• Search
• Discover
• Share

…but first a word from your sponsors…
Changing environment

It all used to be so simple… >sigh<
Multi-channel, Participatory, Discoverable
It’s a User-centric World
Nature.com Search

- Nature.com search users mostly know what they are looking for
- Focus on the precision of search engine:
  - Mark Logic XML database
  - Improved bibliographic search
  - Faster indexing
- Extend functions to improve discovery...
Open Search

- “Technical standard” for sharing specification of query & results
- Allows rapid build of search functions
1. Production of clones of homozygous diploid zebra fish (Brachydanio rerio)
   George Streisinger, Charlene Walker, Nancy Dower, Donna Knauber, Fred Singer
   in Nature 291, 5813 (28 May 1981)
   doi:10.1038/291293a0

2. Zebra mussels invade Lake Erie muds
   Paul Arthur Berkman, Melissa A. Haltuch, Emily Tichich, David W. Garton, Gregory W. Kennedy, John E. Gannon, Scudder D. Mackey, Jonathan A. Fuller, Dale L. Liebenthal
   in Nature 383, 6660 (7 May 1996)
   doi:10.1038/29902

3. Uptake of dissolved organic carbon and trace elements by zebra mussels
   Hudson A. Roditi, Nicholas S. Fisher, Sergio A. Safiudo-Wilhelmy
   in Nature 407, 6600 (7 September 2000)
   doi:10.1038/35024069

4. Burrowing saves Lake Erie clams
   S. Jerine Nichols, Douglas A. Wilcox
   in Nature 389, 6654 (30 October 1997)
   doi:10.1038/40039

5. Neural mechanisms of birdsong memory
   Johan J. Bolhuis, Manfred Gahr
   in Nature Reviews Neuroscience 7, 5
   doi:10.1038/nrm1904

6. Speke and Grant's Zebra
   J. FAYRER
   in Nature 27, 704 (26 April 1883)
   doi:10.1038/027604a0

7. Alien genome evolution: insights from a linkage map of the blue tit (Parus caeruleus)
4. Uptake of dissolved organic carbon and trace elements by zebra mussels

Hudson A. Roditi, Nicholas S. Fisher, Sergio A. Sáhado-Wilhelmy

In Nature 407, 6800 (7 September 2000)

doi:10.1038/35024069
Cloud query demo.
Enter search terms, then drag clouds to create your query. Clicking on the title of the cloud will change the boolean functionality.

query: (keywords="zebra") OR (title="fish")

Found 2,486 items (showing 5):
1. Production of clones of homozygous diploid zebra fish (Brachydanio rerio)
   George Streisinger, Charline Walker, Nancy Dower, Donna Knauber, Fred Singer
   in Nature 291, 293 (28 May 1981), doi:10.1038/291293a0
Displaying events 1–25 of 1331 which matched your search for chemistry
Dashboard Widgets
Amazing widgets for your Mac OS X Dashboard.

natures.com search

About natures.com search.
This widget is an easy-to-use tool designed for searching science research articles and news items on natures.com by keyword or by field — from 1869 to the present day.

Features include a simple text input for keyword search with an optional dropdown pane for fielded search, a journal selection pane with selected journals being maintained in user preferences, and a preview facility showing the actual search query.

http://www.youtube.com/watch?v=sqf_ew4o3U8
Allosteric communication between protomers of dopamine class A GPCR dimers modulates activation

Yuan He, Irina S. Morra, Enisee Urizar, Harel Weinstein & Jonathan A. Javitch
Received 22 October 2009; Accepted 28 April 2009; Published online 02 August 2009

Abstract

A major obstacle to understanding the functional importance of dimerization between class A G protein-coupled receptors (GPCRs) has been the methodological limitation in achieving control of the identity of the components comprising the signaling unit. We have developed a functional complementation assay that enables such control, and we demonstrate it here for the human dopamine D2 receptor. The minimal signaling unit, two receptors and a single G protein, is maximally activated by agonist binding to a single protomer, which suggests an asymmetrical activated dimer. Inverse agonist binding to the second protomer enhances signaling, whereas agonist binding to the second protomer blunts signaling. Ligand-independent constitutive activation of the second protomer also inhibits signaling. Thus, GPCR dimer function can be modulated by the activity state of the second protomer, which for a heterodimer may be altered in pathological states. Our new methodology also makes possible the characterization of signaling from a defined heterodimer unit.

