RESEARCH ACHIEVEMENTS

RESEARCH PROJECTS SPONSORED BY NATIONAL AND INTERNATIONAL AGENCIES

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
FACULTY OF ARTS & HUMANITIES			
Department of Archaeology:			
UNESCO	Explorations & Excavations in Cholistan	0.26 Million Rupees	Project will be taken in hand in 2011
FACULTY OF BEHAVIOURAL & SOCIAL SCIENCES **Department of Political Science**:			
Dr. Umbreen Javaid/ Higher Education Commission, Pakistan	"Nationalistic Tendencies in Balochistan: Impact on Federation of of Pakistan"	0.2 Million Rupees	Research promotion
Dr. Iram Khalid & Ms. Rehana Saeed Hashmi University of the Punjab, Lahore.	Intra-state war in South Asia	0.125 Million Rupees	Research promotion
Rana Eijaz Ahmad / Mubeen Adnan University of the Punjab, Lahore.	The Muslim World and the US: Briging the Gap between Ideology and Humanity	0.125 Million Rupees	Research promotion
FACULTY OF EDUCATION			
Institute of Education & Research:			
Principal Investigation (Dr. Hafiz M. Iqbal) / ICT R & D funded Government of Pakistan	Development Adaptive English Language Learning Tool for secondary School Students	3.7 Million Rupees	To develop interactive and adaptive English Language Learning tool to be used on computer by students of high school.
Principal (Dr. Hafiz M. Iqbal, Dr. Nasir Mahmood, Dr. Rizwan Akram) Rana / UNICEF	Evaluation of Continuous Professional Development (CPD)program for Teachers Implemented by DSD Lahore.	1.2 Million Rupees	To evaluate the implementation plan of CPD program in the light of CPD conceptual frame work

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Principal (Dr. Hafiz M. Iqbal, Dr. Nasir Mahmood, Dr. Rizwan Akram) Rana / British Council	British, Baseline Survey Study of 'Connecting Classroom' Project	1.1 Million Rupees	To conduct baseline survey of the school who participated in the British Council Project 'Connecting school.'
Principal (Dr. Nasir Mahmood) / Higher Education Commission, Islamabad.	Developing a Standardized Classroom Interaction Analysis Framework (CIAF) for Assessing Pro-constructivist practices in Elementary School Science Classrooms.	0.5 Million Rupees	Developing classroom interaction analysis framework to inform teacher and students about the ways of teaching and learning.
FACULTY OF ENGINEERING AND TECHNOLOGY			
Institute of Chemical Engineering and Technology:			
Prof. Dr. Zahoor-ul-Hassan Rizvi / SNGPL – Pakistan	Mitigation of Internal corrosion in Natural Gas Transmission Line due to bacteria, CO_2, H_2S and moisture		On going
Prof. Dr. Mahmood Saleem / Higher Education Commission	Comparative study of coal combustion with waste in CFBC	5.6 Million Rupees	On going
Prof. Dr. Mahmood Saleem / Higher Education Commission	Fast Pyrolysis of Biomass	2.1 Million Rupees	Grant Approved
Prof. Dr. Arshad Chughtai / HEC	Fisher Tropsch Synthesis of Liquid fuels	4.6 Million Rupees	On going
Institute of Quality & Technology Management:			
Dr Muhammad Usman Awan/ Ministry of Health	Development of Pharmaceutical Distribution Model for Customer Satisfaction Two (2)years	0.27 Million Rupees	To development of harmaceutical Distribution Model for Customer Satisfaction

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
College of Engineering and Emergining Technologies:			
Punjab University	Characterization and development of biocompatible coatings on orthopedic implants materials (01 year)	0.20 Million Rupees	Development and characterization of low cost biocompatible coating material
Punjab University	Evaluation of rust converters as an alternate to surface preparation for paint(01 year)	0.125 Million Rupees	Preparation of rust converter to enhance corrosion resistance of mild steel
Punjab University	Development of Uni-Structural Grey Cast Iron in a Casting of Different Section Thickness. (01 year)	0.125 Million Rupees	Control of microstructure of grey cast iron independent of section thickness of the casting
Punjab University	Semi-solid Processing of Al-Si-Mg alloy (01 year)	0.125 Million Rupees	Development of semi-solid processing facility and to observe the response of Al-Si-Mg alloy to semi-solid processing
FACULTY OF LIFE SCIENCES **Department of Botany:**			
Dr. Firdaus-e-Bareen / Higher Education Commission (HEC), Pakistan	Role of plants and associated resistant fungi in metal uptake from tannery sludge and solid waste. 2009- 2011	3.79638 Million Rupees	(in progress)
Firdaus-e-Bareen Punjab University, Lahore	A multivariate analysis of heavy metal contamination in vegetables and fruits in the vicinity of some industrial areas of the Punjab. 2010	0.2 Million Rupees	(completed)
Firdaus-e-Bareen / Punjab University, Lahore	Biochemical Characteristics of *in vitro* salt-tolerant cell lines and regenerated plants of wheat (*Triticum aestivum* L.). 2009	0.2 Million Rupees	(completed)

