2. Dr. Bushra Tabassum 3. Dr. Zahida Qumam 4. Dr. Abdul Munim Farooq	1. Professor 2. Assistant Professor 3. Assistant Professor 4. Assistant Professor	0321-7440016	dr.idrees@gmail.com	-
23	University of the Punjab	Development of Effective Plant-based Biopesticide from <i>Calliandra hirsuta</i> for the Control of <i>Tribolium castaneum</i>	23.09.2020 (IPO # 592/2020)	Pakistan	-	-	-	-	CEMB	1. Dr. Kauser Malik 2. Dr. Bushra Tabassum 3. Mr. Hussain Qamar 4. Mr. Hamza Basit	1. Professor and Students CEMB	0345-8764999	kausemalik786@yahoo.com	-
24	University of the Punjab	Development of new 21-Plex STR Process for the Simultaneous Detection of Autosomal, Y and X-Chromosomal Markers	27.10.2020 Application No. 725/2020	Pakistan	-	-	-	-	CEMB	1. Dr. Ahmad Ali Shahid 2. Dr. Muhammad Shafique 3. Ms. Abida Shehzadi	1. Professor 2. Associate Professor and Students CEMB	0333-4591456	abida@cemb.edu.pk	-
25	University of the Punjab	Natural Inhibitory Compound From Cassia Finita Plant against HCV NS5A Gene of Hepatitis C Virus	04.02.2020 Application No. 58/2020	Pakistan	-	-	-	-	CEMB	1. Dr. Tayyab Husnain 2. Dr. Bushra Ijaz 3. Ms. Somayya Tariq 4. Ms. Sheren Gull 5. Ms. Sidra Rehman	1. Professor 2. Associate Professor and Students CEMB	0321-4722060	hijar_009@yahoo.com	-
26	University of the Punjab	Natural Inhibitory Compound Evofolin B From <i>Tectona Grandis</i> Plant against HCV NS5A Gene of Hepatitis C Virus	27.01.2020 Application No.60/2020	Pakistan	-	-	-	-	CEMB	1. Dr. Tayyab Husnain 2. Dr. Bushra Ijaz 3. Ms. Somayya Tariq 4. Kuloko Brice Landry 5. Ms. Sidra Rehman 6. Mr. Ayesha Malik	1. Professor 2. Associate Professor and Students CEMB	0321-4722060	hijar_009@yahoo.com	-

27	University of the Punjab	Development of Plant-based Biopesticide : Derived from <i>Dioprynos melibacter</i> to Control <i>Tribolium castaneum</i>	27.01.2020 Application No. 61/2020	Pakistan	-	-	-	-	CEMB	1. Dr. Kausar Malik 2. Ms. Adeema Saeed 3. Ms. Anshia Nazir	1. Professor and Students CEMB	0345-8764999	kansarha6789@gmail.com	-
28	University of the Punjab	Novel Antibacterial and Pesticidal Potential of Fagopyrum esculentum	27.01.2020 (IPO # 62/2020)	Pakistan	-	-	-	-	CEMB	1. Dr. Kausar Malik 2. Dr. Tayyab Husnain 3. Mr. Husnain Qamar 4. Ms. Qurat-ul-Ain Aleem 5. Mr. Hamza Bhatti	1. Professor and Students CEMB	0345-8764999	kansarha6789@gmail.com	-
29	University of the Punjab	Production of Vitamin E Primed Fibroblasts Carrier Plasma Gel for Treatment of Diabetic Wounds	14.09.2020 Application No. 591/2020	Pakistan	-	-	-	-	CEMB	1. Dr. Sheikh Hamadulla 2. Dr. Ahmad Ali Shahid 3. Dr. Azra Mehmood 4. Ms. Saba Taseem 5. Ms. Anna Ramzan 6. Ms. Hina Butt	1. Professor 2. Professor 3. Associate Professor and Students CEMB	0333-4107008	azra_mehmood@hotmail.com	-
30	University of the Punjab	Novel transgenic approach to decrease cost of potato production in Pakistan	3.3.2017 (IPO# 157/2017)	Pakistan	-	-	-	-	CEMB	1. Dr. Tayyab Husnain 2. Idrees Ahmad Nasir 3. Bushra Tabassum	1. Professor 2. Professor 3. Assistant Professor CEMB	0321-7440016	dr.idrees@gmail.com	-
