

## Research Projects

Higher Education commission of Pakistan

Sr. #	Project Title	Principal Investigator	Amount (Rs. in Million)	Date of Approval	Status
1	Variety independent targeted genetic manipulation for evolving semi dwarf basmati rice from cultivars	Dr. Saqlain Naqvi, Biochemistry	48	2003	Completed
2	Biosystemics of dragon flies of Pakistan	Prof. Dr. Muhammad Naeem, Entomology	1.405	03.08.2004	Completed
3	Production and utilization of Bio Fuels from sweet Sorghum	Prof. Dr. Muhammad Gulfraz, Biochemistry	1.719	02.10.2004	Completed
4	The epidemiological studies on <i>Bovine fasciolosis</i> leading to the development of forecasting model to assess site specific risk on Indus river basin in Punjab	Prof. Dr. Mazhar Qayyum, Zoology	2.0971	08.07.2005	Completed
5	Selection and characterization of starter culture for fermented milk products	Prof. Dr. Tariq Masud, IF&NS	1.635	03.08.2005	Completed
6	Development of in plant transformation system for wheat	Dr. Abdul Razzaq,	1.892	19.11.2005	Completed

		Agronomy			
7	Collaboration between ISA and UAAR	Prof. Dr. S. M. Saqlan Naqvi, Biochemistry	0.3	2005	Completed
8	Virulence analysis of <i>Puccinia striiformis</i> population triggering strip rust of wheat in Punjab and NWFP	Prof. Dr. Irfan ul Haq, Plant Pathology	1.288	29.12.2005	Completed
9	Evaluation of soil moisture depletion pattern, soil microbial activity & biomass under different types of terracing in Pothwar.	Prof. Dr. M.I. Lone, Soil Science	1.288	06.09.2006	Completed
10	Developing high trait hybridized/mutant scavengers chicken for rural poultry	Prof. Dr. Nemat Ullah, FV&AS	3.346	11.07.2006	Completed
11	Study of polyphenol oxides activity and its association with molecular markers in different wheat genotypes.	Prof. Dr. S. M. Saqlan Naqvi, Biochemistry	3.789	28.12.2006	Completed
12	Exploring of genetic variation for drought tolerance in wheat by using physiological biochemical attributes	Dr. Noshin Ilyas, Botany	5.893	10.02.2007	Completed
13	Allelopathic crop residue use for weed management in rain-fed areas of Punjab	Prof. Dr. Muhammad Ashraf, Agronomy	4.562	06.04.2007	Completed
14	Virulence Analyses of <i>Xanthomonas campestris</i> pv sesami and <i>Pseudomonas syringae</i> pv sesami the causal organisms of sesame ( <i>Sesamum indicum</i> L) bacterial blight.	Dr. Abida Ikram, Botany	6.413	12.11.2007	Completed
15	Characterization and quantification of soil iron oxides and their effect on phosphorus absorption.	Prof. Dr. Muhammad Saleem	5.87	13.11.2007	Completed

		Akhtar, Soil Science			
16	Conservation of Urial through semen preservation	Prof. Dr. Nemat Ullah, FV&AS	2.216	14.11.2007	Completed
17	Mapping of Punjab Tree Cover and Proposed Tree Suitability Map Inside and Outside of Forest under Changing Climate	Dr. Shamim Akhtar, Zoology	2.79	20.5.2008	Completed
18	Isolation of plant growth promoting rhizobacteria (PGPR) from legumes rhizosphere and their in n <sub>2</sub> fixation by legumes under rain-fed conditions of Pothwar	Prof. Dr. Safdar Ali, Soil Science	2.618	10.06.2008	Completed
19	Repercussion of depletions in vulture populations on the ecology of the Pothwar Region	Dr. Sajid Nadeem, Zoology	2.472	03.07.2008	Completed
20	Isolation, purification and monitory analyses for production edible oil from wild olive.	Prof. Dr. Muhammad Gulfraz, Biochemistry	5.988	21.03.2009	Completed
21	Strengthening of Wildlife Food Habits Study Laboratory	Prof. Dr. Iftikhar Hussain, Wildlife Management	0.913	2009	Completed
22	Invitro improvement of wheat ( <i>Triticum aestivum L.</i> ) and tomato ( <i>Lycopersicum esculentum Mill.</i> ) for drought tolerance	Dr. Abdul Razzaq, Agronomy	6.86	2009	Completed
23	Floristic Study of arid zone (Thal desert), Punjab, Pakistan	Dr. Rahmatullah Qureshi, Botany	6.08	3.2009	Completed

24	Baseline Studies on Wildlife Diversity in Selected Protected Areas of Pakistan	Dr. Maqsood Anwar, Wildlife Management	1.364	08.04.2009	Completed
25	Identifying drought tolerant synthetic wheat lines and determining their genetic diversity through DNA makers.	Prof. Dr. M. Kausar Nawaz Shah, PBG	2.618	13.01.2010	Completed
26	Collection of loquat genotypes of Pakistan and their multiplication through conventional vegetative methods and tissue culture techniques	Prof. Dr. Nadeem Akhtar Abbasi, Horticulture	2.565	24.03.2010	Completed
27	Production of pathogen free, true to type olive plants through tissue culture	Dr. Ishfaq Ahmad Hafiz, Horticulture	3.876	30.03.2010	Completed
28	Production of Butanol and ethanol from agricultural and Municipal Wastes	Prof. Dr. Muhammad Gulfraz, Biochemistry	4.285	08.09.2010	Completed
29	Ecology of the indian flying fox ( <i>Pteropus giganteus</i> ) with special reference to the orchard fruits in Pothwar, KP and AJK	Dr. Amjad Rashid Kayani, Department of Zoology	4.275	28.10.2010	Completed
30	Characterization of soil bacteria using gene sequencing and response of cereal to associative N <sub>2</sub> – fixer and P-solubilizers	Dr. Riffat Hayyat, Soil Science	3.628	12.11.2010	Completed
31	Varietal improvement of gladiolus through in vitro mutation	Dr. Ishfaq Ahmad Hafiz, Horticulture	3.079	08.12.2010	Completed
32	Genetic diversity and phylotyping of <i>Ralstonia solanacearum</i> strains causing bacterial wilt of chillies in	Dr. Tariq Mukhtar, Plant	5.346	08.12.2010	Completed