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Dr. Abdul Nasir Khalid / Higher Education Commission of Pakistan.(HEC)	A contribution to the Rust flora of AJK (Azad Jammu &Kashmir) and adjacent Northern areas of Pakistan. 2008-11	2.30600 Million Rupees	(in progress)
Dr. Abdul Nasir Khalid / University of the Punjab, Lahore	Diversity Mycorrhize Poprlars and Willos. 2010	1.5 Million Rupees	(completed)
Dr. Abdul Nasir Khalid / University of the Punjab, Lahore	Diversity of Micromycetes in different polluted water samples and their role in detoxification. 2009	0.1 Million Rupees	(completed)
Dr. Humera Afrasiab / University of the Punjab, Lahore	Establishment of tissue culture conditions for callogenesis and regeneration of medicinal plant Periwinkle (*Catharanthus roseus)* 2010-2011.	0.125 Million Rupees	(completed)
Ms. Farkhanda Jabeen	Isolation of Pyrethorides degrading bacteria from local habitat 2009.	0.125 Million Rupees	
Ms. Ambreen Ahmed University of the Punjab, Lahore	Enterobacter sp: Impact on the growth of Brassica oleraceae.	0.1 Million Rupees	(completed)
Department of Microbiology and Molecular Genetics:			
Prof. Dr.Shahida Hasnain, Dr. Muhammad Faisal /HEC and USAID	Bioremediation of chromium and arsenic from industrial waste waters Pak-US S&T project (2008-2011)	268789 US $	Proposed/ achieved
Prof. Dr. Shahida Hasnain/HEC	Plant growth hormones from bacterial and cyanobacterial origin and its impact in tissue culture (2008-2011)	3.18546 Million Rupees	Proposed/ achieved
Prof. Dr. Shahida Hasnain/ Ministry of Health	Structure elucidation of novel antibiotics from indigenous bacteria (2009-2010)	1.0 Million Rupees	Proposed/ achieved
Prof. Dr. Shahida Hasnain/PU	Genetic basis of noise induced hypertension (2009-2010)	0.2 Million Rupees	Achieved/ completed
Dr. Anjum Nasim Sabri /PU	Effect of chromium on biofilm formation: bacterial biofilms in association with cyanobacterial biofilms (2009-2010).	0.15 Million Rupees	Achieved/ Completed

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Dr. Zakia Latif / PU	Detoxification of methylmercury pollutant by immobilized yeast (2009-2010)	0.15 Million Rupees	Achieved/ Completed
Dr. Sikander Sultan/PU	Isolation and characterization of Cypermethrin degrading bacteria. (2009-2010)	0.15 Million Rupees	Achieved/ Completed
Dr. Muhammad Faisal/HEC	Elimination of carcinogenic Cr (VI) by microorganisms in association with hydrophytes (2008-2010)	1.972 Million Rupees	Proposed/ Achieved
Dr. Muhammad Faisal/HEC	Modern strategies to combat chromium pollution in industrial effluent (2010).	0.3 Million Rupees	Proposed/ Achieved
Dr. Muhammad Faisal/HEC	Bacterial transformation of toxic Selenite (IV) to elemental Selenium (0) in wastewater/ contaminated soil (2010-12).	4.3 Million Rupees	In progress
Dr. Muhammad Faisal/PU	Study of diversity of selected bacterial communities present in Hot springs of Himalayan range (2009-10).	0.125 Million Rupees	Proposed/ Achieved
Ms. Tahira Malik/PU	Development of stress tolerant rice plants using plant tissue culture techniques (2009-10)	0.125 Million Rupees	Proposed/ Achieved
Dr. Abdul Rehman/PSF	Potential use of yeasts in decontamination of arsenic polluted wastewater (2010-2012)	1.490 Million Rupees	Proposed/ Achieved
Dr. Abdul Rehman/PU	Isolation and characterization of xylan degrading yeasts from local environment (2009-10).	0.125 Million Rupees	Achieved/ In progress
Dr. Nazia Jamil/ International Foundation for Science (IFS), Sweden.	Industrial and Domestic wastewater as a resource of Bacteria producing Bioplastic (2009-11)	0.25 Million Rupees	Proposed/ Achieved
Dr. Nazia Jamil / PU	Bioplastic production from bacteria using Mobil oil (2009-10).	0.125 Million Rupees	Proposed/ In progress
Ms. Rida Batool/ PU	Bioremoval of chromium by different biosorbent materials (2009-2010)	0.1 Million Rupees	Achieved/ Completed
Ms Samreen Riaz	Study of protein biomarkers in Diabetes mellitus type 2 (2009-10)	0.1 Million Rupees	Achieved/ Completed

