



The Genomics Landscape

A monthly update from the NHGRI Director



November 4, 2014

This month, I would like to bring to your attention a short new video that we recently completed, which ‘tells the story’ of NHGRI— our history, our organization, and our programs. This ‘silent documentary’ gives an overview of NHGRI through text, images, graphics, and video clips. I encourage you to visit youtube.com/watch?v=ktsNp6GeYGI to view the video.

In this issue of *The Genomics Landscape*, I describe the evolution of genome sequencing and its impact on public health surveillance and infectious disease diagnostics. I also highlight the first BD2K awards, National Family History Day, the appointment of a new NHGRI Executive Officer, as well as share details on how to comment on our recent genome sequencing workshop. See details below, along with other information items that I hope will be of interest to you.

Specifically, November’s *The Genomics Landscape* features stories about:

- [Changing the Face of Diagnostics in Clinical Microbiology](#)
- [First Big Data to Knowledge \(BD2K\) Awards](#)
- [Family Health History, the Original Genetic Test](#)
- [Appointment of Ellen Rolfes, NHGRI Executive Officer](#)
- [Comments Please: Report from the “Future Opportunities for Genome Sequencing and Beyond” Workshop](#)

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		
GENOME UNLOCKING LIFE'S CODE	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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modes of developing resistance; the origins of food-borne illnesses are being traced; reference genomes of clinical pathogens are being generated; the genomic variation of pathogens within patients is being investigated; and genome sequencing is being used for biodefense purposes, such as identifying specific genomic features of bacterial strains and tracing their origins via comparative genomics.

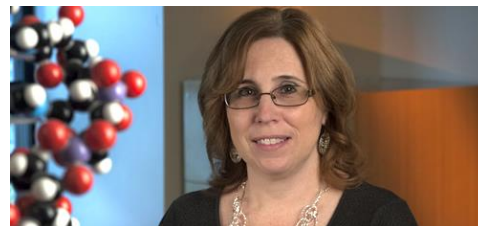
These developments have collectively pointed to the important role of genomics in infectious disease research and diagnostics. As a result, the President's Council of Advisors on Science and Technology (PCAST), an advisory group to the President consisting of top scientists and engineers in the U.S., recently prepared a [report](#) on combating antibiotic resistance. In the report, several actions were recommended: improving our surveillance capabilities, increasing the longevity of current antibiotics, and accelerating the rate at which new antibiotics and other interventions are discovered and developed. Genomics can contribute much to these efforts, especially surveillance and detection of resistance genes and strains, and is mentioned throughout the report.



The PCAST report highlights the urgent need for additional research to develop approaches for combating antibiotic resistance. This issue surfaces in hospitals, homes, businesses, and schools across the world, and genomics has an important role to play in addressing these challenges. Large-scale genomic surveillance of pathogens, healthcare-related and otherwise, and the generation of reference microbial genome sequences will be crucial. The face of diagnostics and clinical microbiology is changing, and bright minds and improved technologies in genomics are helping to lead the way.



Appointment of Ellen Rolfes, NHGRI Executive Officer



Last month, Ellen Rolfes, M.A., was appointed the NHGRI Executive Officer and Director of the Institute's Division of Management. This appointment followed a rigorous national search. In this position, Ms. Rolfes oversees all aspects of administrative management within NHGRI, including management analysis and evaluation, financial management, information technology, and human resources; she also serves as NHGRI's Deputy Ethics Counselor. Over her impressive career at NIH and NHGRI, Ms. Rolfes has worked in a variety of administrative management positions; most recently, she served as NHGRI's Deputy Executive Officer. To read more about Ms. Rolfes's appointment, visit genome.gov/27559294.

Comments Please: Report from the "Future Opportunities for Genome Sequencing and Beyond" Workshop



Last summer, NHGRI held a strategic planning workshop and program review to consider the future opportunities for genome sequencing, especially as it relates to the Institute's [Genome Sequencing Program](#). A report from that workshop is now available, and we welcome your comments. To read the report and submit feedback, please see genome.gov/27559219.

Genomics Research	New Genomics Videos	Funding Opportunities
Advancing the Microbiome Research Community	Genome: Unlocking Life's Code Exhibition Closing Symposium – Genomics and Global Health: What Does the Future Hold	Notice of Intent to Publish: Centers for the Genomics of Common Disease (UM1)
Nature Reviews Genetics 'Clinical Applications of Next-Generation Sequencing'	Genomic Medicine Centers VII Meeting: Genomic Clinical Decision Support	Notice of Intent to Publish: Centers for Mendelian Genomics (UM1)
Whole Exome Sequencing Closer to Becoming “New Family History”	NHGRI Showcase Video	NIH Director's Early Independence Awards (DP5)
Study: Most Respond Well to Genetic Testing Results	NIH News of Interest	NIH Offers Niche Assessment Program to SBIR and STTR Phase I Awardees
Exomes in the Clinic	NIH Funds Research Consortia to Study More than 200 Rare Diseases	Funding News
Thyroid Cancer Genome Analysis Finds Markers of Aggressive Tumors	NIH Grantee Honored With 2014 Nobel Prize in Chemistry	Informational Webinar: 4D Nucleome Initiatives
Autism Linked to Dozens of Genetic Mutations in Major New Studies	NIH Awards ~\$31 Million to Enhance Diversity in the Biomedical Research Workforce	Webinars on NIH Application Submission and Review (R15, Fs, SBIR/STTR & R01)
Genome Advance of the Month	NIH Grants Examine How Genomic Information Can Affect Patients' Health	Media Availability
Exploring Harmful Interactions Between Artificial Sweeteners and Gut Microbiota	Genomics Database Gets a Patient Portal	TCGA Study Improves Understanding of Genetic Drivers of Thyroid Cancer
Genomics On Air		Researchers Uncover New Evidence Revealing Molecular Paths to Autism
Conversations on Health Care®: Eric Green		

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