	major chilli growing areas of Pakistan	Pathology			
33	Ecology on Indian pangolin <i>Manis Crassicaudata</i> in Potohar Region	Dr. Tariq Mahmood, Wildlife Management	2.158	25.12.2010	Completed
34	Comparative economics of fish farming in four districts of Pothwar region	Prof. Dr. Sarfraz Ahmed Mian, Economics	0.813	03.03.2011	Completed
35	Population size, food Habits and Economic Importance of Commensal Rodents in Rural Pothwar	Dr. Muhammad Mushtaq, Zoology	3.624	16.06.2011	Completed
36	Screening of different avian egg yolks for cryopreservation of buffalosemen: a step to improve fertility in buffaloes with frozen semen	Dr. Shamim Akhtar, Zoology	3.472	26.07.2011	Completed
37	Establishing year-round rearing facilities of bumble bees, important pollinator of commercial fruit and vegetable crops.	Dr. Munir Ahmad, Entomology	4.521	26.07.2011	Completed
38	Characterization of putative promoter elements in <i>OsRGLP2</i> promoter region	Prof. Dr. S.M Saqlan Naqvi, Biochemistry	7.61	28.09.2011	Completed
39	Stimulation of soil biological activity through organic amendments for enhancing phosphorus availability in soil-plant system	Dr. Khalid Saifullah Khan, Soil Science	5.855	15.12.2011	Completed
40	Potential application of nanotechnology in crop/vegetable growth, nutrient use efficiency, crop tissue culture and tolerance to osmotic stress	Dr. Abdul Razzaq, Agronomy	4.384	16.12.2011	Completed

41	Monitoring of polycyclic aromatic hydrocarbons exposure among highway toll bar attendants and gt road bus drivers as indicator of environmental and occupational hazards in suburbs of Rawalpindi and Islamabad cities	Dr. Audil Rashid, Environmental Sciences	1.16	23.02.2012	Completed
42	Molecular studies on a complex of potyviruses infecting solanaceous vegetable / crops in Pakistan and their management	Dr. Muhammad Ashfaq, Plant Pathology	1.16	07.05.2012	Completed
43	Surveillance and pathogen characterization of bacterial canker of stone fruits using biochemical and molecular methods and its bio-management	Dr. M. Inam Ul Haq, Plant Pathology	5.686	03.01.2013	Completed
44	Identification of Genetic Risk Factors for Metabolic Syndrome in a Pakistani Population of Local Origin	Dr. Ghazala Kaukab Raja, Biochemistry	3.905	25.06.2013	Completed
45	Biological Control of Rats and Mice in Agricultural Areas of Pothwar Barn Owl (Tyto Alba)	Dr. Muhammad Sajid Nadeem, Zoology	6.267	10.10.2013	Completed
46	Spatial distribution of habitats influences anuran diversity and space use in the landscape implications for conservation beyond species level	Dr. Muhammad Rais, FRM	1.2	03.09.2013	Completed
47	Collaborative Research for Genetic Conservation and Improvement of Pakistani Goats jointly funded by USAID and HEC	Dr. Muhammad Moeen-ud-Din, FV&AS	59.02	2013	Completed
48	Baseline Studies on Wildlife Diversity in Selected Protected Areas of Pakistan (Phase-II)	Dr. Maqsood Anwar, Wildlife	3.916	28.11.2013	Completed

		Management			
49	Establishment of tissue culture and geentic transformation protocol for local varities of lentil	Prof. Dr. S. M. Saqlan Naqvi, Biochemistry	4.524	23.05.2014	Completed
50	Preparation and Application of Multi-Epitopes DNA Vaccines Against Newcastle Disease	Dr. Muhammad Ali Abdullah Shah, FV&AS	4.783	03.06.2014	Completed
51	Improvement of Berry Quality and Post Harvest Performance of Grapes cv. Parlette and King's Ruby by Using Food Grade Chemicals	Prof. Dr. Nadeem Akhtar Abbasi, Horticulture	10.194	06.06.2014	Completed
52	Value Addition of Selected Stone Fruits by Osmotic Dehydration and Hot Air Drying	Dr. Anwaar Ahmed, IF&NS	4.018	11.06.2014	Completed
53	Ecologically-based Rodent Management in Croplands of Pothwar Plateau, Pakistan	Dr. Tariq Mahmood, Wildlife Management	7.363	22.08.2014	Completed
54	Screening of Cellulose Degrading Extremophilic Enzymes From Indigenous Fungi and Study of Site-Directed Mutagenesis Strategies to Enhance Their Activity	Dr. Muhammad Javaid Asad, Biochemistry	3.264	21.08.2014	Completed
55	Enhancing Biological Nitrogen Fixation, Soil Water Holding Capacity and Agronomic Benefits Through Biochar Application in Dryland Area	Dr. Muhammad Tariq Siddique, Soil Science	4.004	29.09.2014	Completed
56	Enhancing Biological Nitrogen fixation, soil water holding capacity and agronomic benefits through biochar application in Dryland Area	Dr. Qaiser Hussain, Soil Science	4.0	29.09.2014	Completed