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Ms. Saba Riaz/ PU	Detection of plasmid-mediated Tem β-lactamase gene in clinical isolates by using PCR (2009-2010).	0.1 Million Rupees	Achieved/ Completed
Ms. Saira Malik/ PU	Carrier Screening for Thalassemia in Pakistan (2009-2010)	0.1 Million Rupees	Achieved/ Completed
Ms. Nageen Hussain /PU	Levels of interleukin 15 in SLE patients (2009-2010)	0.1 Million Rupees	Achieved
Dr. Basharat Ali/ PU	Indole-3-acetic acid quantification from plant associated Bacteria: impact on endogenous IAA content and growth of *Vigna radiata* (L.) (2009-2010).	0.1 Million Rupees	Achieved/ Completed
Dr. Imran Sajid/ PU	PCR based screening for polyketide antibiotics from endophytic Streptomycetes (2009-2010)	0.1 Million Rupees	Achieved/ Completed
Department of Applied Psychology:			
Prof. Dr. Rukhsana Kausar University of the Punjab, Lahore	Urdu Translation and Adaptation of State and Trait Anxiety Inventory in Pakistan	0.2 Million Rupees	Translate a Scale Adaptation for Pakistani Population Publish
Ms. Rafia Rafiq University of the Punjab, Lahore	Coronary Heart Disease (CHD) Risk Profiles of Urban and Rural Population: A Comparative Analysis	0.125 Million Rupees	Coronary Heart Disease (CHD) Risk Profiles of Urban and Rural Population: A Comparative Analysis
Ms. Shazia Khalid University of the Punjab, Lahore	Predictors of Coping with work stress	0.125 Million Rupees	Identify factors that would help in coping with workstress
Ms. Afifa Anjum University of the Punjab, Lahore	Stress and Burnout in Doctors working in Hospitals of Lahore	0.125 Million Rupees	To compare level of stress and burnout in doctor
Ms. Tahira Mubashir University of the Punjab, Lahore	Relationship of Organizational Justice Perception, Perceived Social Support with Organizational commitment and citizenship behavior: the mediating role of employee emotional health	0.125 Million Rupees	To assess role/importance of Organizational Justice Perception Perceived Social

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
			Support in developing Organizational commitment and citizenship behavior and to find out role of employee emotional health
Department of Zoology:			
Prof. Dr. Muhammad Akhtar/ University of the Punjab	Studies on the fossil mammals of the Soan Formation 1 year (2010-2011)	0.2 Million Rupees	Studies on the fossil mammals of the Soan Formation
Prof. Dr. Tanveer Akhtar/ University of the Punjab	Malaria: Molecular Basis of Drug Resistance in Pakistan Scenario	0.2 Million Rupees	
Prof. Dr. Syed Shahid Ali/ University of the Punjab	Toxicity and resistance pattern in various populations of stored grain pest, *Trogogerma ganarium* against a pyrethroid insecticide, "deltamethrin".	0.2 Million Rupees	
Prof. Dr. Javed Iqbal Qazi/ University of the Punjab	Isolation and termite biocontrol potential of chitinase producing bacteria.	0.2 Million Rupees	To verify colloidal chitin hydrolysis potential of chitinolytic bacterial isolates that had been preserved in microbiology lab. The bacteria have been characterized for colloidal chitin hydrolysis at 30^{o}C.
Dr. Mohammad Shafiq Ahmed/ University of the Punjab	Toxicological effects caused by some Heavy metals in Fishes from River Ravi at Baloki Headworks.	0.15 Million Rupees	To identify toxic effects on growth in fishes
Dr. Zafar Iqbal / University of the Punjab	Study on some aspects of biology of freshwater fish gold fish (*Carassicus auratus*) and prevalence of disease in some ornamental fish	0.15 Million Rupees	Studies on disease and biology of gold fish.

