CPTS

CENTER FOR PHARMACOTHERAPEUTICS

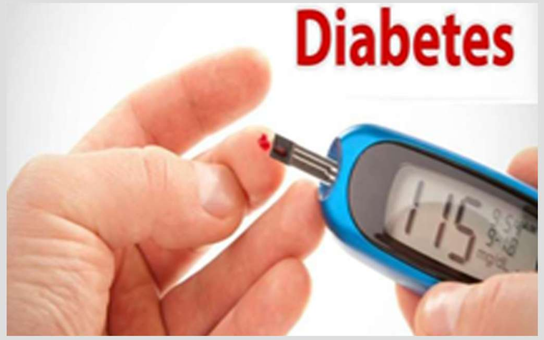
cpts@bahria.edu.pk

CPTS aims to identify the target sites for use of drugs in existing and emerging diseases, drug delivery through different methods and provision of alternative and superior drugs to patients who are encountering resistance or are unable to tolerate them. Modern medicine relies heavily on drugs as the main tool of therapeutics to prevent, diagnose and treat diseases. Identification of appropriate drug target sites in disease processes enables their use in a justified manner with provision of maximum benefits and minimum adverse effects. Accordingly, the group is working on newer use of conventional drugs, identification of chemicals as potential new drugs and exploring drugs that have the potential to behave as a better, easily available and cost effective alternative for use by the community. CPTS is trying to achieve its objectives by collaborating with the pharmaceutical industry related to drug safety profile, drug delivery systems to deliver drugs directly to the target site, preparation of nano-particles and sustained release long acting drugs.

RESEARCH & SERVICES PORTFOLIO

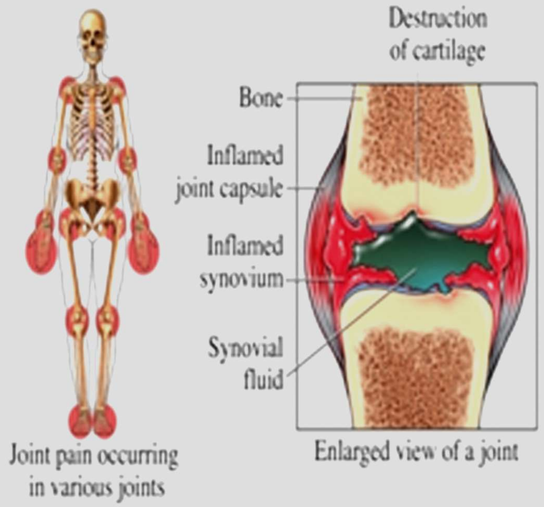
Treating Infertility with Innovation

Polycystic ovarian syndrome (PCOS) is one of the most common endocrine disorders affecting 5-10% of women of reproductive age. It is characterized by insulin resistance, hyper-insulinemia, hyper-androgenism and polycystic ovaries. PCOS is the most common cause of female infertility and increases risk of endometrial cancer, type-2 diabetes and cardiovascular problems. Pioglitazone and Metformin are insulin sensitizing oral hypoglycaemic drugs used for treating PCOS related infertility. The group has evaluated and compared the effects of pioglitazone and metformin on metabolism and ovulation among PCOS infertile women to restore fertility.



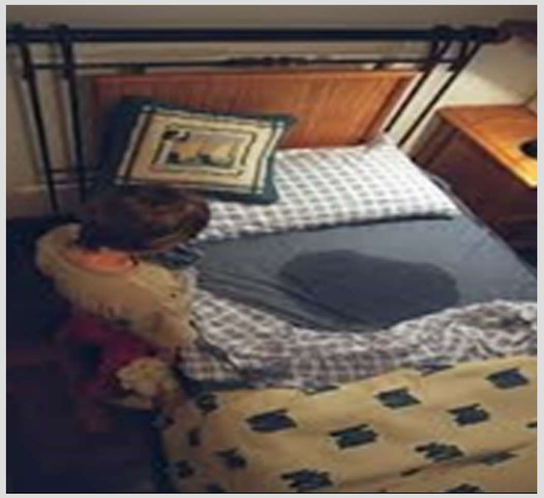
Potential Benefits of Vitamin C in Diabetes

Diabetes mellitus is a metabolic disorder characterized by hyperglycaemia. Type 2 DM is the most common type and causes death due to its complications. Reactive oxygen species generated during oxidative stress play significant role in the pathophysiology of diabetes and its complications. Lowering oxidative stress may help in the control of diabetes. Vitamin C - a potent antioxidant is documented to be reduced in type 2 DM. Human body cannot synthesize this vitamin. Exogenous administration of vitamin C with oral hypoglycaemic drugs can logically improve the quality of life of diabetics. The team has evaluated and correlated the effects of vitamin C on FBS and HbA1c in type 2 DM & also evaluated the hepatic and renal safety profile of vitamin C.