57	Development of breeding objective for desirable milk protein quality of dairy animals	Dr. Ghulam Bilal, Livestock Production & Management	3.27	26.11.2014	Completed
58	Inter-Comparison of CENTURY and DSSAT Model Simulations to Improve Soil Based Climate Change Resilience and Adaptability of Rainfed Crop Production Systems in Pakistan	Dr. Shahzada Sohail Ijaz, Soil Science	3.584	16.10.2014	Completed
59	Characterization of Nutraceutical Potential of Buckwheat and value Addition of Cereal Products	Dr. Anwaar Ahmed	5.78	15.07.2015	Completed
60	Are Anurans Impacted by Urbanization? Anuran Monitoring and Conservation in a Human dominated Landscape	Dr. Muhammad Rais, Wildlife Management	8.198	09.03.2015	Completed
61	Monitoring and Characterization of Insecticide Resistance in Spotted Boll Worm, <i>Earias Vitelli</i> (Lepidoptera: Noctuidae) Against Different Insecticides	Dr. Asim Gulzar, Entomology	1.725	25.10.2016	Completed
62	Evaluation for Antifreeze Proteins Extracted From Various Sources for Cryopreservation of Buffalo Spermatozoa	Dr. Shamim Akhtar, Zoology	2.405	21.06.2016	Completed
63	Drug trafficking in Pakistan: In-depth study of drug smugglers	Dr. Mazhar Hussain Bhutta, Sociology	1.334	05.04.2017	Completed
64	Visual Ethnography of the Dying Culture of Northern Punjab Pothwar	Dr. Abid Ghafoor Chaudhry, Anthropology	4.248	04.04.2018	Completed

65	Collaborative Research for Genetic Conservation and Improvement of Pakistani Goats	Dr. Muhammad Moeen ud din, Associate Professor, ABG	59.02	2013	Completed
66	Evaluation and performance of different F1 Hybrids of tomato, cucumber and bell peeper in Pothwar region of Punjab	Dr. Tanveer Hussain, Horticulture	0.449	05.06.2020	Completed
67	Clinical and Therapeutic Functioning of Canine Mesenchymal Stem Cells in Canine Bone Regeneration	Dr. Mansoor Abdullah Sandhu, FVAS	8.813	08.06.2018	Completed
68	Biotreatment of Tannery Wastewater and Its Application for Biomass Production of Energy Crops	Dr. Azeem Khalid, Environmental Sciences	13.769	11.06.2015	Completed
69	Somatic Hybridization for Citrus Improvement: A Way Towards a Low Input Sustainable Citrus Culture in Pakistan	Dr. Touqeer Ahmad, Horticulture	12.51	03.12.2015	Completed
70	Evaluation of biochar from different sources to control heavy metal toxicity to soil Microorganisms and Plants	Dr. Muhammad Akmal, Soil Science	2.235	15.02.2016	Completed
71	Nutritional quality assessment and comparison of commonly consumed rainfed arid cereal varieties of Pakistan for their effective marketing and commercialization	Dr. Feroza Hamid Wattoo, Biochemistry	5.036	10.03.2016	Completed
72	Optimization of Agro-management techniques for <i>Sinapis alba</i>	Prof. Dr. Fayyaz ul Hassan, Agronomy	2.022	05.04.2017	Completed

73	Modeling rainfed cereal-based cropping systems to climatic extremes	Dr. Mukhtar Ahmed, Agronomy	4.724	05.04.2017	Completed
74	Perspective study of using weeds nano material for the management of weeds, tolerance of drought and improvement of productivity in wheat	Dr. Safdar Ali, Agronomy	3.925	05.04.2017	Completed
75	Parental decisions on girls schooling levels within demographic framework of rural households in Pothohar Region, Punjab, Pakistan	Prof. Dr. Naimatullah Hashmi, Sociology	1.826	05.04.2017	Completed
76	Buffer Optimized High Gradient Magnetic Separation Technology to Study the Biology of Livestock Parasites (TDF project)	Prof. Dr. Mazhar Qayyum, Zoology	2.415	01.08.2017	Completed
77	Production through suspension culture and in vivo testing of <i>Bistorta amplexicaulis</i> bioactive compounds	Dr. Muhammad Sheeraz Ahmad, Biochemistry	3.916	19.11.2018	Completed
78	Effects of Korean red Ginseng Extract on the Adipogenic and Osteogenic Differentiation of Canine Stem Cells in Vitro	Dr. Evelyn Saba, Veterinary Biomedical Sciences	0.444	05.06.2020	Completed
79	Efficacy of Different Plants Extract in Combination Against <i>Rhizopertha dominica</i> , <i>Tribolium castaneum</i> and <i>Trogoderma granarium</i>	Dr. Sehrish Kanwal, Entomology	0.438	05.06.2020	Completed
80	Investigate the Effect of Foliar Application of Chitosan on Cucumber plants under Hydroponic condition	Dr. Mehwish Liaquat, Institute of Hydroponic Agriculture	0.45	05.06.2020	Completed