31	University of the Punjab	Development of Chewing and Sucking Insect Resistant Cotton Application	11-01-2021 (IPO# 54/2021)	Pakistan	-	-	-	-	CEMB	1. Dr. Abdul Qayyum Rao 2. Dr. Ahmad Ali Shahid	Professors, CEMB	0322-4676161	qayyumshahid77@yahoo.com	-
32	University of the Punjab	Genetically Engineered Algae (<i>Chlamydomonas reinhardtii</i>) Strain Expressing Constitutively Mosquito Larvicidal cyt b Gene and its Derivatives	18.05.2021 (IPO # 359/2021)	Pakistan	-	-	-	-	CEMB	1. Dr. Ahmed Ali Shahid 2. Dr. Kausar Malik 3. Dr. Mohsin Ahmad Khan 4. Dr. Nadeem Ahmed 5. Dr. Rashid Bhatti 6. Ms. Rabia Pervaiz	1. Professor 2. Professor 3. Associate Professor 4. Associate Professor 5. Assistant Professor and Student CEMB	0300-4413747	mohsinshah@gmail.com	-
33	University of the Punjab	Novel Recombinant Human Epidermal Growth Factor (hEGF) Gene Expressed in Yeast (<i>Pichia pastoris</i>)	30.09.2021 (IPO # 736/2021)	Pakistan	-	-	-	-	CEMB	1. Dr. Kausar Malik 2. Dr. Ahmad Ali Shahid 3. Dr. Mohsin Ahmad Khan 4. Dr. Nadeem Ahmed 5. Dr. Samia Adil 6. Dr. Rashid Bhatti 7. Muhammad Islam Khan 8. Dr. Saad Tahir 9. Hira Nasir 10. Saba Taseem	1. Professor 2. Professor 3. Associate Professor 4. Associate Professor 5. Assistant Professor and Student CEMB	0300-4413747	mohsinshah@gmail.com	-
34	University of the Punjab	3-hydroxy-1, 2-bis(4-hydroxy-3-methoxy) propane-1-one- Inhibitory Agent of Hepatic Fibrosis	07.10.2021 Application No. 760/2021	Pakistan	-	-	-	-	CEMB	1. Dr. Ahmad Ali Shahid 2. Dr. Bushra Ijaz 3. Sonamya Tariq 4. Hamza Anjum 5. Kotake Brice Landry	1. Professor 2. Associate Professor and Students CEMB	0321-4722060	shar_009@yahoo.com	-
35	University of the Punjab	CRISPR based genome editing approach to reduce vacuolar invertase in potatoes during cold storage .	30-03-2022 Application No. 221/2022	Pakistan	-	-	-	-	CEMB	1. Dr. Tayyab Husnain 2. Dr. Ahmad Ali Shahid 3. Dr. Abdul Qayyum Rao 4. Dr. Anesha Yasmeen	1. Professor 2. Professor 3. Professor 4. Assistant Professor CEMB	0334-7609019	arlamalik5@yahoo.com	-
36	University of the Punjab	CRISPR based genome editing approach to combat insects pests and viruses	30-03-2022 Application No. 222/2022	Pakistan	-	-	-	-	CEMB	1. Dr. Ahmad Ali Shahid 2. Dr. Abdul Qayyum Rao	Professors, CEMB	0322-4676161	qayyumshahid77@yahoo.com	-
37	University of the Punjab	Plant based Edible Vaccine against Avian Influenza H9N2 Virus.	30-03-2022 Application No. 223/2022	Pakistan	-	-	-	-	CEMB	1. Dr. Abdul Qayyum Rao 2. Dr. Naila Shahid 3. Mr. Tahir Rehman Samiullah	1. Professor 2. Assistant Professor 3. Assistant Professor CEMB	0322-4676161	qayyumshahid77@yahoo.com	-
38	University of the Punjab	An Alternative Approach to Enhance the Resilience of Transgenic Cotton for Insect Resistance.	01-01-2024 Application No. 1/2024	Pakistan	-	-	-	-	CEMB	1. Dr. Abdul Qayyum Rao 2. Dr. Saira Azam	1. Professor 2. Assistant Professor CEMB	0322-4676161	qayyumshahid77@yahoo.com	-
39	University of the Punjab	A Novel Process for the Purification of Biotinylated (Recombinant Human Interleukin 11) using Escherichia Coli	25.7.2024 Application No. 518/2024	Pakistan	-	-	-	-	CEMB	1. Dr. Nadeem Ahmed 2. Dr. Saad Tahir 3. M. Akram Khan Akusa Fujimura 4. Muhammas Asad Ali	1. Associate Professor 2. Lecturer 3-4. Students CEMB	0301-4727440	nadeem_ahmed@yahoo.com	-
