

# INTEROP

NEW YORK CITY  
SEPT 30 - OCT 4, 2013 | EXPO: OCT 2-3

IT Leads, Business Succeeds

Save an Extra \$200  
Priority Code: MPIWK

REGISTER NOW

SPONSORED BY:



MOBILE

# BIG DATA REPUBLIC

Transform Your Business With Data

ABOUT US

REGISTER

LOGIN

HOME BLOGGERS MESSAGES POLLS WEBINARS RESOURCES VIDEOS | STRATEGY ANALYTICS TECHNOLOGY FB TW LI G+ RSS

FINANCIAL SERVICES HEALTHCARE GOVERNMENT EDUCATION RETAIL

## UNIFIED DATA

### Predictive Modelling for Biotech Insights



**John Edwards**, Technology Journalist & Author  
5/7/2013  
Comment  
4 comments

[Login](#)  
50% 50%

[Like](#) 4 [Tweet](#) 3 [Share](#) 2 [+1](#) 4

The largest biotech companies are amassing multiple petabytes of data containing an array of useful drug development resources, such as patient outcomes, gene expression profiles, DNA sequencing data, and biomarker reliability. Putting all of this big data to productive use in the quest to find new treatments and streamline research and development is the next step many biotech firms face.

Predictive modeling based on big data offers biotech companies the potential to generate actionable insights in a variety of areas. Carefully crafted algorithms can, for instance, uncover the attributes that lead to positive and negative outcomes (like patient response to a particular drug or therapy) and enable such outcomes to be reliably predicted in the future.



#### Fresh insights

Despite the challenge of working with both unstructured and complex structured data sets, data analytics can help biotech companies detect patterns and extract

meaningful insights in areas such as drug interactions, patient behavior, and physician prescription choices.

Predictive models can also address some of the most important issues facing biotech firms, such as whether a clinical trial will ultimately prove successful or whether a planned joint venture with another business is likely to achieve its financial goals. While no algorithm can ever replace real world testing, or predict the future with flawless accuracy, predictive modeling can generate significant and useful insights that help executives and managers make more deeply informed decisions in less time. With potentially huge sums of money at stake, obtaining any improvement in the ability to make accurate predictions can be incredibly valuable.

#### New approaches

Driving biotech data analytics to its full potential requires tapping into and using information in innovative and often unique ways. By scouring patient databases and social media, for example, big data analytics can help companies match the right patients to the right drug trial.

Social media data can also help biotech firms fine-tune sales and gauge customer satisfaction after a drug reaches market. As a pharmaceutical product becomes widely prescribed, potentially useful information rapidly circulates throughout cyberspaces as both physicians and patients describe their experiences and offer their opinions. Such content is tweeted, posted on website discussion boards, and entered onto Facebook pages in unstructured and hard to access ways.

A number of big data-oriented tools and services are now emerging to help biotech businesses access and use more types of data. **Treato**, for example, promises to automatically collect massive amounts of patient-written health experiences from blogs and forums and, with advanced Natural Language Processing (NLP), extract relevant information, connect the dots, and create a big picture of what people are saying about their medications and conditions.

#### Last thought

### MORE BLOGS FROM JOHN EDWARDS

#### Confront 4 Key Big Data Storage Challenges

4 comments

Developing a practical storage strategy is essential to long-term big data success.

#### How Energy Companies Are Missing Big Data Opportunities

6 comments

Poor information management is crippling energy firms' ability to utilize big data to its full potential.

#### How Big Data Can Support Workforce Optimization

22 comments

Analytics allows businesses to scrutinize real-time employee data.

#### Boosting Fraud Detection Accuracy With Big Data

5 comments

Financial firms turn to big data tools to root out fraudsters.

#### Big Data Targets Alzheimer's Disease

9 comments

Researchers comb data to find possible causes and develop treatment paths.

More from John Edwards



### FLASH POLL

#### In which vertical market do you work?

- Automotive
- Banking
- Consumer
- Education
- Energy
- Engineering
- Financial services
- Food and beverage
- Government
- Healthcare
- Insurance
- Manufacturing
- Media
- Real estate
- Religion

With drug development costs skyrocketing and regulator approvals declining, biotech firms desperately need fresh research approaches. While big data alone can't help the biotech industry solve all of the challenges it's currently facing, having the ability to study more information from more sources is certainly going to help companies deal more effectively with problems in areas ranging from basic research to commercial operations.

