



The Genomics Landscape

A monthly update from the NHGRI Director



December 2, 2014

It is hard to believe (and, in fact, I find it shocking!) that today marks the beginning of my 6th year as Director of the National Human Genome Research Institute. The last five years have gone by in a flash, and I feel quite proud about what we have accomplished. Since becoming Director, NHGRI has published an updated strategic vision for the field of genomics (see: [Charting a course for genomic medicine from base pairs to bedside](#)), celebrated the [10th anniversary of completing the Human Genome Project](#), implemented a [major reorganization](#) of the institute, and launched the [Genome: Unlocking Life's Code](#) Smithsonian exhibition that is now travelling North America. In addition, there was a wealth of scientific accomplishments from our research laboratories and grantees— far too many to mention here. It has been a spectacular half decade— but I have no doubt that the next five years will also be profoundly eventful!

In this month's *The Genomics Landscape*, I describe NHGRI efforts to use social media for spreading Institute and genomics messages. I also highlight a recent event for military families at the *Genome: Unlocking Life's Code* exhibition (now located in San Diego), recent publications from the Mouse ENCODE Project, and the new Chief of NHGRI's Genomic Healthcare Branch. See details below, along with other information items that I hope will be of interest to you.

Specifically, December's *The Genomics Landscape* features stories about:

- [NHGRI and Social Media](#)
- [Genome: Unlocking Life's Code – Military Family Day at the San Diego Fleet Center](#)
- [Mouse Encyclopedia of DNA Elements Project Publishes Capstone Research](#)
- [NHGRI Welcomes the New Chief of the Genomics Healthcare Branch](#)

All the best,

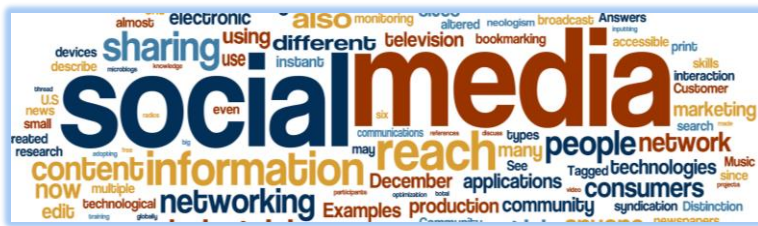
Watch here for current and upcoming locations of the Smithsonian-NHGRI exhibition *Genome: Unlocking Life's Code* as it tours North America!

Traveling Exhibition		
	Current	Next
	September 27, 2014 - January 4, 2015	January 22 - April 27, 2015
	Reuben H. Fleet Science Center San Diego, California	The Tech Museum of Innovation San Jose, California
	See unlockinglifescode.org for details	

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 ~~To suggest future topics, send an e-mail to: NHGRLANDSCAPE@MAIL.NIH.GOV~~

NHGRI and Social Media

Social media is a powerful tool. NHGRI's social media presence has grown substantially over the last few years, increasing our capacity to reach relevant public and scientific communities. In doing so, the Institute has emerged as a leader at the NIH in stimulating and coordinating the use of social media. We post information about leading-edge research findings, scientific presentations, and numerous announcements on genome.gov, and advertise and further disseminate that information via social media sites— GenomeTV, Facebook, and Twitter— on a daily basis. These sites are essential for keeping the public, grantees, researchers, and staff abreast of exciting genomic advances happening and relevant information about NHGRI.



The Institute's website, genome.gov, is our primary portal to the world. We constantly update this site with new content and stories about NHGRI funding initiatives, programs, and events. Genome.gov also hosts unique resources, such as [GenomeTV](#), the [Genome Advance of the Month](#), the [Talking Genetics Glossary](#), [Genomic Careers](#), the [Genome-Wide Association Studies \(GWAS\) Catalog](#), and links to the [Genetics/Genomics Competency Center \(G2C2\)](#), the [Global Genetics and Genomics Community \(G3C\)](#), and many others.