Dr. Nabila Roohi / University of the Punjab	Identification and prognostic significance of malignancy associated biomarker/s in patients with Hodgkin's and non Hodgkin's Lymphoma.	0.125 Million Rupees	
Dr. Najma Shaheen / University of the Punjab	Identification of bacterial isolates from contact lenses or lens cases, their antibiotic resistance profile and responses to selected antimicrobials.	0.125 Million Rupees	

National Centre of Excellence in Molecular Biology:

Dr. Shaheen N. Khan/ Higher Education Commission	Molecular Genetics of Usher syndrome Type I in Pakistani population	Continued	Ascertainment of families Aim 1: 1.) Family identification and enrollment 2.) Sample collection 3.) Clinical evaluation Aim 2: Mapping novel USH1 locus 1.) Genotyping to find the linkage to known loci 2.) Mutational screening of the selected known genes 3.) Genome wide linkage analysis 4.) Fine mapping of new Usher locus 5.) Screening additional families for a new USH1 locus Aim 3: Identification of novel USI1 gene. 1.) Positional cloning USH1 genes. 2.) Mutational analysis of the candidate genes 3.) Mutational analysis of new USH1 gene in the population.

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Dr. Tayyab Husnain/ Higher Education Commission (Pak-US$	Collaborative linkage with University of Illinois, USA.	Continued	1.) Stress treatment and isolation of promoter regions involved in the regulation of drought tolerant genes in cotton. 2.) Determine the sequence of isolated promoter regions. 3.) Analytical studies on promoter sequences. 4.) Alignment of isolated sequence with other related proteins from other plants to locate the conserved motifs.
Dr. S. Riazuddin/ Higher Education Commission	Studies on the Role of Tricellulin Tight Junction Protein.	Continued	1.) Identification of 25 large consanguineous families segregating non-syndromic hearing impairment. 2.) Search for linkage to DFNB49 and other non-syndromic loci. 3.) Generation of DFNB49 mouse model. a) Construction of the targeting vector. b) Electroporation of ES cells.

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
			4.) Screening for nock-in mice for the human R500X mutations of DFNB49. 5.) Generation of dual transgenic mice. Evaluation of the targeted mice for phenotype/ genotype/ TRIC expression and distribution.
Dr. S. Riazuddin/ ICGEB, Trieste, Italy	Genetic Basis of Hereditary Hearing Impairment.	Continued	1.) Search for new loci and pathogenic mutations associated with human hearing impairment 2.) Generate DFNB49 gene knockin and knockout transgenic mouse model and elucidate the role of tricellulin in hearing impairment.
Dr. S. Riazuddin/ Higher Education Commission (Pak-US$	Novel Triple Acting Chimeric Anti Microbials for Eradication of Multi-Drug Resistant Strain of Staphy lococcus *aureus.*	Continued	1.) Isolate and characterize staphylococci and staphylococcal bacteriophage f rom the pakistani farm environment. 2.) Isolate and characterize bacteriophage lytic enzymes (endolysins) of Pakistani origin. 3.) Train four young

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			researchers from the Pakistani lab in these technologies to further strengthen local molecular research and antimicrobial capabilities. 4.) With the training received in Objective 3. and the endolysin genes characterized in objective 1 and 2, the Pakistani researchers will create and characterized novel triple domain antimicrobials and test their efficacy against known Pakistani mastitis pathogens. Once tested in Pakistan, the triple fusions would be sent to the US for testing against US pathogens.
Institute of Biochemistry & Biotechnology:			
Dr. Mahjabeen Saleem University of the Punjab	Molecular Cloning and expression of Xylanase gene from *Bacillus sp.* in *E. coli.*	0.1 Million Rupees	Cloning and expression of xylanase gene and study of its applications in paper industry