81	Biodegradation Of Biodegradable Plastic Mulch Films In Soil Environment And Its Impact On Soil Microbial Communities And Ecosystem Functions	Dr. Sadia Mehmood Satti, UIBB	0.440	05.06.2020	Completed
82	Evaluation of Phytochemical, Biological Potential and Nanoparticle Analysis of <i>Capsicum annum</i> L.	Dr. Riffat Batool, UIBB	0.440	11.06.2020	Completed
83	Sex determination in date palm ( <i>Phoenix dactylifera</i> L.) through molecular markers	Dr. Nadia, UIBB	0.450	05.06.2020	Completed
84	Development of high yielding wheat breeding material with improved grain iron and zinc content for rain-fed areas of Pakistan	Dr. Munir Ahmad, PBG	2.608	05.04.2017	Completed
85	Ostrich farming in Pakistan: Novel and key nutritional solutions to accelerate profitability	Dr. Muhammad Farooq Iqbal, FV&AS	2.339	02.06.2018	Completed
86	Improvement of Host Disease Resistance in Tomato Through Genetic Transformation	Dr. Saad Imran Malik, PBG	3.669	13.01.2016	Completed
87	Expression of pathogenesis - related (PR) proteins to acquire systemic resistance against fungal pathogens ( <i>Alternaria</i> and <i>Fusarium</i> ) of sesame	Dr. Abida Akram, Botany	3.358	26.05.2016	Completed
88	Evaluation of rapeseed (canola) germplasm for erucic acid content based on presence and expression of genes	Dr. Abdul Manaf, Agronomy	2.451	05.04.2017	Completed
89	Development of high yielding, more sugar content and increased stay green leaf sorghum lines	Dr. Ghulam Shabbir, PBG	2.576	05.04.2017	Completed

90	Development of double haploid lines of chillies resistant to phytophthora root rot	Dr. Rashid Mehmood, PBG	5.94	05.04.2017	Completed
91	Physio-morphic and biochemical characterization of wheat varieties in response to silver based nanoparticles against heat stress	Dr. M. Naveed Iqbal Raja, Botany	2.322	05.04.2017	Completed
92	Green synthesis and evaluation of silver nanoparticles for anti-microbial and biochemical profiling in kinnow ( <i>Citrus reticulata L.</i> ) to enhance fruit quality and productivity under biotic stress	Dr. M. Naveed Iqbal Raja, Botany	2.218	20.06.2018	Completed
93	Systematics and Floristic Diversity Assessment of Salt Range (District Mianwali) with special Emphasis on Georeferencing and Herbarium Development	Dr. Ghulam Yaseen, Botany	0.439	05.06.2020	Completed
94	Mapping of Punjab Tree Cover and Proposed Tree Suitability Map Inside and Outside of Forest under Changing Climate	Dr. Muhammad Fahad, IGEO	0.467	05.06.2020	Completed
95	Nutritional assesment and phytochemical screeing of some selected wild fruits from Balochistan, Pakistan	Dr. Rehmat Ullah Qureshi, Botany / 36	3.111	17.12.2018	Completed
96	Mutational and expressional profile of microRNA in thyroid cancer	Dr. Ruqia Mehmood Baig, Zoology / 36	2.527	19.11.2018	Completed
97	Soybean based double cropping system for rainfed areas of Pakistan	Dr. M. Ansar, Agronomy	2.373	23.10.2018	Completed

98	Screening of wild grape biodiversity for drought tolerance and their rootstock-scion compatibility for sustainable grape production in Pakistan	Dr. Touqeer Ahmad, Horticulture	7.77	05.04.2017	Completed
99	Harnessing Untapped Potential of Oleaginous Bacteria for Development of Lipid Based Biorefineries Using Food Processing Waste	Dr. Azeem Khalid, Environmental Sciences	5.903	07.10.2019	Completed
100	Screening for the Selection of Exopolysaccharide-Producing Strains for Yoghurt Making	Dr. Asia Latif, IF&NS/ 36	8.058	07.12.2015	Completed
101	Improving agricultural extension in Pakistan through communication for development	Dr. Badar Naseem Siddiqui, Agri. Extension / 36	11.993	08.06.2017	Completed
102	Detection and Molecular Characterization of Mastitis, Mammilitis and Reproductive Tract Disorders Causing Herpes viruses in Dairy Cattle	Dr. Aayesha Riaz, FV&AS / 36	6.119	05.06.2018	Completed
103	Evaluation of local microbial strains and trace elements for enhancing BNF and production of lentil in Pothwar	Dr. M. Rasheed, Agronomy / 36	2.524	05.06.2018	Completed
104	Development of Nutraceutical Products From Indigenous Source	Prof. Dr. Asif Ahmad, IF&NS / 36	3.593	28.09.2018	Completed
105	Expression Profiling of Regulatory Factors in Various Phenotypic Classes of Tuberculosis Patients	Dr. Pakeeza, Biochemistry / 36	7.798	12.11.2018	Completed