Citations to this article

News & Views

Inside this article:

Compounds

Figures at a glance (Figure viewer)

Related content

2-way reference links
Briefly: Articles automatically annotated to identify entities (e.g., compounds) in the text.

- References can now be looked-up from the text of the article.
- Bold compounds numbers ‘pop-up’ the structure.
- Clicking on bold numbers takes you to enhanced compound pages.

Chemistry Features
Click through to enhanced compound pages, which offer:

- Chemdraw file
- CML file
- View structure in 3D
- Synonyms
- Chemical formula
- Molecular Weight
- Elemental Analysis
- InChI and InChIKey
- SMILES string
- Links to external databases
Chemistry Production Platform Editor Interface
Mobile Internet Outpaces Desktop Internet Adoption
iPhone + iTouch Users = 8x AOL Users 8 Quarters After Launch

iPhone + iTouch vs. NTT docomo i-mode vs. Netscape vs. AOL Users
First 20 Quarters Since Launch

Subscribers (MM)

Mobile Internet
iPhone + iTouch
Launched 6/07
~57MM

Desktop Internet
Netscape*
Launched 12/94
~25MM

Mobile Internet
NTT docomo i-mode
Launched 6/99
~11MM

Desktop Internet
AOL*
v 2.0 Launched 9/94
~7MM

Quarters Since Launch

Q1 Q3 Q5 Q7 Q9 Q11 Q13 Q15 Q17 Q19

Note: *AOL subscribers data not available before Q3/94; Netscape users limited to US only.
Source: Company Reports, Morgan Stanley Research.
Mobile devices

- Experiment: free iPhone application
- Nature Magazine to start; roll out to others in 2010; more features to come
- Users must register to access content
- Desktop: find, read paper there, save PDF / citation
- Mobile: find, skim, save citations of interesting papers / references for desktop
- Thinking about business models and access control models
1. Users request EPUB
2. EPUB packaging web service requests manifest and content
3. Mark Logic returns: manifest for EPUB article in XHTML, stylesheets
4. Service fetches images listed in manifest
   - article XML already ingested

filesystem
- flat XML files
- images

Mark Logic

Users
Nature on the iPhone

Access Control

Browse

Full text

Figures

Search

References

An epistatic ratchet constrains the direction of glucocorticoid receptor evolution

Jamie T. Bridgman et al.

The extent to which evolution is reversible has long fascinated biologists. Most previous work on the reversibility of morphological and life-history evolution has been inductive, because of uncertainty and bias in the methods used to infer ancestral states for such characters. Further, despite theoretical work on the factors that could contribute to irreversibility, there is little empirical evidence on its causes, because sufficient understanding of the mechanisms is lacking. Here, we describe two apparent cases of irreversible evolution in the transcriptomes of the nematode C. elegans and the mammalian species M. musculus and rhesus macaque. We use these cases to suggest that selection on epistatic ratchets, which are sets of pairwise interactions that ensure that once fitness is gained, it is lost only with a substantial probability, may be an important driver of evolutionary change.
Blogs may link to the journal (nature.com/x), DOI (dx.doi.org/x), PubMed (ncbi... etc.)

- CrossRef has a great blogging plugin
- Aggregation technology disambiguates references to infer links to online papers
Igor

- Is a proof of concept gadget written in-house at NPG
- Igor is a “robot” for Google Wave - a mix of richly formatted document and real-time conversation. (APIs)
- It allows users to pull in references from PubMed & personal libraries on Connotea or CiteULike simply by typing in keywords as they write an article.

http://vimeo.com/5772930
Nature Network

Publications (Content)  UGC  Network (People)

Workbench (Functionality)
Thank you!

d.pollock@nature.com

www.nature.com