40	University of the Punjab	Improvement of Aloe-Vera Cosmetic Impact on Human Skin through its Genetic Modification by Human Serum Albumin	7.10.2024 Application No. 099/2024	Pakistan	-	-	-	-	CEMB	1. Dr. Ahmad Ali Shahid 2. Dr. Abdul Qayyum Rao 3. Dr. Nadeem Ahmad 4. Dr. Saira Azam	1. Professor 2. Professor 3. Associate Professor 4. Assistant Professor	0322-4676161	qayyumshahid77@yahoo.com	-
41	University of the Punjab	Development of a Process of PCR Multiplex System for Rapidly Mutating-Y Chromosomal Short Tandem Repeat Loci	19.11.2024 Application No. 319/2024	Pakistan	-	-	-	-	CEMB	1. Dr. Ahmed Ali Shahid 2. Dr. Muhammad Shafique 3. Dr. Faqeha Javed	1. Professor 2. Associate Professor and Students CEMB	0333-6148635	shafique@yahoo.com	-
42	University of the Punjab	Consensus Nucleoprotein-Based Adenoviral Vector Vaccine for Broad Protection Against SARS-CoV-2 Variants	24.2.2025 Application No. 119/2025	Pakistan	-	-	-	-	CEMB	1. Prof. Dr. Moazur Rahman 2. Prof. Dr. Mazhar Iqbal 3. Prof. Dr. Aamir Shaezad	1. Director CEMB 2. Deputy Chief Scientist, (NIBGE), Faisalabad 3. Prof. Dr. Aamir Shaezad, (Scientist, (NIBGE), Faisalabad	0321-7582800	moaz@cebmb.edu.pk	-
43	University of the Punjab	Consensus Spike Protein-Based Adenoviral Vector Vaccine for Broad Immunization Against SARS-CoV-2 Variants.	24.2.2025 Application No. 120/2025	Pakistan	-	-	-	-	CEMB	1. Prof. Dr. Moazur Rahman 2. Prof. Dr. Mazhar Iqbal 3. Prof. Dr. Aamir Shaezad.	1. Director CEMB 2. Deputy Chief Scientist, (NIBGE), Faisalabad 3. Prof. Dr. Aamir Shaezad, (Scientist, (NIBGE), Faisalabad	0321-7582800	moaz@cebmb.edu.pk	-
44	University of the Punjab	VP2 Protein -Based Adenoviral Vector Vaccine for Broad Spectrum, Immunization Against Local Isolates of Infectiousursal Disease Virus.	8.4.2025 Application No. 215/2025	Pakistan	-	-	-	-	CEMB	1. Prof. Dr. Moazur Rahman 2. Prof. Dr. Mazhar Iqbal 3. Prof. Dr. Aamir Shaezad 4. Prof. Dr. Naem Rashid	1. Director CEMB 2. Deputy Chief Scientist, (NIBGE), Faisalabad 3. Prof. Dr. Aamir Shaezad, (Scientist, (NIBGE), Faisalabad 4. Prof. Dr. Naem Rashid(Ex-Director General SBS)	0321-7582800	moaz@cebmb.edu.pk	-
45	University of the Punjab	Method and device for edge shape enforcement for visual enhancement of depth image based rendering of a three-dimensional video stream	US10049562B2	US (USPTO)	07/05/2035 (Adjusted expiration)	-	Active	https://patents.google.com/patents/US10049562B2/en	Sivvel Technology SRL, None, Torino, ITALY	Marco Grangotto, Maurizio Luceniforte, Andrea Basso, Giovanni Ballocca, Muhammad Shahid Farid	Marco Grangotto, Professor, University of Turin, Italy Maurizio Luceniforte, Assistant Professor, University of Turin, Italy Andrea Basso, Sivvel Technology SRL, None, Torino, ITALY Giovanni Ballocca, Sivvel Technology SRL, None, Torino, ITALY Muhammad Shahid Farid, PhD Student, University of Turin, Italy, Assistant Professor, University of the Punjab, Lahore	0092 333 4454227	shahid_musaf@yahoo.com	-