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Dr. Amtul Jamil Sami / World Wild Life Fund	Comparative studies on the phylogenetic analysis of Indus Dolphin & Gangies Dolphin	0.2 Million Rupees	Study of evolutionary and phylogenetic analysis of indigeneus Dolphen species.
Dr. Amtul Jamil Sami / HEC	Molecular basis of action of Neem derived compounds as Bio-pesticides	1.95 Million Rupees	Study the role of Neem derived compounds as Biopesticides.
Dr. Saima Sadaf/ TWAS	Recombinant production of biopharmaceutical using a prokaryotic expression system	12,000 $ (USD)	Cloning, expression, partial characterization and biological activity assessment of an important biopharmaceutical.
Dr. Saima Sadaf/ PAS	Production of recombinant cytokine of therapeutic importance	1.98 Million Rupees	Production of granulocyte colony stmulating faetor for neutropenia treatment
Dr. Saima Sadaf/ HEC	Free circulating molecular markers for cancer diagnosis and prognosis	4.19 Million Rupees	Analysis of DNA/RNA based markers for early diagnosis of cancer
Dr. Saba Irshad/ University of the Punjab	Linkage studies of Microcephaly in Pakistani kindred	0.1 Million Rupees	Genetic and linkage based studies of children suffering from microcephaly.
Dr. Zahoor Qadir Samra University of the Punjab	Anti-cancer drug delivery through Magnetic Nanoparticles	0.1 Million Rupees	Preparation of nano-based magnetic particles for effective delivery of anti-cancer drugs.

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Ms. Mamoona Naz University of the Punjab	The role of estrogen-metabolizing genes CYP17 and Catechol-o-methyltranferase in association risk of epithelial ovarian cancer	0.1 Million Rupees	Study of the role/association of CYP17 mutation and polymorphism with ovarian cancer.
Mr. Shahbaz Aslam University of the Punjab	Use of laccases in textile industry	0.1 Million Rupees	Study the applications of fungal laccases in textile industry
Ms. Iram Gull University of the Punjab	Expression of Human INF-α2-b in *E. coli* for Therapeutic purposes	0.1 Million Rupees	In house production of human interferon α2 for the treatment of Hepatitis.
Ms. Afshan Iqbal University of the Punjab	Cloning and Expression of Human Tumor Necrosis Factor in *Escherichia coli*.	0.1 Million Rupees	Cloning and expression analysis of human TNF in E.coli.
Ms. Beenish Kashif University of the Punjab	Enhanced production and purification of L-glutamate from bacterial strains	0.1 Million Rupees	Production of L-glutamate and its purification.
Ms. Ferhana Hussain University of the Punjab	Over expression of human erythropoietin gene	0.1 Million Rupees	Expression of human erythropoietin gene through recombinant DNA technology.
Institute of Plant Pathology:			
Prof. Dr. Rukhsana Bajwa/ Punjab University/ HEC	Fungal Culture Bank of Pakistan	0.615 Million Rupees (by P.U. as seed money) 33.472 Million Rupees (by HEC)	To preserve and provide culture to students and researchers

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Prof. Dr. Rukhsana Bajwa/ Punjab University/ HEC	Herbal Heritage Garden	1.406 Million rupees (by P.U.) 15.56 Million rupees (by HEC)	Detailed phytosociological study.Seed germination and macro/micro-propagation studies.
Prof. Dr. Rukhsana Bajwa/ HEC	Commercialization of VAM technology for higher farm production.	1.975 Million Rupees	Development of protocol of VAM technology for commercial production.
Prof. Dr. Rukhsana Bajwa/EPD	Fungi: The ultimate solution to industrial heavy metals pollution (Electroplating).	8.42 Million Rupees	Evaluation of biosorption capabilities of different groups of fungi. Determination of feasibility of biosorption by fungi as a viable method for removal of metal toxicity.
Prof. Dr. Rukhsana Bajwa/HEC	Biology, ecology and management of parthenium weed (*Parthenium hysterophorus* L.): An invasive alien weed threatening agricultural and natural ecosystem in Pakistan	12.7 Million Rupees	To evaluate existing and future patterns of spread of parthenium weed in Pakistan and evolve strategies to contain its spread and reduce its present population size.
Dr. Ghazala Nasim/ P.U.	Development of software for an easy access to fungal systematic	0.100 Million Rupees	
Dr. Ghazala Nasim/P.U.	Soil microbial analysis for biosafety hazards and risk management in some hybrid varieties of corn, pea and radish	0.100 Million Rupees	