**Related posts:**

- [Altered Design Hampers Transmitters](#)
- [What If Your Medical Data Could Help Save Lives?](#)
- [Raw Search Data Soothes Medical Need](#)
- [Big Data for a Healthy Big Apple](#)

[Email This](#) [Print](#) [Comment](#)

**COMMENTS**

[Newest First](#) | [Oldest First](#) | [Threaded View](#)



MDMConsult, User Rank: Exabyte Executive  
5/13/2013 | 8:07:43 AM

**Re: Double edged sword?**

AstraZeneca currently generates more medical data every two weeks "than is currently held in the US Library of Congress". Health-care expenses now represent 17.6 percent of GDP nearly \$600 billion more than the expected benchmark for a nation of the United States's size and wealth.

[Login](#)



50% 50%

[Reply](#) | [Post Message](#) | [Messages List](#) | [Start a Board](#)



smkinoshita, User Rank: Exabyte Executive  
5/8/2013 | 1:18:35 AM

**Does Privacy Come Into Play?**

I was wondering if privacy will come into play with BioTech and Big Data. Some medical conditions can be touchy. People may be reluctant to release data, talk about it, and the data collected by Biotech organizations will need to be careful guarded even if identities are stripped (due to Big Data's ability to reconstruct said identity)

[Login](#)



50% 50%

[Reply](#) | [Post Message](#) | [Messages List](#) | [Start a Board](#)



Mike Lata, User Rank: Blogger  
5/7/2013 | 4:31:05 PM

**Re: Double edged sword?**

Yes, rather than just look at drug testing from a financial point of view or ROI, it benefits science and medicine to find cures to even the most rare diseases.

[Login](#)



50% 50%

[Reply](#) | [Post Message](#) | [Messages List](#) | [Start a Board](#)



legalcio, User Rank: Exabyte Executive  
5/7/2013 | 3:11:21 PM

**Double edged sword?**

Modelling using Big Data could help in determining ROI for a new drug trial. The downside to it is that we might miss an opportunity for development of an effective drug, particularly one that addresses a rare disease.

[Login](#)



50% 50%

[Reply](#) | [Post Message](#) | [Messages List](#) | [Start a Board](#)

- Religion
- Retail
- Technology
- Telecommunications
- Transportation
- Other

[Submit](#)

[All Polls](#)

**BDR IN YOUR INBOX**

[SUBMIT](#)

**InformationWeek** reports  
THE ULTIMATE RESOURCE FOR IT, BY IT  
Unlimited access to comprehensive research and analysis reports  
Top 5 Mobile Security Threats for 2012  
State of Unified Communications

**FEATURED VIDEO**

**Big Data Explained: What Is Data Governance?**

0



A short video over view of the need for data governance.  
[Watch This Video](#)

[More Video Blogs](#)

**CAPTION CONTEST**

**Write a Caption, Win a Gift Card**

[Click Here](#)



Latest Comment: "The Kaggle Factor set a new viewing record of nearly 23.7 viewers. With ..."

19

Cartoon Archive

### FOLLOW US ON TWITTER

**Edu•Tek Ltd.** @edutek\_ltd 30m  
Big Data in the Classroom  
[buff.ly/18AY4BV](http://buff.ly/18AY4BV) via  
[@BigDataRepublic](https://twitter.com/BigDataRepublic) #edtech

**TIBCO Software** @TIBCO 57m  
Is #BigData #analysis art or science?  
Nick Evans of @jaywingsays  
discusses in @BigDataRepublic:  
[bit.ly/18Srqn](http://bit.ly/18Srqn)

**Big Data Republic** @BigDataRepublic3h  
RT @data\_nerd: Data Mining is about  
explaining the past and predicting  
the future. How can #analytics help  
you? [dld.bz/aqgf8...](http://dld.bz/aqgf8...)  
Retweeted by Adma Raia  
Expand

### LIKE US ON FACEBOOK

**Big Data Republic**  
Like You like this.

You and 3,257 others like Big Data Republic.

Facebook social plugin

### ACCOLADES



Media Pioneer Award Winner



UBM TECH

OUR MARKETS: [Business Technology](#) | [Channel](#) | [Electronics](#) | [Game & App Development](#)

**Working With Us:** [Advertising Contacts](#) | [Event Calendar](#) | [Tech Marketing Solutions](#) | [Corporate Site](#) | [Contact Us / Feedback](#)

[Terms of Service](#) | [Privacy Statement](#) | Copyright © 2013 UBM Tech, All rights reserved