106	Genetic Determinants of Coronary Heart Disease Risk in Central and General Obesity	Dr. Ghazala Kaukab Raja, Biochemistry / 36	2.44	19.11.2018	Completed
107	Genome editing in plants through oligonucleotide targeted nucleotide exchange	Dr. Tayyaba Zainab, Biochemistry / 36	3.241	19.11.2018	Completed
108	The study of epigenetic signatures and immune system programming in tuberculosis	Dr. Pakeeza Arzo, Biochemistry / 36	3.077	19.11.2018	Completed
109	Molecular Characterization of <i>Apis Mellifera</i> (L.) Hygienic Behaviour Against Varroa Mite in Pakistan (Phase 1)	Dr. Muhammad Asif Aziz, Entomology / 36	6.064	04.02.2019	Completed
110	Morpho-molecular characterization and management powdery mildews of cucurbits	Dr. Farah Naz, Plant Pathology / 36	4.78	14.03.2019	Completed
111	Effectiveness of different processing techniques for reduction of pesticides residues vegetables at house hold level	Dr. Rai Muhammad Amir, IF&NS / 36	1.987	10.12.2018	Completed
112	Genetic diversity and population structure of markhor in Pakistan	Dr. Bushra Allah Rakha, Wildlife Management/ 36	5.013	12.11.2018	Completed
113	Validation of Novel Rhizobium for Mass Production of Pulses Bioferlizer	Dr. Riffat Hayat, Soil Science / 36	3.378	23.10.2018	Completed

114	Sustainable Urbanization and the Impact of Sprawling Communities in Pakistan	Dr. Abid Ghafoor Chaudhry, Anthropology / 36	1.883	14.03.2019	Completed
115	Inhibition of TGFBR Signalling Pathway in Cancer Cells Using Selected Natural Compounds	Dr. M. Sheeraz Ahmad, Biochemistry / 24	4.814	13.12.2019	Completed
116	Comparision of Carbon Sequestration in Different Cropping System of the Punjab	Dr. Irfan Aziz, Agronomy	4.3	08.10.2018	Completed
117	Genetic studies of human male infertility in Pakistan	Dr. Irfan Ali, Zoology	3.8	08.10.2018	Completed
118	Developing Reproductive Technologies for Conserving Quail	Dr. Bushra Allah Rakha, Wildlife Management / 36	8.375	13.02.2019	Completed
119	Electrocaytic abetment of endocrine disrupting pollutants from wastewater and simultaneous electricity production using nano aerogels	Dr. Muzammal Anjum, Institute of Soil & Environmental Sciences / 36	8.543	30.11.2021	Completed
120	Revamping probation services: assesing risks, needs and strenths of offenders on probation in Punjab, Pakistan	Dr. Mazhar Hussain Bhutta, Sociology/ 24	10.090	19.05.2022	Completed
121	Application and delivery system of plant protein isolates	Dr. Asma Sohail, IF&NS / 36	1.940	Apr.2022	Completed

122	Molecular characterization of antibiotics resistant <i>Pasteurella multocida</i> isolated from the buffalo and cattle calves for effective therapeutic approach in Punjab	Dr. Mazhar ul Haq, Clinical Studies / 36	5.96	10.12.2018	Completed
123	Dissecting pathomechanism of recurrent pregnancy loss through genomic investigation and in vivo disease modeling	Dr. Uzma Abdullah, UIBB / 36	10.640	May.2022	Ongoing
124	Development of indigenous renewable energy technologies for sustainable agriculture	Dr. Arslan Afzal, Agri. Engineering / 36	6.800	Apr.2022	Ongoing
125	Post harvest management and nutraceutical assessment of sweet oranges ( <i>Citrus sinensis</i> L. Osbeck) produced in Taxila khanpur valley	Dr. Kashif Sarfraz Abbasi, IF&NS/ 36	4.930	Apr.2022	Ongoing
126	Early detection of <i>Bovine Mastitis</i> using MicroRNAs as a potential biomarker; A cutting edge technique	Dr. Aysha Riaz FVAS/ 36	6.633	March, 2026	Ongoing
127	Socio-Psychological factors in Spread of misinformation and radicalization via social media networks; Developing and validating localized counter-Narrative Strategies	Dr. Majid Ali Department of Economics	4.100	March, 2026	Ongoing

## Pakistan Science Foundation

Sr. #	Project Title	Principal Investigator	Duration (in months)	Amount (Rs. in Million)	Date of Approval	Status
1	Evaluation of high yielding and drought resistant canola cultivars in Pothwar	Prof. Dr. Fayyaz ul Hassan, Agronomy	36	0.575	13.05.2003	Completed
2	Integrated management of stored chickpea beetle, <i>Callosobruchus linnaeus</i> .	Dr. Muhammad Aslam, Entomology	36	0.6	2004	Completed
3	Tissue culture and transformation studies in Banana for disease eradication/resistance.	Prof. Dr. S. M. Saqlan Naqvi, Biochemistry	36	0.873	05.07.2005	Completed
4	Cloning and sequencing of major DNA components of banana bunchy top virus from Pakistan	Prof. Dr. S. M. Saqlan Naqvi, Biochemistry	36	0.873	01.11.2005	Completed

5	Potential of mungbean & mush bean to fix nitrogen & benefit the subsequent wheat crop in wheat.	Prof. Dr. Safdar Ali, Soil Science	36	0.588	2006*	Completed
6	Selection of Probiotic cultures for yogurt making	Prof. Dr. Tariq Masud, IF&NS	36	0.239	24.04.2007	Completed
7	Identification of Chemically defined extenders for cryo preservation of buffalo bull spermatozoa	Dr. Shamim Akhtar, Zoology	36	1.36	19.03.2008	Completed
8	Detection of multiple anthelmintic resistance of nematodes in small ruminants grazing in barani region	Prof. Dr. Mazhar Qayyum, Zoology	36	1.208	14.07.2008	Completed
9	Isolation and Identification of plant growth promoting N <sub>2</sub> -fixing soil bacteria using macular techniques for improving legume cereal cropping system	Dr. Riffat Hayyat, Soil Science	36	1.34	16.06.2009	Completed
10	Ethnobotanical survey of Thal desert, Punjab,	Dr. Rehmatullah Qureshi,	36	1.783	16.06.2009	Completed

