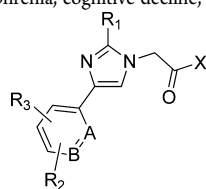


Trisubstituted Imidazoles as Positive Modulators of Metabotropic Glutamate Receptor Subtype 5

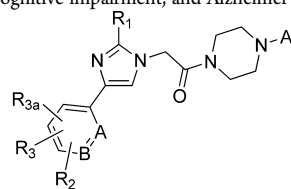
Gerard Rosse*

Structure Guided Chemistry, Dart Neuroscience LLC, 7473 Lusk Boulevard, San Diego, California 92121, United States, and Adjunct Associate Professor, Department of Pharmacology and Physiology, College of Medicine, Drexel University, New College Building, 245 North 15th Street, Philadelphia, Pennsylvania 19102, United States

Title: Trisubstituted Imidazoles as Positive Modulators of Metabotropic Glutamate Receptor Subtype 5
Patent/Patent Application Number: US2013150347A1 **Publication date:** June 13, 2013
US2013150355A1
Priority Application: EP 2011–193132 **Priority date:** December 13, 2011
EP 2011–193133
Inventors: Rudolf, K.; Bischoff, D.; Dahmann, G.; Grauert, M.; Kuelzer, R.; Wellenzohn, B.
Assignee Company: Boehringer Ingelheim International GmbH, Germany
Disease Area: Neurological and/or psychiatric disorder **Biological Target:** Metabotropic Glutamate Receptor Subtype 5 (mGluR5)
Summary: These two application claim a series of trisubstituted imidazoles that may provide treatment for a wide variety of diseases and disorders such as schizophrenia, cognitive decline, dementia, cognitive impairment, and Alzheimer's disease.

Important Compound Classes:

US 2013/0150347 A1

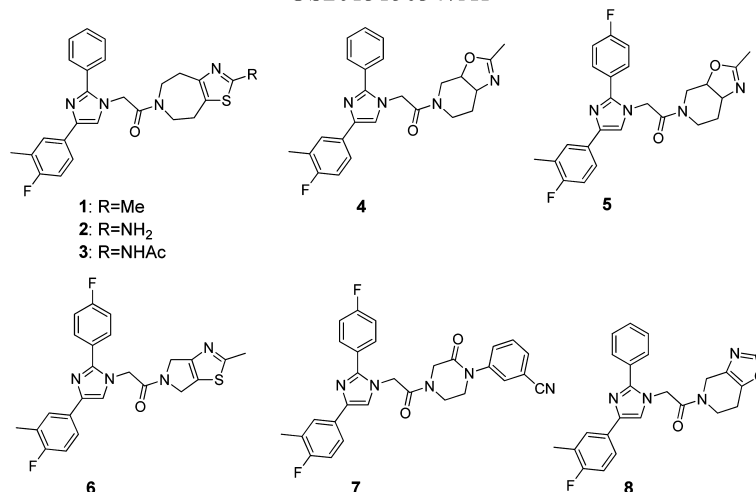


US 2013/0150355 A1

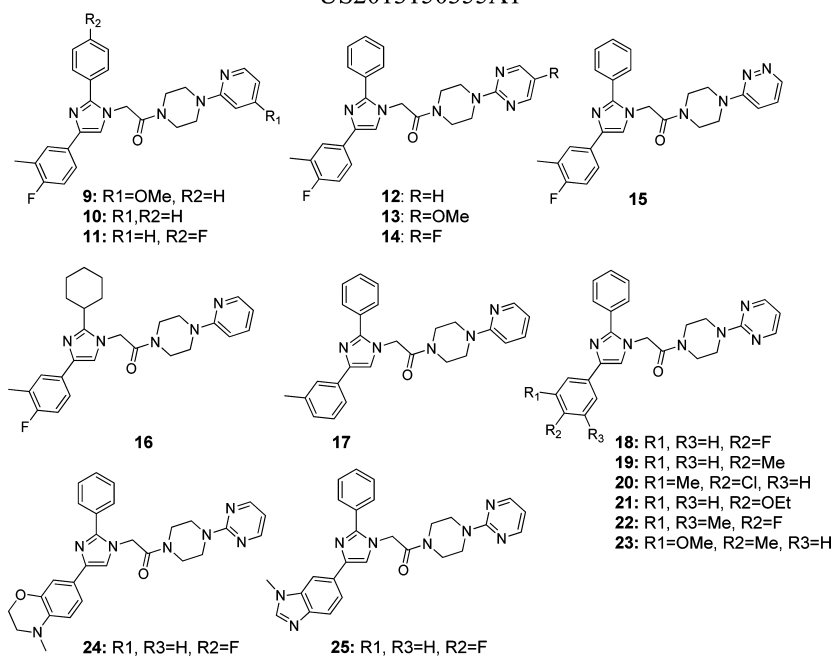
Received: July 16, 2013**Published:** August 06, 2013

Key Structures:

US2013150347A1



US2013150355A1



Recent Review Articles:

1. Matosin, N.; Newell, K. A. Metabotropic glutamate receptor 5 in the pathology and treatment of schizophrenia. *Neurosci. Biobehav. Rev.* **2013**, *37* (3), 256–268.
2. Lindsley, C. W.; Stauffer, S. R. Metabotropic glutamate receptor 5-positive allosteric modulators for the treatment of schizophrenia (2004–2012). *Pharm. Pat. Anal.* **2013**, *2* (1), 93–108.

Biological Assay:

The positive modulation of mGluR5 is measured in HEK 293A cells expressing human recombinant mGluR5 and is detected with calcium based FLIPR assay.

Pharmacological Data:

Activity of positive modulator of mGluR5

Compound	mGluR5 (EC ₅₀ , nM)	Compound	mGluR5 (EC ₅₀ , nM)
1	90	14	97
2	224	15	858
3	769	16	717
4	90	17	73
5	40	18	272
6	64	19	67
7	431	20	54
8	61	21	680
9	84	22	38
10	76	23	29
11	53	24	914
12	41	25	1527
13	53		

■ AUTHOR INFORMATION

Corresponding Author

*E-mail: grosse@dartneuroscience.com.

Notes

The authors declare no competing financial interest.