46	University of the Punjab	Apparatus and method for image segmentation	EP3018626B1	European Patent Office	27/10/2035 (Adjusted expiration)	-	Active	https://patents.google.com/patents/EP3018626B1/en	Sivvel Technology SRL, ITALY	Muhammad Shahid Farid, Marco Grangotto	Muhammad Shahid Farid, PhD Student, University of Turin, Italy, Assistant Professor, University of the Punjab, Lahore Marco Grangotto, Professor, University of Turin, Italy	0092 333 4454227	shahid_musaf@yahoo.com	-
47	University of the Punjab	Single Step Liquefaction and Saccharification of Corn Starch Using an Acidophilic, Calcium Independent and Hyperthermophilic Pullulanase.	US9340778B2	USA	12-Feb-33	In Process	Active	https://patents.google.com/patents/US9340778B2/en	Dr. Nasir Ahmad, Prof. Dr. Naem Rashid, Prof. Dr. Muhammad Saleem Haider, Prof. Dr. Muhammad Akhtar	Dr. Nasir Ahmad, Prof. Dr. Naem Rashid, Prof. Dr. Muhammad Saleem Haider, Prof. Dr. Muhammad Akhtar	Associate Professor & Professors at School of Biological Sciences, University of the Punjab, Lahore	92331-4408881	msa.sho@pu.edu.pk	Investors are required for mega scale commercialization

48	University of the Punjab	Process for recombinant protein expression augmentation in bacillus expression system	US 2017/0183668A1	USA	8-May-35	No	Expired -	https://patents.google.com/patent/US2017/0183668A1/en	Faiza Saleem, Hyun-woo Park, Shagufa Naz, Abdul Rauf Shakoori	Faiza Saleem, Hyun-woo Park, Shagufa Naz, Abdul Rauf Shakoori	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92333-4673255	rahman.cho@pu.edu.pk	Methodology for efficient recombinant protein expression
49	University of the Punjab	A recombinant nucleic acid encoding a protein exhibiting enhanced activity for milk production	Pakistan Patent No. 139216; Dated 18 Feb., 2007	Pakistan	-	-	-	-	M. Waheed Akhtar, Saima Sadaf, Muhammad Ataf Khan	M. Waheed Akhtar, Saima Sadaf, Muhammad Ataf Khan	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92 (0)300 410 5823	muhammad.cho@pu.edu.pk	Animal Husbandry
50	University of the Punjab	Multi-epitope fusion antigens for the diagnosis of tuberculosis	Pakistan Patent No. 142466; Dated 15 September, 2017	Pakistan	-	-	-	-	M. Waheed Akhtar, Madeeha Afzal, Sana Khurshid, Ruzgysa Khalid	M. Waheed Akhtar, Madeeha Afzal, Sana Khurshid, Ruzgysa Khalid	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92 (0)300 410 5823	muhammad.cho@pu.edu.pk	Pharmaceutical sector
51	University of the Punjab	Truncation and CRM engineering of ColE.C. of Thermoplasma Sp. for improved biomass degradation	Pakistan Patent No. 142896; Dated 8 May, 2019	Pakistan	-	-	-	-	M. Waheed Akhtar, Saima Sadaf, Abdul Basit	M. Waheed Akhtar, Saima Sadaf, Abdul Basit	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92 (0)300 410 5823	muhammad.cho@pu.edu.pk	Biofuel Industry
52	University of the Punjab	A polynucleotide comprising a nucleotide sequence encoding a fusion protein	Pakistan Patent No. 142896; Dated 8 May, 2019	Pakistan	-	-	-	-	M. Waheed Akhtar, Ruzgysa Khalid, Madeeha Afzal and Sana Khurshid	M. Waheed Akhtar, Ruzgysa Khalid, Madeeha Afzal and Sana Khurshid	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92 (0)300 410 5823	muhammad.cho@pu.edu.pk	Pharmaceutical sector