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Dr. Ghazala Nasim/P.U.	Development of software for the identification of Macromycetes of Ayubia National Park	0.125 Million Rupees	
Dr. Ghazala Nasim/ WWF	Macromycetes of Ayubia National Park	0.600 Million Rupees	
Dr. Arshad Javaid, Pakistan Science Foundation	Natural compounds from allelopathic trees as antifungal agents against *Ascochyta rabiei* (Pass.) Lab.	2.012256 Million Rupees	• *In vitro* evaluation of antifungal activity of aqueous and organic solvent extracts of different parts of four allelopathic trees against *A. rabiei.* • *In vivo* evaluation of antifungal potential of most effective extracts selected on the basis of their *in vitro* effectiveness. • Separation of plant allelochemicals through fractional guided bioassay using various chromatographic techniques as per requirement of the work. • *In vitro* and *in vivo* evaluation of various isolated fractions

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			• against the target fungal pathogen. • Structural elucidation of potent antifungal compounds through various spectroscopic techniques as per requirement of the work.
Dr. Arshad Javaid, Punjab University	Management of Capsicum Wilt by *Coronopus didymus*	0.125 Million Rupees	1- To evaluate antifungal activity of methanolic extracts of different parts of *C. didymus* against *Sclerotium* isolated from diseased capsicum plants. 2- To fractionate the most antifungal methanolic extracts using various organic solvent in order of increasing polarity. 3-*In vitro* evaluation of various isolated organic fractions against the target fungal pathogen. 4-Evaluation of *in vivo* antifungal activity of *C. didymus* using its leaves.

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Dr. Shazia Shafique/ University of the Punjab	"Biological Control and Genetic Characterization of *Fusarium solani*" 2009-2010	0.125 Million Rupees	Management of Potato diseases caused by *Fusarium*
Dr. Sobiya Shafique/ University of the Punjab	"Biological Control and Genetic Characterization of *Alternaria alternata*" 2009-2010	0.125 Million Rupees	Management of Tomato diseases caused by Alternaria
School of Biological Sciences:			
Prof. Dr. Javed Iqbal/Pak-US Collaborations	Enhance the sugarcane production in Pakistan by Modern Breeding Technology	71610.00 US $	Under progress)
Prof. Dr. Javed Iqbal/ Higher Education Commission	Strengthening of the School of Biological Sciences	377.328 Million Rupees	(Under progress)
Prof. Dr. M. Waheed Akhtar / Higher Education Commission	Study of protein biomarkers for early detection of pathological states.	31.642 Million Rupees	To characterize protein biomarkers specific in different cancers and relate their levels with state of the disease. (Under progress)
Prof. Dr. M. Waheed Akhtar / Ministry of Sciences and Technology	Production of Bioenergy from plant biomass (a collaborative project with major share of the School of Biological Sciences Lab.)	260.329 Rupees (129.52 million Punjab University component share)	Develop biotechnology for the production of ethanol from plants biomass (under progress).
Prof. Dr. M. Waheed Akhtar / Government of Pakistan	Preparation of application of growth hormones injectables (part of the project "Strengthening of School of Biological Sciences)	377.328 Rupees (-50 million share component)	Strathclyde University, U.K.
Prof. Dr. M. Waheed Akhtar / Pakistan Academy of Sciences	Production of recombinant cytokine of therapeutic importance	1.982 Million Rupees	