	Pakistan	Botany				
11	Ecology, status and management of Fisheries in Mangla Dam	Dr. Muhammad Sajid Nadeem, Zoology	36	0.998	16.06.2009	Completed
12	Disease mapping and characterization of lentil wilt pathogen in Pakistan	Prof. Dr. Abdul Rauf, Plant Pathology	24	1.965	13.05.2010	Completed
13	Pre and postharvest treatments of food grade chemicals to improve peach fruit quality and shelf life	Prof. Dr. Nadeem Akhtar Abbasi, Horticulture	36	2.407	27.7.2010	Completed
14	Determination of biological activities and micropropagation of <i>Polygonum amplexicaulis</i> ; A popular medicinal plant of North Pakistan	Dr. M. Sheraz Ahmad, Biochemistry	24	2.072	23.02.2011	Completed
15	Biodiversity and ecology of bats and rodents in the thorn forests and croplands of the Potohar plateau	Dr. Amjad Rashid Kayani, Zoology	36	2.122	06.06.2011	Completed
16	Studies on characterization	Dr. Muhammad	36	2.073	13.06.2011	Completed

	and management of leaf crinkle virus infecting black gram	Ashfaq, Plant Pathology				
17	Utilization of plant growth promoting rhizobacteria for the induction of systemic resistance in potato seed against bacterial rot diseases	Dr. M. Inam-ul-Haq, Plant Pathology	36	1.919	13.06.2011	Completed
18	Biotreatment of Industrially Discharged Azo Dye Contaminants Using Bioaugmentation	Dr. Azeem Khalid, Environmental Sciences	36	3.911	06.01.2012	Completed
19	Insecticide Resistance and mechanisms of resistance in brinjal shoot and fruit borer <i>Leucinodes orbonalis</i> (Lepidoptera: pyralidae)	Dr. Asim Gulzar	24	1.344	19.08.2013	Completed
20	Improving Yield Quality and Storage Life of Bell Pepper by Use of Food Grade Chemicals	Prof. Dr. Nadeem Akhtar Abbasi, Horticulture	36	2.875	09.04.2014	Completed
21	Mosquito Fauna of Pothwar Region: A Resource-Based Approach”	Prof. Dr. Muhammad Naeem	24	1.796	Apr-14	Completed

22	Ants- aphid's Mutualistic Association, Its Impact on Biological Parameters of Aphids and Predation of Coccinelids'	Dr.Imran Bodlah, Entomology	36	1.953	2014	Completed
23	Nematodes Infecting Temperate Fruits in Pakistan and their Management	Dr. Tariq Mukhtar, Plant Pathology	36	5.22	2014	Completed
24	Evaluation of Intravenous Hypersomotic Sodium Bicarbonate Solution as an Adjunct to Antibiotic Therapy on Acid-Base Status and Cardiovascular Function in Buffalo Calves with Induce and Spontaneous Neonatal Diarrhea Associate with Escherichia Coli;	Dr.Muhamma d Arif Zafar, FV&AS	36	2.589	19.11.2014	Completed
25	Development of breed identification marker for Pakistani dairy cattle breeds	Dr. Muhammad Moeen-ud-Din, FV&AS	36	4.423	15.08.2013	Completed

26	Development of Genetic Evaluation Model for Dhanni Cattle as Potential Beef Cattle in Potohar Region of Punjab	Dr. Ghulam Bilal, FVAS	36	3.086	2014	Completed
27	Surveillance and Characterization of Pathogens Infecting Loquat in Pakistan	Dr. Farah Naz, Plant Pathology	36	2.271	2014	Completed
28	Molecular Cloning and Heterologous Expression of Endopolygalacturonase Gene in E.coli as a Promising Application for Food Industry	Dr. Muhammad Javaid Asad, Biochemistry / 36	3.954	04.12.2017		
29	Preparation and evaluation of bovine serum and chicken egg derived immunoglobulins for the treatment of staphylococcus aureus mastitis in cattle and buffalo	Prof. Dr. Arfan Yousaf, DVM/ 36	4.9	15.04.2020		Ongoing
30	Molecular quantification and breeding of heritage chickens (Asil) for better feed efficiency	Dr. Nasir Mukhtar, DVM/ 36	6.274	30.06.2020		Ongoing

31	Mining for private /unique genes preserve in rapeseed brassica napus germ plasm regulating draught & salinity tolernace and special seed nutrition quality based on genome structural variation analysis of A core collection	Prof. Dr. Ghullam Jillani, Soil Science (PSF joint)/ 36	5.166	24.04.2020	10.2023	Ongoing
32	Traceable Beef Production: An Innovative Production System to Develop Consumer Trust on Food Safety through Traceability	Dr. M. Fiaz, LPM/ 36	4.269	21.06.2021	6.2023	Ongoing
33	Screening of validation of natural herbal dewormer for livestock	Dr. Murtaz ul Hassan, DVM/ 36	3.28	11.2021		Ongoing
34	Nutraceutical characterization guava (psidium guajava L.) cultivars in response to different post-harvest interventions	Dr. Kashif Safraz Abbasi, IFNS/ 36	3.425	15.04.2022		Ongoing

