



home xml feeds newsletter advertise accessibility contact

Archive Search [input] Go

Medical Abbreviations [input] Go



Long Peptide Synthesis Over 20 years of experience Specialize in large peptide

sichem GmbH modular compound library for pharmacological research

Co-Crystal Structures ActiveSight -- crystallographic and fragment screening services.

microRNA detection Microarrays, Q-PCR, in situ probes Human, mouse and rat microRNAs

News Categories

- Biology/Biochemistry
Abortion
ADHD
Aid/Disasters
Alcohol/Addiction/ Illegal Drugs
Allergy
Alzheimer's
Anxiety
Arthritis
Asthma/Respiratory

Navigation Links

- Home
About Us
Advertising
News Archive Search
RSS/XML News Feeds
Free Website Feeds
Free Tools & Content
Your Opinions
Medical Jobs
Links
Contact Us
Health Professionals
Breast Cancer
Cardiovascular
GI
Prostate Cancer
Psychiatry
Respiratory
Learning Resources
Urology
Patient Resources
Asthma
Blood Pressure
Breast Cancer (Patient)
Heartburn
Migraine
Tell a Friend

Your Name: [input]
Your E-mail: [input]
Friend's Name: [input]
Friend's E-mail: [input]

Send

full details.

Receive our news in one weekly e-mail. Sign up to our newsletter. click here



Clinical Trials

[input] Go!

< back to previous page email this to a friend printer friendly page

Computer Models Of More Than 900 Cell Receptors From A Class Of Proteins Known To Be Important Drug Targets Created

Main Category: Biology/Biochemistry News
Article Date: 20 Feb 2006 - 2:00am (UK)

In an important step toward accelerating drug discovery, researchers have created computer models of more than 900 cell receptors from a class of proteins known to be important drug targets.

"This is the first time anyone has modeled them all with an algorithm that improves the accuracy of the structure," said Jeffrey Skolnick Georgia Research Alliance Eminent Scholar in Computational Systems Biology at the Georgia Institute of Technology.

One of the hottest areas in drug research, rational drug design uses three-dimensional computer simulations to study how different drugs and their cellular targets interact with each other.

G protein-coupled receptors are targeted by an estimated one-third of all drugs and convey chemical signals from the outside of cells to the inside.

Using an algorithm they developed known as TASSER, a team of researchers led by Skolnick, then at the University of Buffalo, created three-dimensional structures of all the GPCRs below 500 amino acids in the human genome.

"The solved GPCRs are of the same approximate shape as the ones known to be good drug targets, only they differ in details. But it's the details, the packing of the helices, their angles, their size, that differentiate the drug binding sites of GPCRs from one another," said Skolnick.

Of the 907 models TASSER has helped create, Skolnick estimates that about 820 are accurate enough to be useful to researchers.

"There's still room for significant improvement. They're like cartoons - they kind of look like reality sometimes, but they can be used to help design experiments," said Skolnick.

The mission of the Center for the Study of Systems Biology at Georgia Tech, of which Skolnick is the director, is to essentially simulate life on a computer by building accurate three-dimensional models of the components of life, such as individual proteins and collections of proteins.

"The idea is to simulate these proteins, introduce a drug structure and see how they interact," said Skolnick.

The next step for Skolnick is solving the structure of proteins that have been implicated as a factor in various types of cancer.

###

Contact: David Terraso
d.terraso@gatech.edu
Georgia Institute of Technology

How Useful Was This Article? (1-5, 5=highest)
1 2 3 4 5
I Am A: -- Please Sel
Submit Rating

This Article Also Appears In
Medical Students
IT/Internet/E-mail

view all opinions on this
write an opinion on this
sign up to our newsletter
NEWS ALERTS

Ads by Google

Oreck Air Purifiers

Reduce dust, mold, viruses, and other air-borne allergens.

www.Oreck.com

BDicty Medicro
This is a sample of the Medical Acronyms Dictionary by Pharma-Lexicon, a leading provider for medical reference information. This file contains only abbreviations starting with digits and the first two letters of the alphabet, but should be Medical abbreviations search for your PDA

Ads by Google

Medical Terms

Liberty - Official Site

Medicare Provider of Diabetic Test
Supplies for Seniors - Details Here

www.LibertyMedical.com

Ads by Google

- View the latest [Biology/Biochemistry News](#).
- View all the [latest Medical News Headlines](#).
- Get the latest medical news in your email every week with our [newsletter](#).

Contact Our Medical News Editors

For any corrections of factual information, or to contact the editors please use our [feedback form](#).

Please send any medical news or health news press releases to:
pressrelease@medicalnewstoday.com

[Back to top](#)

[Back to health news](#)

[List of All Medical Articles](#)

[Privacy Policy](#)

[Disclaimer](#)

© 2003-2006 Medical News
Today

Web design by [Alastair Hazell, Sussex UK](#)