

New cancer treatment hope for children

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Children suffering from a cancer of the nervous system could benefit from a potential new treatment, thanks to an international team led by researchers at the University of Kent and at the Institute of Medical Virology at the Goethe-University, Frankfurt am Main, Germany.

The team, including Professor Martin Michaelis and Dr Mark Wass at the University's School of Biosciences, found that flubendazole - a drug used against parasitic worms - has potential for the treatment of neuroblastoma, a cancer of the peripheral nervous system which affects children.

Tests on 461 cancer cell lines revealed that neuroblastoma - the most common solid cancer occurring outside the brain in children and a major cause of death during infancy – was highly sensitive to flubendazole.

Flubendazole was also found to reduce the viability of five primary neuroblastoma samples in concentrations thought to be achievable in humans. It inhibited vessel formation and neuroblastoma tumour growth in a tumour model in fertilised chicken eggs.

Acquired resistance to various anti-cancer drugs is a major problem in high-risk neuroblastoma. The researchers found that 119 cell lines from a panel of 140 neuroblastoma [cell lines](#) with acquired resistance to various anti-[cancer](#) drugs were sensitive to flubendazole in low concentrations.

The research team concluded that flubendazole represents a viable

potential treatment option for neuroblastoma. It will now be subject to further research.

The research, entitled Identification of flubendazole as potential anti-neuroblastoma compound in a large cell line screen, was conducted by Martin Michaelis, Professor of Molecular Medicine, and Mark Wass, Senior Lecturer in Computational Biology, at the University of Kent; Professor Jindrich Cinatl and nine colleagues from the Goethe-University and eight from other German institutions. It was published in *Scientific Reports*.

More information: Martin Michaelis et al. Identification of flubendazole as potential anti-neuroblastoma compound in a large cell line screen, *Scientific Reports* (2015). [DOI: 10.1038/srep08202](https://doi.org/10.1038/srep08202)

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