35	Development of nanobiofertilizer (nano-encapsulated PGPR) with silicon dioxide nano-particles for improvement of wheat growth and its commercialization	Dr. Noshin Ilyas, Botany/ 24	4.72	4.2022		Ongoing
36	Identification and development of functional molecular markers related to resistance against viral diseases in chill	Dr. Rashid Mehmood, PBG/ 24	4.62	5.2022		Ongoing
37	Molecular identification and biopolymeric encapsulation of lactic acid bacteria	Dr. Asma sohail, IFNS/ 36	4.30	12.08.2022		Ongoing
38	Development of sperm cryopreservation protocols for <i>Cirrhinus mrigala</i> and <i>labeo rohita</i>	Prof. Dr. Shamim Akhtar, Zoology, Wildlife and Fishries/ 36	4.19	6.2023		Ongoing
39	Genetics studies of inherited neurodevelopment disorder in Pakistan Families	Dr. Uzma Abdulla, UIBB	4.0	7.2023		Ongoing

### PARB Projects

	Project Title	Principal Investigator	Duration (in months)	Amount (Rs. in Million)	Staus
1.	Utilizing bacterial ACC-deaminase biotechnology to mitigate impact of water stress (drought) on cereal crops	Dr. Azeem Khalid, Environmental Sciences	60	6.800	Completed
2.	Evaluation and Introduction of Some Exotic Kiwi Cultivars	Prof. Dr. Azam Khan, Horticulture	36	9.934	Completed
3.	Modeling approach for assessing the impact of climate change on growth and yield of wheat and groundnut and possible adaptation/management strategies under rainfed condition.	Dr. Muhammad Naveed Tahir, Agronomy	24	1.894	Completed
4.	Exploration, Domestication and Commercialization of Bees	Dr Asim Gulzar Entomology	36	22.220	Completed
5.	Pilot Scale production of cow-side and bench-top immune-magnetic diagnostic tool for bovine mastitis	Prof. Dr. Arfan Yousaf, Clinical Science	36	18.574	On going

6.	Exploration and Development of Insecticide Resistance Predatory Orius Bug Species for Effective Management of Thrips	Dr. Munir Ahmad, Entomology	36	5.572	On going
7.	Mitigation of Climate change impacts in canola and wheat through amino acid based liquid biofertilizer	Dr. Noshin Ilyas, Botany	36	24.375	Ongoing

#### ALP-PARC

S.No	Project Title	PI	Duration/ Months	Amount (Rs. in Million)	Status
1	Investigation of role of Germene like proteins during germination by construction of rice plants engineered for sense and anti sense expression of rice GLPs.	Prof. Dr. S. M. Saqlan Naqvi, Biochemistry	36	2.473	Completed
2	Insecticide resistance in <i>Plutella xylostella</i> and its implication in integrated management.	D. Abdul Khaliq, Entomology	36	2.0904	Completed
3	Sustainable cropping pattern for Pothwar plateau	Prof. Dr. Muhammad Azim Malik, Agronomy	36	3.0336	Completed
4	Biology and management of porcupine in central Punjab	Prof. Dr. Afsar Mian, Zoology	36	2.094	Completed
5	Screening drought tolerance wheat genotypes and	Prof. Dr. Muhammad	36	1.967	Completed

	estimation of the genetic basis	Munir, PBG			
6	Integrated weed control for major Rabi crops (wheat & rapeseed and fallow land Pothwar).	Prof. Dr. Muhammad Azim Malik, Agronomy	36	2.22	Completed
7	Impact of tillage system Legumes and mulches on soil profile moisture dynamics and wheat production	Prof. Dr. Safdar Ali, Soil Science	36	2.000	Completed
8	The WTO Agreement and its impacts on the farm sector with emphasis on small holders	Prof. Dr. Sarfraz Ahmad Mian, Economics	24	1.621	Completed
9	Characterization to determine the adaptive role of Dehydrins under drought stress in wheat	Dr. Rehana Asghar, Botany	36	2.943	Completed
10	Phenotypic plasticity of Safflower ( <i>Carthamus tinctorius</i> ) in response to environment and integrated nutrient management.	Prof. Dr. Fayyaz-ul - Hassan, Agronomy	36	1.913	Completed
11	Epidemiology, population biology and management of chilli anthranose in Punjab, Pakistan	Dr. Abid Riaz, Plant Pathology	24	2.37	Completed
12	Improving Drought Tolerance and Quality of Fodder Maize Genotypes for Silage Using Growth Hormone and Selenium	Dr. Muhammad Rasheed, Agronomy	36	5.737	Completed
13	Identification of Parasitoids and Ants Complex Associated	Dr. Imran Bodlah,	36	3.142	Completed

	with Psyllids on Trees and Management of Olive Psyllid in Pothwar and KPK	Entomology			
14	Development of a Fourier Function Model for Selection of High Fertility Buffalo Bulls for AI	Dr. Shamim Akhtar, Zoology	36	4.558	Completed
15	Validation of Rhizobium for Mass Production of Groundnut Biofertilizer	Dr. Riffat Hayat, Soil Science	36	4.43	completed
16	Research for productivity enhancement of drought tolerant and shattering resistant cultivars of sesame in rainfed areas of Punjab Pakistan	Dr. Ghulam Qadir, Agronomy	36	5.085	Completed
17	Adaptability and development of production technology of guar ( <i>Cyamopsis tetragonoloba</i> (L.) Tauba) in rainfed Pothwar through simulation modeling	Dr. Ghulam Qadir, Agronomy	36	3.98	Ongoing
18	Development of dust control mechanism for wheat thresher to minimize environmental pollution and control health hazards of farming community	Engr. Dr. Zia-Ul-Haq, FAET/24		8.242	Ongoing
19	Selection fingerprinting and combining ability assesment of candidate chilli accessions for OPV development	Prof. Dr. Azam Khan, Horticulture/36		6.328	Ongoing