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Prof. Dr. M. Waheed Akhtar / Higher Education Commission	Free circulating molecular markers in cancer diagnosis of tuberculosis using amultiplex microbead immunoassay	4.198 Million Rupees	
Prof. Dr. M. Waheed Akhtar / EMRO (WHO) Switzerland	Validation study of a rapid and reliable diagnosis of tuberculosis using amultiplex microbead immunoassay.	12,729.27 US$	University of California, Davis, USA
Prof. Dr. M. Waheed Akhtar / Pak-US S&T Cooperation	Rapid detection of infection and drug resistance in tuberculosis patients by multiplex analysis	262,342.00 US$	University of California Davis, USA
Prof. Naeem Rashid Higher Education Commission of Pakistan	Cloning, sequencing and expression of gene and biochemical characterization of starch hydrolyzing enzyme pullulanase from hyperthermophilic archaeon *Pyroaculum calidifontis*.	3.261635 Million Rupees	Under progress
Dr. Muhammad Saleem Haider Punjab Agricultural Research Board	Novel approach to generate, wide spectrum resistance to all cotton begomoviruses infecting cotton and other cultivated crops	28.1 Million Rupees	Under progress
Dr. Sadaf Naz Higher Education Commission of Pakistan	Molecular characterization of dystonia and wolfram syndrome in Pakistan (3 years)	4.198896 Million Rupees	Under progress
Dr. Sadaf Naz/ Fogarty International Centre and National Institute on Deafness and other Communication Disorders, National Institute of Health, USA	Genetic basis of moderate to severe hearing loss in Pakistan.	270,000 $	Under progress

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Dr. Muhammad Arshad Javed Punjab Agricultural Research Board	Molecular mapping of quantitative trait loci determing salinity tolerance at maturity stage in *indica* rice	23.7 million Rupees	Under progress

FACULTY OF SCIENCE

Department of Physics:

Research projects sponsored by national and international agencies.
(Only in the year started and in the year completed. If the research project is more than two years, please do not repeat during the intervening period).

Centre for Excellence in Solid State Physics:

Dr. S.A. Siddiqi & Dr. S. Naseem / Higher Education Commission	Establishment of Experimental Facilities Research Facilities for Fabrication and Characterization of Functional Nano-ceramics at COE in Solid State Physics	38.533 million Rupees	To establish experimental research facilities for nano-ceramics research

Institute of Chemistry:

Dr. Jamil Anwar Ch.(Professor)	Chemical less water treatment pilot plant		Recommended
Dr. Makshoof Athar (Professor)	Impact of vehicular emissions on the Air quality of the major cities of Pakistan		Recommended
Dr. Riffat Parveen (Professor)	Characterization of Pathological cataracts		Recommended
Dr. Munawar Ali Munwar (Professor)	Chemical transformation and degradation study of industrial waste material		Recommended
Dr. Zaib Hussain (Foreign Faculty Member)	Electricity Generation by Gravity Cost free		Recommended & submitted
Dr. Zaib Hussain (Foreign Faculty Member)	Environmental contamination of polychlorinated biphenyles from transformer oils		Recommended & submitted
Dr. Zaib Hussain (Foreign Faculty Member)	Study on Bio energy/Biomass energy		Recommended & submitted
Dr. Zaib Hussain (Foreign Faculty Member)	Study in Energy efficient fuel cells		Recommended & submitted

Name of Researcher/Sponsoring Agency	Title of Research Project with duration	Financial Support (amount)	Main goals
Mr. Jawwad Saif (Ph.D. Scholar)	Preparation of multi walled carbon Nanotubes and their use in epoxy-composite materials		Recommended
Punjab University College of Information Technology:			
Syed Mansoor Sarwar (Principal Investigator), Dr. Asim Karim (Co-PI), Jamal Abdl Nasir / Sponsored by HEC Islamabad	Data Warehousing Virtualization Framework for Enhance Business Intelligence (2008-2010)	2.68 Million Rupees	Continued
Fakhar Lodhi (Principal Investigator), Naveed Malik (Co-PI), and Syed Mansoor Sarwar (Co-PI)/Sponsored by National ICT R&D Fund Research Grant	Integrating Open Source Software Development in the Software Engineering Curriculum (2008-2010)	35.0 Million Rupees (PUCIT share is about 11.00 Million Rupees)	Continued
College of Statistical and Actuarial Sciences:			
Higher Education Commission of Pakistan (HEC)	3- Years 'Psychological, Psychosocial Concerns and Quality of Life of Breast Cancer Survivors in Pakistan'	4.896 Million Rupees	Successfully completion of HEC approved Research project and audited report send to HEC.
Centre for Undergraduate Studies:			
Dr Najam ul Sahar/ University of the Punjab	Characterization and Illustration of Rust fungi on members of Poaceae from Lahore District (Completed)	0.125 Million Rupees	Academic Research
Mr. Umer Shafique / University of the Punjab	Effect of ionic concentration on microwave heating (Completed)	0.125 Million Rupees	Academic Research