LED glasses step into the light

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(PhysOrg.com) -- Light therapy glasses -- spectacles that use inbuilt light emitting diodes (LEDs) to assist in resetting the body's natural clock -- are a step closer to commercial availability with the award of a grant from the Federal Government's Commercialisation Australia fund.

The LED glasses are the result of more than a decade of research, development and clinical trials by psychologists at Flinders University.

Sleep experts Professor Leon Lack and Dr Helen Wright and their team have established bright light therapy as an effective treatment for helping people who suffer disturbed sleeping patterns.

The researchers initially used exposure from bright light boxes powered by fluorescent tubes to shift the timing of circadian (24-hour) rhythms of the human body clock to a later or earlier time. More recent studies demonstrated that the use of small LED light sources at the blue and blue/green end of the spectrum is also effective in retiming.

To increase the convenience and portability of the therapy, a set of LED glasses was then developed.

As one of 11 grants announced in July, Commercialisation Australia has given a grant of $20,000 to Flinders Partners, the University's commercial arm, to fund a business case analysis and commercialisation strategy for the LED glasses.

Director of Flinders Partners, Mr Anthony Francis, said that over the next few months the glasses would take the major step from prototype to production.

A dedicated company, Retime, has been set up to manage the production, marketing and distribution of the glasses. A basic functional design will undergo final trials with sleep clinicians around Australia beginning in November, and it is intended that a fully designed version will go to market in Australia and Japan early in 2011, with release in the US planned for later in the year.

Mr Francis said there is no doubt that a large potential global market exists for the product.

"What people have to realise, though, is that the path to commercialisation is a long and jagged one: someone has to be willing to take the first risky steps."

Professor Lack said the portable coloured-light sources have the potential to treat insomnia and seasonal affective disorders as well as helping shift-workers and international travellers to reset their body clocks.

Professor Lack said that while the glasses have been shown to be effective in correcting most sleep pattern problems in as little as a week,

some individuals who have a tendency to revert to phase-delayed sleeping might need to use their glasses to 'top up' from time to time.

Provided by Flinders University