Herbal Medicines in Joint Pain

Osteoarthritis, an inflammatory, degenerative disease of joints mostly affects weight bearing joints in old age. Most commonly involved joint is knee. As long term treatment is required for this chronic and debilitating disease; people are now seeking use of herbal medicines for effective relieve of the symptoms. This is on account of easy availability, low cost and fewer adverse effects. The team has evaluated and compared the clinical efficacy of Naproxen-ginger group with Naproxen and Diacerein-ginger group with Diacerein including the adverse effects of administered regimens.



Treating Bed Wetting in Children

One of the most common conditions in children is nocturnal urinary incontinence. Use of desmopressin alone or its combination therapy with oxybutynin has been a major relief in alleviating nocturnal enuresis. The group has asssessd the safety as well as efficacy of desmopressin monotherapy and in combination, that is desmopressin plus oxybutinin in treating nocturnal urinary incontinence among children aged 7-13 years of age. The recovery of each patient was also assessed on the basis of complete, partial and no recovery

KEY RESEARCHERS

Prof. Dr. Nasim Karim

Prof. Dr. Nasim Karim is working as Head of Pharmacology department at BUMDC since 2010. She Graduated from Dow Medical College, Karachi. She did her MPhil from BMSI-JPMC, Karachi University on hypertensive type II diabetic patients in 2000 and PhD from Karachi University in 2005 on insulin sensitizer treated infertile women having polycystic Ovarian syndrome. Her project used metformin - an anti-diabetic insulin sensitizer for the first time in Pakistan for a documented study. She did Post-Doctoral fellowship on HEC granted scholarship from University of Medicine & Dentistry New Jersey, USA in 2006 on effects of type-I experimental diabetes on peripheral sympatho-adrenal axis function.Her undertaken clinical trial projects are oral and parenteral treated gestational diabetes, placental changes in drug treated and diet controlled gestational diabetes, treatment options for rheumatoid arthritis in local population, role of vitamin D in primary tuberculosis etc. Currently she is working on drug delivery systems.

Prof. Dr. Khalid Mustafa

Prof. Dr. Khalid Mustafa is working as a Professor in the department of Pharmacology since 2008. He graduated from Dow Medical College Karachi in 1994. He did his MPhil, from BMSI-JPMC, Karachi University in 2007. He has worked on treatment of joint diseases such as osteoarthritis.He is interested in exploring the role of herbal drugs in comparison to pain relieving medicines as they are to be taken for long periods and produce side effects as acidity and ulcers in the stomach and intestines. He is looking forward to launch joint ventures with Pharmaceutical industry to explore chemicals derived from herbal sources, dosage form and doses that can come up with cost effective remedies free of side effcts in chronic diseases.

Dr. Talea Hoor

Dr. Talea Hoor, a Professor in the department of Pharmacology at BUMDC since 2011, is a graduate of Dow medical college in the year 1998. She did her post-graduation in the year 2008 from Karachi University. Her area of interest is herbal medicine. She has detected antimicrobial, antifungal, anti-inflammatory and analgesic medicinal potentials of Salvidora Persica (Miswak). She is interested in making formulations of miswak as a component of tooth pastes, pain relieving drug for joint diseases and muscle sprains and part of treatment plan for skin diseases caused by fungi.

Dr. Syed Ijaz Hussain

Dr. Syed Ijaz Hussain Zaidi is working as an senior associate professor in the department of Pharmacology since 2015. He graduated from Army Medical College Rawalpindi in 1983 and earned his PhD in 2011 from Baqai Medical University Karachi. His project was related to the use and comparison of herbal medicines with known anti-ulcer drugs in peptic ulcer disease model.He is looking forward to isolate the active ingredients in the extracts obtained from herbal sources.

Prof. Dr. Sajid Abbas

Prof. Dr Sajid Abbas is working as Head of Medicine department at BUMDC since 2015. He Graduated from Sindh Medical College, Karachi. He did MCPS in Family Medicine in 2001, and FCPS in internal medicine in 2003. His special areas of interest are diabetes mellitus and its complications, diseases affecting gastrointestinal tract and diseases associated with endocrinology. Potent control of blood glucose level prevents complications. He is interested in using insulin preparations with newer oral diabetic drugs for reducing blood glucose level in a potent manner with the prevention of hypoglycaemic events at the same time.

Prof. Dr. Shakeel Ahmed

Prof. Dr.Shakeel Ahmed is working as Head of Paediatrics Department at BUMDC since 2012. He graduated from Sindh Medical College, Karachi.He did his FCPS in 2000, MRCPCH in 2003, FRCP(Glassgow) in 2007 and FRCP (UK) in 2011. His special interst areas are nutritional deficiencies, and paediatric rheumatology. He has been working on the use of biological agents in the treatment of rheumatoid arthritis in children and is interested in extending the project by exploring the safety profile of biological agents. He is working on the control of dengue fever specially in urban slums.