

CELEBRATING
COMMERCIALISATION
YEAR 2014

iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention
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exposition 2014

INNOVATEUR
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2014

27th - 30th
APRIL 2014
DEWAN AGUNG TUANKU CANSELOR (DATC)
UNIVERSITI TEKNOLOGI MARA
MALAYSIA

*Bridging
the valley of death :
advancing the
commercialisation
of research*

RESEARCH BOOK

iiindex2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

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FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed
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Rena_CA

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Strong kidneys and healthy urinary tract are essential to facilitate eliminating bodily wastes. Protect this vital system with Rena_CA capsules. The kidneys' function is to help remove various toxins (drug and food wastes), and expel them in urine. Therefore, drugs can cause acute kidney failure. The average patient today is older, has more co morbidities, and is exposed to more diagnostic and therapeutic procedures with the potential to harm kidney function. Gentamicin is an antibiotic that has been used against severe gram negative bacterial infections for many years. However, nephrotoxicity is the major side effect that limits its clinical applications. Prevention of nephrotoxicity will improve clinical utility of many drugs significantly. Rena_CA is a unique herbal formula designed to help maintain healthy kidneys and protect them against drug induced nephrotoxicity. It showed excellent protective effects against gentamicin_ induced nephrotoxicity in rats as judged by enhancing renal antioxidant system, amelioration of markers of renal injury and urinary excretory indices. The extract significantly reduced the gentamicin- induced elevated serum creatinine, serum urea, and urinary total protein excretion. The decreased serum total protein, serum albumin and urine creatinine levels were significantly replenished by the extract when compared to gentamicin treated group. The glomerular filtration rate (GFR) restored and the inflammatory markers such as TNF_a and 1L-1B down regulated in treated animals. These biochemical findings were supported by histopathological evidences. It may be said that the central role of gentamicin induced nephrotoxicity is oxidative stress and inflammation. Many studies have reported that plants with antioxidant and anti-inflammatory activities have protective effect against gentamicin induced nephrotoxicity. Rena_CA is a product formulated with polyphenol derived from Cassia auriculata flowers which act as an antioxidant and anti-inflammatory agent, indicating a protective role against gentamicin induced nephrotoxicity. These findings thus suggest that Rena_CA have a promising role in the prevention of gentamicin induced nephrotoxicity which may provide a cushion for prolonged therapeutic option against severe bacterial infections without harmful side effects of gentamicin. In addition to renoprotective effect of Cassia auriculata this plant has been established to be effective against urinary tract infections, due to its antibacterial properties. These effects make it a perfect natural choice to maintain healthy kidneys and protect them against drug induced nephrotoxicity. Rena_CA is a 100% natural herbal renoprotective agent with excellent safety data. This plant extract balances the root causes of drug induced nephrotoxicity including gentamicin induced nephrotoxicity by its strong anti- inflammatory and antioxidant properties. This safe, natural product is available in capsules to provide a tasteless and odourless dosage of the extract. The capsules can be taken before, during or after undergoing aminoglycoside therapy to protect the kidneys from harmful side effects of this class of antibiotics. Rena_CA is one of nature's best allies to protect your kidneys and help them to perform at their very best.