

# Pilot Project for Determining Look-alike Sound-alike (LASA) Drug Names for New Molecular Entities (NMEs)

VA Center for Medication Safety - A Patient Safety Center for Inquiry  
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 National Center for Patient Safety

**OBJECTIVES:**

To pilot a structured multi-attribute search and retrieval method for determining drug names that have potential for drug name confusion.

**METHODS:**

Using the LASA multi-attribute drug product search engine developed by a professor at the University of Illinois at Chicago, a query of the database of existing drug names employing 5 different retrieval methods is being carried out for each new molecular entity (NME) generic and brand name. Each search varies several attributes such as name, strength, dosage form, and route, as well as analyzes the drug names by both a spelling component and a phonological component. Different emphasis can be placed on the beginning of the drug name, end of the drug name, or both. To uniformly narrow down search results, the following steps are being performed:

1. The top 25 ranking drug names from each search will be selected regardless of the similarity scores (both brand and generic included, excluding the drug name itself).
2. The list of drug names will be ranked in descending order of frequency of occurrence from the search results.
3. The outcomes pharmacist will narrow down the selection to drug names that are relevant based on similarity at the beginning and end of the name, dosage strength, dosage form, and route of administration. The list of drug names will be sent to the PBM clinician, and both the outcomes pharmacist and PBM clinician will discuss the significance of the similarities and come to consensus on the final selection of 3-5 drug names.
4. The PBM clinician will incorporate the LASA results into the NME drug monograph for approval by the MAP and VISN Formulary Leaders, followed by VA-wide dissemination, as well as posting to the PBM internet/intranet website.

**FINDINGS/RESULTS:**

From FY 2005 to 1<sup>st</sup> Qtr FY06, the search and retrieval method has been performed for the following NMEs with the suggested drug names that may serve as potential sources of drug name confusion.

NME	LASA Names	Severity	Frequency
Azacitidine Vidaza™	Cimetidine, famotidine, ranitidine, azathioprine, azulfidine, capecitabine, zalcitabine Videx, Vitrase, Viadur		
Cilostazol Pletal™	Sulfisoxazole, colestipol, clozaril, cozaar, inositol, aldactazide, voriconazole Plendil	Minor to catastrophic Major	Uncommon to occasional Occasional
Duloxetine Cymbalta™	Fluoxetine, atomoxetine, paroxetine, Dulcolax Symbyax		
Erlotinib Tarceva™	Gefitinib, imatinib Pexeva	Mild to moderate Mild	
Eszopiclone Lunesta™	Testolactone, buspirone, risperidone, ropinirole Menest, Cenestin, Lutera, Congestac,	Minor to moderate Minor	Infrequent Infrequent

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	Nestabs		
Iloprost Ventavis™	Bimatoprost, latanoprost, travoprost Ventolin inh., Ventuss Syrup, Tavist Syrup	Minor Minor to moderate	Uncommon Uncommon to occasional
Orlistat Xenical™	Orlenta, Uristat Xiral, Xeloda		
Pegaptanib	Paganone, paraplatin, imatinib, gefitinib, Protonix	Major	Remote to uncommon
Macugen™	Adagen, magnesium sulfate, glucagen, mustargen, salagen	Major	Remote to uncommon
Permetrexed	A-methapred, Penetrex, trimetrexate, ceftriaxone, Cetapred, Emetrol, Medipred, Merrem, methotrexate		
Alimta™	Alinia, Elimite, Aceta, Adalimumab, Alfenta, Esclim	Moderate	
Pramlintide	Prandin		
Symlin™	Insulin		
Rifaximin Xifaxan™	Rifampin, rifapentine, rifabutin, Rifater Xanax, Biaxin	Severe Severe	Occasional Uncommon
Sibutramine	Imipramine, topiramate		
Meridia™	Mexitil, meperidine		
Telithromycin	Erythromycin, clarithromycin, azithromycin, dirithromycin	Minor to moderate Moderate	Occasional Uncommon
Ketek™	Keflex, Keftab, K-pek, Kaopek		
Acamprosate Campral™	Bacampicillin, acarbose, camptosar Camptosar, Keppra, captopril		
Apomorphine	Oxymorphone, hydromorphone, atomoxetine, morphine		
Apokyn™	Naprosyn, Unasyn, Zosyn		
Bevacizumab	Daclizumab, efalizumab, omalizumab, palivizumab, adalimumab, basiliximab, abciximab		
Avastin™	Fastin, Arestin, Avandia, avandamet, Vantin		
Micafungin Mycamine™	Caspofungin, Fungizone, Macugen Micatin, Mysoline		
Olanzapine IM	Olanzapine (oral route), clozapine, mirtazapine, Flolan, loxapine	Minor	Occasional
Zyprexa IM™	Zyprexa (oral route, including Zydis), Zyrtec, Ziprasidone mesylate (Geodon IM), Hiprex, Chorex, Zephrex	Minor	Occasional
Tdap Adacel™	DDAVP, Orap, APAP, DTPA, Q-TAPP Adagen, Aranelle, Ascarel		
Tipranavir	Atazanavir, indinavir, lopinavir, amprenavir, nelfinavir, saquinavir, trizivir, Famvir, ritonavir		
Aptivus™	Activella, Antivert, Sustiva, Ativan, Actos		
Cetuximab	rituximab, abciximab, cefotaxime, alemtuzumab, ceftizoxime, Rituxan, trastuzumab, basiliximab		
Erbix™	Rubex, Rituxan		
Cinacalcet	Calcet	Minor to Moderate	Occasional
Sensipar™	Buspar, Senna products	Minor	Remote
Erlotinib	gefitinib, imatinib	Mild to moderate	
Tarceva™	Pexeva	Mild	
Exenatide	Nateglinide; ethionamide		

Byetta™	Diabeta		
Ezetimibe Zetia™ or Vytorin™	Escitalopram, eszopiclone, glipizide Zebeta 10 mg, Zovia 1/150, Zerit 1 mg, Meridia 10 mg, Zyrtec 10 mg, Voltaren, Vantin, Vysken.	Mild Mild	Occasional Occasional
Hydralazine/Isosorbide Dinitrate Bidil™	Isordil, Isosorbide dinitrate, hydralazine, hydroxyzine Bentyl, Isordil, Paxil, Plendil	Minor to Moderate Minor to Moderate	Uncommon to Occasional Remote to uncommon
Lanthanum Carbonate Fosrenol™	Aluminum hydroxide, lithium carbonate Fiorinal, Fosfree, Fer-In-Sol	Minor to Moderate Minor to Moderate	Remote Remote
Omega-3 fatty acid ethyl esters Omacor™	Omeprazole, Orap Omeprazole, Mevacor, Orap, Amicar	Minor Minor to Moderate	Occasional Occasional
Paricalcitol Zemplar™	Calcitriol, ergocalciferol, paclitaxel Remular Temptra Gemzar, Zanosar	Minor Minor to Moderate	Uncommon Remote
Ramelteon Rozerem™	Ramipril Remeron, Reminyl, Razadyne, Romazicon	Minor to Moderate Minor	Infrequent Uncommon to frequent for Razadyne

The format for searching and retrieving of look-alike sound-alike names for potential drug name confusion is still being piloted. The steps for search, retrieval, and determination of significant drug names of potential confusion are still being refined.

**PUBLICATIONS:**

<http://vaww.pbm.va.gov/Safety%20Reports/3ET72Look%20Alike%20Sound%20Alike.pdf>