Ostarine is also known as enodosarm when it is sold for clinical study. This chemical is being developed to mimic the effects of an androgen receptor modulator. The hope is to eventually develop this chemical so it can be used to help manage muscle wasting or small cell lung cancer in animals.

This chemical is not yet ready for study or treatment of humans but it has been used in a variety of animal test subjects to determine the effects of this chemical. Ostarine is also currently banned by the World Anti-Doping Agency, given its potential for abuse if it were to be released to the public, though this does not impact its potential for future medical use once this has been better developed.

As it has been developed Ostarine has taken on a variety of different names but the structure is referred to as GTx-024 or MK-2866. This refers specifically to the peptide’s nature as an investigational selective androgen receptor modulator or SARM. The chemical is developed by GTX Inc. but was formerly produced by Merck and Company.

This chemical is commonly confused or linked with andarine which has a different chemical structure and does not produce the same results in clinical studies that Ostarine was designed to manage.

Clinical Trials and Further Study

At this time the manufacturer GTx has used Ostarine in clinical trials that have included around 1200 animal test subjects which have included five efficacy studies.

The company announced recently that they had finished compiling results from two of the phase 3 clinical trials of power 1 and 2 of the Ostarine formula which is used to address muscle wasting and help to prevent this condition in animal test subjects that were subjected to NSCLC.

In each of these studies the results were derived from placebo-controlled and double blind clinical trials which included at least 325 test subjects that either had NSCLC in stage three or four severity. These test subjects were randomly assigned to receive oral applications of enobosarm or placebo chemicals at 3mg daily. At this time they started the doublet chemotherapy (standard platinum) as well.

During these power trials the goal was to assess the response of the Ostarine, compared to the placebo chemicals in order to determine the co-primary endpoints at three month intervals of the application and chemotherapy process. At this time the total lean body mass of the animal was tested which was then assessed by DXA and the physical function by encouraging minor exercise in the animal.

- The durability of applications of Ostarine was also assessed at the 5 month point in the study to better understand the long term effects these treatments would have on the muscle tissue and the overall power that the animal could manage.
When these results were published, GTx announced that the results of this study had failed in meeting the set co-primary endpoints that had been set for lean body mass as well as the physical function of the animal. These were statistically assessed using responder analysis but data from the study of the Ostarine applications showed a consistent effect that could improve or maintain the lean body mass compared to a placebo chemical application.

• This could be associated with the potential longevity with animals that managed to survive their condition for longer periods of time, regardless of the application of chemicals or other existing treatment plans that they were subjected to.

• Generally, Ostarine was found to be well tolerated with only few serious adverse reactions occurring in groups receiving the chemical application or the placebo, which has caused the FDA to begin considering this chemical as a potential future treatment possibility for muscle wasting disease.

The chemical formula that is used to create Ostarine has not been disclosed to the public but the chemical composition of the formula has been listed in patent databases, including the WIPO. Primary literature at Zhang also mentioned this formula in 2009. There are a variety of SARM chemotypes on the market for research purposes today but aryl propionamides including andarine/S-4 or Ostarine are some of the more advanced chemicals that are being investigated for their potential aproperties.

The atom connectivity of Ostarine is different from andarine because the cyano substitutions of the phenyl rings relace the acetamido and nitro moieties.

**Resource Box:**

http://en.wikipedia.org/wiki/Enobosarm

http://www.gtxinc.com/Pipeline/OstarineMK2866.aspx?Sid=4