

### Lead University of the Sciences Inventor

Adeboye Adejare, PhD

### Unmet Need

Syntheses of phenethylamines in a rapid and efficient manner. **Dr. Adejare's demonstrated technology can save time, reagents, and number of steps in syntheses of arylalkylamines.** The pharmaceutically relevant chemical classes include: phenylethylamines, alpha-alkylphenylethylamines, tryptamines, and arylcyclohexylamines.

### Opportunity

Many fine chemicals, pharmaceutical products, and / or their intermediates can be synthesized using this technology. Numerous of these drugs have sales of over \$1 Billion (US) annually. **Syntheses of these chemicals in a cost-efficient manner could save the manufacturer 25% or more and thereby increase product margins.**

### Unique Attributes

This technology allows syntheses of alkylamines in a rapid and efficient manner; it saves time, reagents, and the number of steps. The conditions are also safer and milder. It can therefore reduce cost of production of relevant pharmaceutical intermediates and pharmaceuticals.

### Use Cases

Specific compounds include selegiline, dopamine, and amphetamine. These compounds are utilized for treatment of various disorders, including Parkinson's disease and depression (selegiline), shock due to trauma (dopamine), and ADHD, narcolepsy and obesity (amphetamine).

### Stage of Development

Dr. Adejare and his team have illustrated the general utility of this technology with gram scale syntheses of over 30 compounds, many of which are clinically utilized or novel.

### Intellectual Property

Protected as a Trade Secret and by copyright.

## Collaboration / License Opportunity

Actively seeking licensee for commercialization or collaboration with the intent to out-license the technology to pharmaceutical, agricultural, and fragrance industries.

## References

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- Erwan Le Gall et. al.; Straightforward three-component synthesis of diarylmethylpiperazines and 1,2-diarylethylpiperazines; Tetrahedron 63 (2007) 3672–3681.
- Erwan Le Gall et. al.; Three-Component Synthesis of alpha-Branched Amines under Barbier-like Conditions; J. Org. Chem. 2009, 74, 7970–7973. Synthesis of diarylmethylamines, 1,2-diarylethylamines, and beta-arylethylamines, Tetrahedron 66 (2010) 9902e9911.

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