

New research provides hope for those with epilepsy

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(PhysOrg.com) -- Groundbreaking research from the University of Reading could reduce the number and severity of seizures for epileptics.

Successful results from recent studies have shown that three different non-psychoactive cannabis extracts can significantly reduce [seizures](#). During the next few months, Reading researchers will be completing pre-clinical work which could enable the start of human trials.

[Epilepsy](#) affects around 1% of the global population and approximately 30% of people with epilepsy have seizures which are not controlled by conventional anticonvulsant drugs. Moreover, these drugs are associated with significant motor and cognitive side-effects that adversely affect the quality of life of individuals dependent upon their daily use.

A research group at the University of Reading, led by Dr Ben Whalley, Dr Claire Williams and Dr Gary Stephens from the Departments of Pharmacy and Psychology, is looking at whether individual compounds derived from cannabis, known as cannabinoids, could provide a solution to some of these difficult to treat seizures.

The group has recently published highly promising results which demonstrate that three different non-psychoactive compounds isolated from the cannabis plant have the potential to be used for the therapeutic control of seizures in epilepsy. Cannabidiol, D⁹-tetrahydrocannabivarin and GWP42006 were shown to significantly reduce the number and severity of seizure episodes in rats.

Dr Whalley said: "Other leading institutions around the world are investigating the involvement of the cannabinoids that our own bodies' produce (endocannabinoids') in seizure susceptibility, while others are examining how this system changes in response to seizures.

"However, the University of Reading is leading the search for therapeutic components of phytocannabinoids - cannabinoids extracted from the *C. sativa* plant that limit or abolish such seizures. We hope that these findings will lead to new, better tolerated and more effective treatments for people with epilepsy, reducing the number and severity of seizure episodes."

Whilst cannabis has been used medically and recreationally for thousands of years, it was not until the 1960s that the psychoactive component of [cannabis](#), D⁹-THC, was identified. Subsequently, other components were isolated and identified and a small scale human trial conducted during the early 80s suggested that at least one of these components could be of use in seizure control. However, this initial finding has not been properly followed up and expanded upon until the present time.

More information: The research has been funded by a 1million grant from GW Pharmaceuticals plc and Otsuka Pharmaceutical Co, Ltd.

Provided by University of Reading

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