



FierceBiotech now available wherever you are.

DOWNLOAD

OUR MOBILE APP TODAY

Free Weekly Biotech Research Newsletter Stay current on the latest Drug Discovery Breakthroughs, R&D Trends & Financing, Stem Cell News, and Preclinical Research with updates sent straight to your Inbox. Join over 43,000 lab research professionals who subscribe to FierceBiotechResearch for FREE! Click here to see a sample.

We never sell or give away your contact information. Our readers' trust comes first.

SIGN ME UP

FierceBiotech Research

NEWS TOPICS ANALYSIS FEATURES LIBRARY EVENTS JOBS MARKETPLACE

FOLLOW US [Email] [Twitter] [LinkedIn]

Topics: Preclinical IT

Antidepressants could provide new way to treat deadly lung cancer

September 26, 2013 | By Emily Mullin

SHARE

Drug repurposing is a growing trend as pharma companies are seeing their pipelines dry up, and academic researchers are often at the forefront of testing current drugs as well as those that failed in clinical trials for new uses against a host of diseases.

Email

18

Tweet

6

Share

Like

Like

0

Using a bioinformatics method involving a computerized discovery pipeline, researchers at the Stanford University School of Medicine have stumbled upon a possible new treatment for a deadly kind of lung cancer from existing drugs--a little-used class of antidepressants already approved by the FDA.

The investigators identified two antidepressants with potential cancer-fighting abilities--imipramine, which is used to regulate the activity of certain hormones causing mood disorders, and promethazine, a sedative and antipsychotic drug. They then tested the drugs in cell cultures and animal models of small-cell lung cancer (SCLC), a neuroendocrine disease with a dismal prognosis and a 5-year survival rate of only 5%. Both drugs induced cell death mechanisms in the cancer cells. The drugs were also effective in mice with human SCLC that had become resistant to the chemotherapy drug. The findings appear in *Cancer Discovery*, a journal of the American Association for Cancer Research.

TOOLS



Webinar: Mobile medical app regulation

DATE: DECEMBER 18TH, 2 PM ET/11 AM PT

The FDA has finally issued new guidance outlining requirements for mobile medical device apps. Are companies altering their app development in response to the new requirements, or can they continue as planned, business as usual? This webinar explores the issue. Register Today!

Comment



Print

Sign up for our FREE newsletter for more news like this sent to your inbox!

JOIN 43,000+ INSIDERS SIGN UP FOR OUR NEWSLETTER

SIGN ME UP

FierceBiotechResearch alerts lab research professionals on the latest scientific breakthroughs in drug discovery and development. Get your free, weekly email briefing today! Sign up today!

A NEW eBook From FierceBiotech

NEW DRUGS FOR OLD: FAILED DRUGS GAINING A SECOND CHANCE



POPULAR STORIES

MOST READ

MOST SHARED

Key hep C protein revealed, paving the way for new vaccines

Male contraceptive breakthrough: Australian, UK researchers collaborate on protein discovery

NIH publishes first Alzheimer's genomics data for researchers

NIH announces \$100M for new HIV research initiative

Novartis team IDs new malaria target



Contact Author



Reprint

"There are no approved targeted therapies against SCLC, in part because this cancer type does not have 'easy' mutations to targets," study co-author Julien Sage, associate professor of pediatrics and genetics at Stanford University School of Medicine, told *FierceBiotech Research*

Unlike most targeted therapies, which are often tailored for a single molecule or pathway, Sage said the drugs his team identified target multiple receptors at the surface of neuroendocrine cancer cells, which may hamper cancer cells' ability to develop resistance to the treatment.

"These results may help in two ways: The candidate drugs may be readily useful in the clinic, in combination with current therapies," Sage said. "Also, these findings may help refocus on key features of neuroendocrine tumor cells."

Based on the preclinical studies, the researchers have begun a clinical trial to test desipramine, a drug similar to imipramine, in SCLC and other high-grade neuroendocrine tumors. Palo Alto, CA-based NuMedii has licensed the intellectual property of the preclinical research, and the company will futher develop the drugs.

- here's the Stanford [release](#)
- see [more](#) from the AACR
- check out the study [abstract](#) in *Cancer Discovery*

Related Articles:

- [Diabetes drug decreases lung cancer tumors in mice with gene mutation](#)
- [UC Davis team finds new lung cancer Rx target](#)
- [Natural killer cells may be key to lung cancer susceptibility](#)

Sign up for our free newsletter

SIGN ME UP

Filed Under [bioinformatics](#), [lung cancer](#), [Stanford University School of Medicine](#)

COMMENTS

0 comments



Start the discussion...

Best Community

Share

No one has commented yet.