We leverage and promote new genome.gov content via three Facebook pages— [NHGRI \(genome.gov\)](#), [National DNA Day](#), and [Genome: Unlocking Life's Code \(ULC\)](#). NHGRI staff members post information about research findings from NHGRI and its grantees, other NIH Institutes/Centers, and noteworthy genomics news. This month, the NHGRI Facebook page reached over 66,000 likes, and that number is growing each day. Our National DNA Day page focuses mainly on promoting the various National DNA Day activities, and has reached nearly 30,000 likes. Our newest Facebook page, *Genome: Unlocking Life's Code*, was just launched this year, and focuses on events associated with the NHGRI-Smithsonian exhibition.



Genome: Unlocking Life's Code – Military Family Day at the San Diego Fleet Center



Last month, NHGRI and the San Diego Military Family Collaborative partnered with the Reuben H. Fleet Science Center to host Military Family Day in celebration of the traveling exhibition, *Genome: Unlocking Life's Code*. More than one thousand people, including active duty military service members and their families, registered to attend the event, which included complimentary admission to the Reuben H. Fleet Science Center to see the exhibition, hands-on genomics activities, and an information fair featuring dozens of local organizations that support the military.

For more information, visit rhfleet.org/press-room/reuben-h-fleet-science-center-host-military-family-day-sunday-november-9.

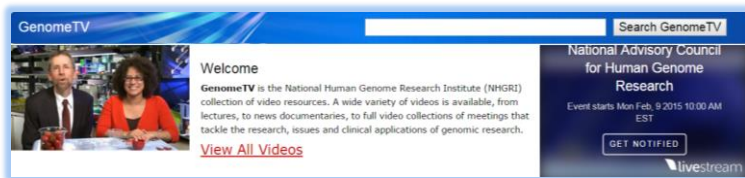
Mouse Encyclopedia of DNA Elements Project Publishes Capstone Research



The Mouse Encyclopedia of DNA Elements (ENCODE) Project recently published a coordinated set of papers in *Nature*, *Science*, *Genome Research*, *PNAS*, and other journals that featured comparative analyses of functional elements in the mouse and human genomes. The reported studies aimed to characterize the genetic and biochemical mechanisms involved in regulating various functions in the two genomes. The publications highlight the similarities and important differences in how the human and mouse genomes regulate gene expression, for example, which have important implications for use of the mouse as a model for human health and

NHGRI also hosts three primary Twitter accounts, with staff members ‘tweeting’ from various events and meetings on behalf of the Institute. Our primary Twitter handle is [@genome_gov](https://twitter.com/genome_gov) (twitter.com/genome_gov) with over 13,000 followers. Numerous individual NHGRI programs have Twitter handles, including H3Africa (twitter.com/h3africa), the Encyclopedia of DNA Elements (twitter.com/ENCODE_NIH), the Clinical Sequencing Exploratory Research Consortium (twitter.com/hail_CSER), and the Centers for Mendelian Genomics (twitter.com/solvemendelian).

Our most extensive and frequently used social media tool is our YouTube channel, [GenomeTV](#). This channel now comprises a collection that includes nearly 1,000 videos— from lectures and news documentaries to full video collections of major genomics meetings. GenomeTV has over 10,000 subscribers, and its videos have collectively been viewed over 1.7 million times. I am proud to say that one of our most popular videos is “[How to extract DNA from strawberries](#)” that starred Dr. Carla Easter (Deputy Chief of NHGRI’s Education and Community Involvement Branch), with me as her sidekick. Through this video, Carla was instrumental in increasing my overall YouTube ‘hit number’!



Recently, we began pairing our GenomeTV live webcasts with Twitter to create new ways to engage virtual participants and enhance our meetings and conferences through active, remote participation in the discussion. This past July, NHGRI hosted the “Future Opportunities for Genome Sequencing and Beyond” workshop and broadcasted the proceedings live. During the two-day meeting, more than 230 virtual participants tweeted over 700 times using the hashtag [#GSPfuture](#). The powerful combination of these two technologies extended our reach to those not able to join the meeting in person and enriched the discussion about a core area of our research portfolio.