53	University of the Punjab	A non-naturally occurring enzyme comprising a nucleic acid sequence homologous with endoglucanase of Clostridium Spici	Pakistan Patent No. 142893; Dated 8 May, 2019	Pakistan	-	-	-	-	M. Waheed Akhtar, Saima Sadaf, Shahad Ali	M. Waheed Akhtar, Saima Sadaf, Shahad Ali	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92 (0)300 410 5823	muhammad.cho@pu.edu.pk	Biofuel Industry
54	University of the Punjab	Recombinant thermostable endoglucanase (CelX) from Clostridium Sp. showing higher catalytic activity	Pakistan Patent Application No. 6942015; Filing date October 28, 2015	Pakistan	-	-	-	-	M. Waheed Akhtar, Saima Sadaf, Shahad Ali	M. Waheed Akhtar, Saima Sadaf, Shahad Ali	Professor Emeritus at School of Biological Sciences, University of the Punjab, Lahore	92 (0)300 410 5823	muhammad.cho@pu.edu.pk	Enzyme Industry
55	University of the Punjab	A process of synthesis of 5-ethoxymethylfurfural from agricultural waste material using ionic liquid	144176	Pakistan	Twenty years	Yes	Active	https://ipo.gov.pk/system/files/Grant%20May-2024.pdf	Maitha Unos, Sadia Nuz	Maitha Unos, Sadia Nuz	Associate Professor, School of Chemistry	0322-5681296	maithaunos@chempu.edu.pk	-
56	University of the Punjab	A process of one-pot deconstruction and chemical transformation of lignocellulosic biomass	144185	Pakistan	Twenty years	Yes	Active	https://ipo.gov.pk/system/files/Grant%20May-2024.pdf	Maitha Unos, Sadia Nuz	Maitha Unos, Sadia Nuz	Associate Professor, School of Chemistry	0322-5681296	maithaunos@chempu.edu.pk	-
57	University of the Punjab	Extraction of lignin from lignocellulosic waste material using pyridinium ionic liquids	50/2019 (Filed in January 2019 and still under process)	Pakistan	Under process	Yes	Under process	https://ipo.gov.pk/system/files/1902152.pdf	Maitha Unos, Ammar Muhammad Aam, Newshad Muhammad	Maitha Unos	Associate Professor, School of Chemistry	0322-5681296	maithaunos@chempu.edu.pk	-
58	University of the Punjab	Ionic liquid mediated synthesis of carboxymethylcellulose via extracting cellulose from lignocellulosic waste	819/2022 (Filed in December 2022 and still under process)	Pakistan	Under process	Yes	Under process	https://ipo.gov.pk/system/files/221219.pdf	Maitha Unos, Maitha Akhlag, Hassan Maqsood	Maitha Unos	Associate Professor, School of Chemistry	0322-5681296	maithaunos@chempu.edu.pk	-
59	University of the Punjab	Process development for the mass production of carboxymethylcellulose (CMC) using agro-industrial waste	820/2022 (Filed in December 2022 and still under process)	Pakistan	Under process	Yes	Under process	https://ipo.gov.pk/system/files/221219.pdf	Maitha Unos, Maitha Akhlag	Maitha Unos	Associate Professor, School of Chemistry	0322-5681296	maithaunos@chempu.edu.pk	-
60	University of the Punjab	Development of a Novel Multiplexed Vaccine Candidate Against SARS-CoV-2	2402174159	Pakistan	-	-	Active	-	Dr. Hafiz Muzammil, Dr. Muhammad Sajjad, Dr. Muhammad Shahbaz Ahsan, Dr. Asif Ali, Dr. Faris Qureshi, Dr. Musfir Ahmed Binsider, Dr. Ruzgysa Gul, Dr. Mahabubul Saleem	Dr. Hafiz Muzammil	Assistant Professor, School of Biochemistry and Biotechnology	0322-9764710	muzammil.cho@pu.edu.pk	-