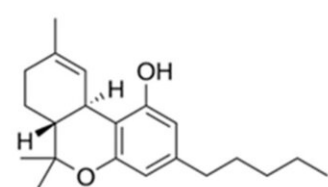
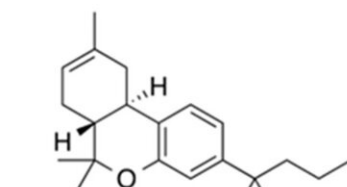


# New research offers hope for reduced muscle wastage in cancer patients

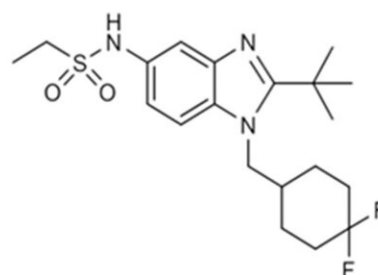
November 10 2023



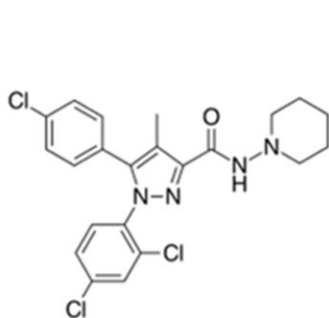
**Tetrahydrocannabinol (THC)**



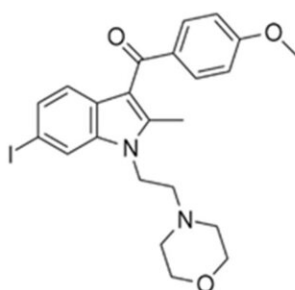
**Dimethylbutyl-deoxy-Delta-8-THC (JWH133)**



**ART27.13**



**Rimonabant**



**AM630**

Structures of the cannabinoid receptor agonists/antagonists examined in this study. Credit: *Pharmaceuticals* (2023). DOI: 10.3390/ph16111580

Researchers from Trinity, in collaboration with Artelo Biosciences, have made a breakthrough in cancer cachexia. Their work shows that the drug ART27.13 protects against the muscle degeneration associated with colon and lung cancers (cachexia) and believe it may also positively impact life expectancy.

The team, led by Richard Porter, associate professor in Trinity's School of Biochemistry and Immunology, and based in the Trinity Biomedical Science Institute (TBSI), has also identified a specific cell receptor as an anti-cachexia target. The [research article](#) has just been published in the journal *Pharmaceuticals*.

Porter said, "This ground-breaking research demonstrated ART27.13's ability to protect against [muscle degeneration](#) associated with colon and lung cancers. Based on this in vitro data, ART27.13 has the potential to protect against muscle wasting, which could result in increased quality of life and may ultimately impact life expectancy for patients living with cancer."

Artelo is currently evaluating ART27.13, in the Cancer Appetite Recovery Study (CAREs) Phase 2a clinical trial to determine its effect on [lean body mass](#), [weight gain](#), activity levels, and improvement of anorexia in [cancer patients](#).

The purpose of the newly published research was to establish whether ART27.13 may additionally impact muscle degradation, a common debilitating effect of cancer and its treatment.

Not only did the research show that ART27.13 protects against muscle wasting in the in vitro model, but also that the activity was mediated by a specific CB2 receptor, thereby confirming the scientists better understand the mode of action.

Steven D. Reich, M.D., Chief Medical Officer of Artelo, commented, "This in vitro data supports our confidence in ART27.13's potential as a supportive care therapy for [cancer](#) patients as it may not only increase appetite, but also prevent muscle wasting. We are actively enrolling patients in the trial and look forward to reporting on our continued progress."

**More information:** John Noone et al, Cancer-Cachexia-Induced Human Skeletal Muscle Myotube Degeneration Is Prevented via Cannabinoid Receptor 2 Agonism In Vitro, *Pharmaceuticals* (2023). DOI: [10.3390/ph16111580](https://doi.org/10.3390/ph16111580)

Provided by Trinity College Dublin

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