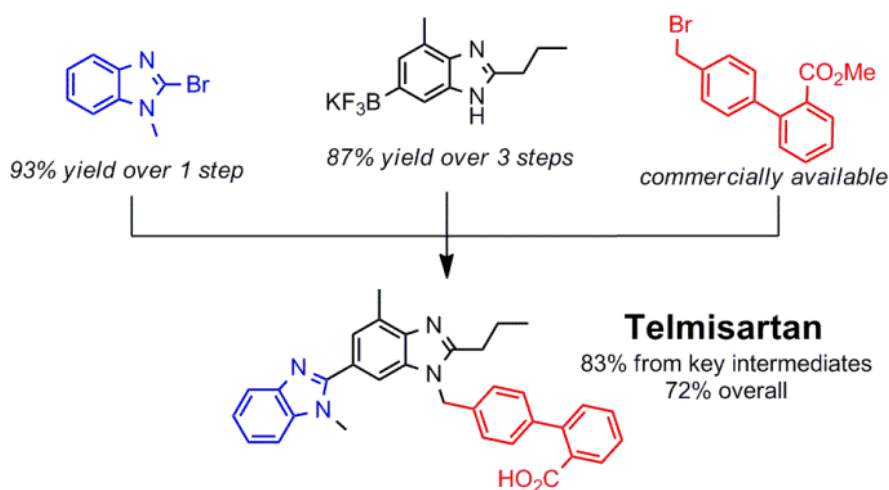


Novel Synthetic Method for Producing Telmisartan

The technology

With 1/3 of the world's adults having high blood pressure, hypertension prescriptions are widely used to prevent long-term cardiac disease. Medications such as telmisartan, valsartan and candesartan are prescribed to reduce blood pressure. Recently, there has been a push for improved production methods of telmisartan with the patent expiring in January 2014. A novel method of synthesizing telmisartan has been invented by researchers at VCU, which uses a high-yielding Suzuki reaction that can be catalyzed by either a homogeneous palladium source or graphene-supported palladium nanoparticles. Surpassing current production yields (50%), this method has an overall yield of 72% with an 83% yield over the final 3 steps. This is an efficient process that avoids harsh production conditions such as high temperatures and extreme pH conditions. Not only can this be applied to synthesis of telmisartan, but it also has the potential of using graphene-supported palladium nanoparticles as an alternative catalytic source for cross-coupling reactions.



Benefits

- » Efficient production method
- » High-yielding (overall 72%)
- » Harsh reaction conditions are avoided such as high temperatures and extreme pH conditions

Applications

- » Improved method of synthesis of telmisartan (medication for hypertension)
- » Alternative catalytic source for cross-coupling reactions

Patent status:

Patent issued: U.S. rights are available.

License status:

This technology is available for licensing to industry for further development and commercialization.

Category:

Biomedical

VCU Tech #:

14-088

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External resources:

[US 10,077,242 B2](#)
[Martin, A. D., et al. \(2014\)](#)

Contact us about this technology

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