ALSO ON FIERCEBIOTECHRESEARCH

[Hopkins researchers offer new way to deliver personalized cancer therapies](#) [High copper levels implicated in Alzheimer's disease](#)

1 comment • 10 months ago

2 comments • 3 months ago

Lah99 — Assuming one mouse per drug, SKT Wordpress Themes — Yes i am also

THE LIBRARY: EBOOK

Picking Winners: Data Mining for Drug Discovery



SPONSORED BY: CERTARA

There are several new initiatives being undertaken in the biopharmaceutical industry aimed at making better use of the vast terabytes of information flowing out of research labs around the world. This ebook discusses the intelligent application of analytics and informatics to enable drug hunters to better understand disease, pharmacological and clinical data. Download it today.

MORE ITEMS

A NEW eBook From FierceBiotech

PICKING WINNERS: DATA MINING FOR DRUG DISCOVERY

LATEST COMMENTARY

- [Industry-academic partnerships could help propel metabolic disease research](#)
- [Biosortia tapping into nature to fill early drug-discovery void](#)
- [Doctor calls for boost in cord blood stem cell research](#)
- [Bristol, AZ take doses of Vanderbilt to treat depressed CNS drug R&D](#)
- [Stem cell research needs breakthroughs](#)

EVENTS

World ADC Frankfurt 2014
February 17-20 — Germany

MORE EVENTS

 sounds like a lot of mice, particularly to reach significance. Perhaps to ...

 of the same view..as per this study....

Plant-based inhibitor could halt HIV infection

1 comment • 4 months ago*

 **jhnycmly** — One might wonder whether anyone is going to rush , now , to the defense of "Dr Beetroot" ?"They have ...

Preclinical data snags GlaxoSmithKline's attention in ...

1 comment • a year ago*

PRESS RELEASES

[Jain Foundation Signs Agreement With Cellular Dynamics to Create iPSC Lines From Patients With Muscular Dystrophies](#)

[PaxVax Secures \\$22 Million Series B Financing](#)

[Medivation and Astellas Initiate Phase 2 Study of Enzalutamide in Advanced Breast Cancer That Is Estrogen or Progesterone Receptor Positive and HER2 Normal](#)

[Harvard Bioscience Realigns Global Operations to Create Organizational Efficiencies and Better Position It for Growth](#)

[Genmab Announces Expansion of DuoBody Platform Collaboration with Janssen Biotech, Inc.](#)

[More Press Releases](#)

FEATURED JOBS

[Scientist, Medicinal Chemistry \(Temporary Positions Available\)](#)
Flexus Biosciences, Inc. - San Carlos CA

[Director, Regulatory Affairs CMC - 13000003MA](#)
Abbvie - Chicago IL United States

[Director, Business Development](#)
Rho - Chapel Hill, NC

[Global Pharmaceutical Expert - Korea Health Industry Development Institute](#)
Korea Health Industry Development Institute - Osong South Korea

[Senior Medical Representative](#)
Invado Pharmaceuticals, llc, -

A publication of



FierceBiotechResearch alerts lab research professionals on the latest scientific breakthroughs in drug discovery and development. [Click here](#) to get your free weekly email briefing today!

The FierceMarkets Network:

Telecom

- [FierceCable](#)
- [FierceDeveloper](#)
- [FierceWireless:Europe](#)
- [FierceWirelessTech](#)
- [FierceOnlineVideo](#)
- [FierceTelecom](#)
- [FierceWireless](#)

Marketing & Retail

- [FierceCMO](#)
- [FierceRetail](#)
- [FierceMobileRetail](#)
- [StorefrontBacktalk](#)

Healthcare

- [FierceEMR](#)
- [FierceHealthcare](#)
- [FierceHealthFinance](#)
- [FierceHealthIT](#)
- [FierceHealthPayer](#)
- [FierceMedicalImaging](#)
- [FierceMobileHealthcare](#)
- [FiercePracticeManagement](#)
- [Hospital Impact](#)

Government

- [FierceGovernment](#)
- [FierceGovernmentIT](#)
- [FierceHomelandSecurity](#)
- [FierceMobileGovernment](#)

Energy

- [FierceEnergy](#)
- [FierceSmartGrid](#)

Life Sciences

- [FierceBiomarkers](#)
- [FierceBiotechResearch](#)
- [FierceBiotech](#)
- [FierceBiotechIT](#)
- [FierceCRO](#)
- [FierceDiagnostics](#)
- [FierceDrugDelivery](#)
- [FierceMedicalDevices](#)
- [FiercePharma](#)
- [FiercePharmaManufacturing](#)
- [FierceVaccines](#)

Enterprise IT

- [FierceBigData](#)
- [FierceCIO](#)
- [FierceCIO:TechWatch](#)
- [FierceContentManagement](#)
- [FierceEnterpriseCommunication](#)
- [FierceITSecurity](#)
- [FierceMobileIT](#)

Finance

- [FierceCFO](#)
- [FierceFinance](#)
- [FierceFinanceIT](#)

[Home](#) | [Subscribe](#) | [Manage Newsletter Subscriptions](#) | [Advertise](#) | [Contact](#) | [Mobile Apps](#) | [RSS](#) | [Privacy](#) | [Editors](#) | [List in Marketplace](#)

© 2013 FierceMarkets. All rights reserved.