

# Research leads to orthopaedic products

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**U**NIVERSITI Kebangsaan Malaysia (UKM), through its Medical Faculty, has unveiled three innovative products aimed to provide orthopaedic patients a cost-effective solution and make their daily lives more comfortable.

The products — MyB Muslim Prosthetic, MyB Air Walker and MyB Ortho Shoes — are results of a research led by Associate Professor Dr Mohd Yazid Bajuri last year under an initiative called MyB Orthopaedic Innovation.

The senior medical lecturer and orthopaedic surgeon at the Orthopaedics and Traumatology Department said his interaction with patients at the orthopaedic clinic in UKM Medical Centre, Kuala Lumpur, had encouraged him to initiate the research.

"Most patients cannot afford expensive medical aids. These new innovations can increase the patients' self-confidence, give them more comfort and are nearly half the cost of commercially-available products," said Dr Yazid, adding that they would especially

benefit patients from the B40 group.

He said the MyB Muslim Prosthetic is a user-friendly prosthetic leg that would provide Muslim lower-limb amputees flexibility and comfort, especially when praying.

"The conventional prosthetic leg in Malaysia can only be used for standing, walking and running. With the hinge design in our prosthetic leg, the ankle movement is possible. You can even do yoga with it," he said, adding that the product has been patented.

MyB Air Walker is a walking tool for patients who have recently undergone surgery for a fracture or ligament injury to facilitate the healing process.

"This product has special sensors to detect excess pressure that the patient puts on the injured leg, allowing him to adjust the way he stands or walks."

MyB Ortho Shoes are designed for diabetic patients susceptible to foot diseases, ulcers and wounds.

"We designed shoes that can be customised to each patient's needs and feet, specifically for diabetic patients under the advice of orthopaedic specialists. They can even be ready in two days."



Associate Professor Dr Mohd Yazid Bajuri with (from left) the MyB Air Walker, MyB Ortho Shoes, and MyB Muslim Prosthetic products. PIC BY HAIRUL ANUAR RAHIM

While the research was initially funded by Dr Yazid, the MyB Orthopaedic Innovation project has recently received a grant of RM274,000 from the Energy, Science, Technology, Environment and Climate Change Ministry.

"With the help of our partner, Ortonesia Enterprise, who will be licensing our designs, we will be able to provide some 25 prosthetic legs, 25 air walkers, and 120 pairs of shoes to patients in the B40 category. In our prototype phase, we have given out four prosthetic legs, five air walkers and 20 pairs of shoes."

Asked what drives him to do research despite his heavy schedule as an academic

and a practising doctor, Dr Yazid said research and practise naturally come together.

"When I meet patients, I often try to think of ways that could help them heal better or go about their daily lives more comfortably."

"Innovation comes through cross-discipline efforts — marrying my side of medicine with biomechanics and information technology," he said.

Present at the launching ceremony of the innovations under MyB Orthopaedic Innovation was UKM deputy vice-chancellor (Research and Innovation Affairs) Professor Datuk Dr Abdul Wahab Mohammad, along with selected recipients under the B40 category.