### Other Funding Agencies

S. No	Title	PI	Duration	Amount (Rs. in Million)	Status	Funding Agency
1	Distribution and management of root-knot nematodes ( <i>Meloidogyne</i> spp.)	Dr. Tariq Mukhtar, Plant Pathology	36	1.998	Completed	UAF, Endowment Fund Secretariat
2	Component-I: Strengthening informal seed supply system at two locations in Pothwar through participatory technology transfer	Dr. Abdul Razzaq, Agronomy	24	2.087	Completed	UAF, Endowment Fund Secretariat
3	Component-III: Technology transfer to potato growers in relation to pathogen free seed potato, management of diseases and adoption of improved agro techniques	Dr. Ishfaq Ahmad Hafiz, Horticulture	24	2.125	Completed	UAF, Endowment Fund Secretariat
4	Component-II: Rhizobacterial formulations application technology for the control of major pathogenic root infecting fungi in chickpea for sustainable crop production	Dr. M. Inam Ul Haq, Plant Pathology	24	1.787	Completed	UAF, Endowment Fund Secretariat
5	Molecular studies on a complex of potyviruses infecting solanaceous	Dr. Muhammad Ashfaq, Plant Pathology	12	1.16	Completed	IFS

	vegetable / crops in Pakistan and their management					
6	Genetic Analysis of SUMOylation in Tomato and its Role in Plant Defence	Dr. Saad Imran Malik, PBG	24	1.14	Completed	IFS
7	Spatial distribution of habitats influences anuran diversity and space use in the landscape implications for conservation beyond species level	Dr. Muhammad Rais, Wildlife Management	12	1.2	Completed	IFS
8	Role of Crop Field Boundary Vegetation in Population Ecology of Passerine Birds in Pothwar Area	Prof. Dr. Iftikhar Hussain, Wildlife Management	24	0.600	Completed	WWF
9	Effect of Time of Harvest on Olive Oil Yield and Quality	Prof. Dr. Ishfaq Ahmad Hafiz, Horticulture	12	0.200	Completed	NESCOM
10	Spatio-temporal dynamics of greenhouse gas emissions from soil under various forest types of Pakistan	Dr. Muhammad Irfan Ashraf, Forestry & RM	6	1.250	Completed	Ministry of Climate Change
11	Building disaster resilience in Pakistan (preparing climate risk profiles of selected district in Punjab)	Dr. M. Hasan Ali Baig, IGEO	12	1.973	Completed	FAO
12	Billion Tree Honey (Pilot Phase)	Dr. M. Asif Aziz, Entomology	24	1.878	Completed	M/o Climate Change
13	Developing a sub-national dashboard for the urban food system	Prof. Dr. Anwaar Ahmed, IFNS	24	3.75	Completed	GAIN

14	Studies on effects of zinc, boron and iron nanoparticles on yield quality of olive oil	Dr. Irfan Ali, Horticulture	12	0.25	Completed	NESCOM
15	Capacity building and transformation of food system with special focus on gender	Prof. Dr. Anwaar Ahmed, IFNS	12	3.57	Completed	FAO
16	Anti inflammatory activities of korean red gingseng extract and asgard nagori (withania somnifera)-A comparative study	Dr. Evelyne Saba, Veterinary Biomedical Sciences	12	5.0	Completed	Korean Society of Gingseng
17	Anti microbial activity of korean red gingseng extract against bovine mastitis causing pathogens	Dr. Evelyne Saba, Veterinary Biomedical Sciences	12	5.0	ongoing	Korean Society of Gingseng
18	Defining the role of red korean gingseng extracts on mental stress and fatigue under sleep deprived model on the productive, physiological, biochemical and carcass quality in New Zealand rabbits	Dr. Syeda Maryam Hussain, LPM	12	5.0	Ongoing	Korean Society of Gingseng
19	Hair growth potential of res korean gingseng with LD-methionine and analysing the histological and microrna profiles changes in angora rabbit skin development and muscle gain	Dr. Syeda Maryam Hussain, LPM	12	5.0	ongoing	Korean Society of Gingseng

20	Development of Agriculture Disaster Response Technology	Dr. M. Azam, FAET	33	0.9	ongoing	National Research Foundation Korea
21	Phytochemical investigation of Margallah hills flora: prospects for antidiabetic agents	Dr. Zia ur Rehman Mashwani, Botany	12	0.7	Ongoing	Pakistan Academy of Sciences
22	Urban food gardening in twin cities: a step toward fight against climate change and malnutrition	Prof. Dr. Azam Khan, Horticulture	36	4.4	Ongoing	UAF, Endowment Fund Secretariat
23	China Pakistan joint research on key technologies and application promotion of high resolution remote sensing agricultural satellites data processing	Dr. M. Amin, IGEO	24	8.0	Ongoing	China
24	Evaluation of osteogenic capacity of korena red ginseng water extract on the tri-lineage differentiation of rat dental pulp stem cells	Dr. Evelyn Saba, Veterinary Bio-medical Science	12	0.8	Ongoing	Korean Society of Ginseng, Korea
25	Sustainable biological control of patulin contamination in apples: a mycotoxin management strategy for Gilgit Baltistan Pakistan	Dr. Marina Sajid, IF&NS	12	1.5	Ongoing	OIC COMSTECH