Our next GenomeTV live broadcast will occur on Monday, February 9, 2015, covering the open session of the National Advisory Council for Human Genome Research (NACHGR) meeting. Please visit genome.gov/10000905 for further details. We hope you can join us virtually!

disease. These papers represent the capstone effort by the Mouse ENCODE project, which was initiated in 2009.

For additional information, see genome.gov/27559596.

To access the *Nature* publications, see nature.com/nature/journal/v515/n7527/full/515346a.html.

NHGRI Welcomes the New Chief of the Genomics Healthcare Branch



Last month, Bob Wildin, M.D., joined NHGRI as Chief of the [Genomic Healthcare Branch \(GHB\)](#) within the [Division of Policy, Communications, and Education](#). Prior to joining NHGRI, Dr. Wildin practiced clinical genetics in the Pacific Northwest in both private and hospital-based settings. His tenure as a medical faculty member at several hospitals— as well as a clinical genetics provider for large community hospital systems, consultant on biomedical informatics software, and medical director of a clinical molecular diagnostics laboratory— gives him a unique perspective to advance the activities of GHB. He looks forward to continuing and expanding NHGRI’s support of resources to educate healthcare professionals and the public in genomics.

For more information, see genome.gov/27559677.



Genome Advance of the Month

[Humans Adapted to Day-Length by Tuning their Circadian "Clocks"](#)

Funding Opportunity

[Administrative Supplements for Research on Sex/Gender Differences](#)

Funding News

[FAQs for RFA-RM-14-016 Model Organisms Screening Center for the Undiagnosed Diseases Network \(UDN\)](#)

NIH News

[Big Data, Meet Big Money: NIH Funds Centers to Crunch Health Data](#)

[Dr. Don Lindberg, Director of the National Library of Medicine at NIH, to Retire](#)

[Rock Talk: Retention Rates for First-Time NIH R01 Awardees](#)

[HHS and NIH Take Steps to Enhance Transparency of Clinical Trial Results](#)

Genomics Research News

[The Cat's Meow: Genome Reveals Clues to Domestication](#)

[Environmental Carcinogens Leave Distinctive Genetic Imprints in Tumors](#)

[Google Wants to Store Your Genome](#)

[Researchers Identify New Genetic Cause of Epilepsy](#)

[Gut Check: Humans' Important Relationships Under the Microscope](#)

[New Community Challenge Seeks to Evaluate Methods of Computing on Encrypted Genomic Data](#)

[Retiring U.S. Congressman Rush D. Holt, a Scientist and Teacher, to Lead AAAS](#)

[The Skin Microbiome: More than Skin Deep](#)

[NIH Scientists Determine How Environment Contributes to Several Human Diseases](#)

[ASU, IBM Collaboration Moves Ultrafast, Low-Cost DNA Sequencing Technology One Step Closer to Reality](#)

[Researchers Produce Largest Scale Map of Human Protein Interactions](#)

[Without Genes Pilfered from Bacteria, Ticks Would Drop Dead of the Lyme Disease They Carry](#)

[Highly Evolvable Malaria Vectors: The Genomes of 16 Anopheles Mosquitoes](#)

NIH Requests for Feedback

[Comments Sought on Informed Consent Rules for Comparison Studies](#)

[Publication of Notice of Proposed Rulemaking for Clinical Trials Registration and Results Submission under FDAAA](#)

[NIH Request for Public Comments on the Draft NIH Policy on Dissemination of NIH-Funded Clinical Trial Information](#)

[Request for Information: Inviting Comments and Suggestions on the Reagent-Related Barriers to Reproducible Research](#)

[Request for Information: Input on Direction of the Second Phase of the "Illuminating the Druggable Genome" Program](#)

[Request for Information: Making Data Usable--A Framework for Community-Based Data and Metadata Standards Efforts for NIH-Relevant Research](#)

[Request for Information: NIH Big Data to Knowledge \(BD2K\) Initiative Resources for Teaching and Learning](#)

Past editions of *The Genomics Landscape* can be accessed at genome.gov/27541196.

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