Future Opportunities for Genome Sequencing and Beyond

A Planning Workshop for the National Human Genome Research Institute

July 28 and 29, 2014

NIH National Human Genome Research Institute

1. Welcome
2. Agenda Rationale
3. Agenda Walk-Through
4. Acknowledgements
5. Advice about Advice
6. Logistics

Rationale: Why now?

Genomic Science is Changing

- **Technology**
- **Availability of “infrastructure” including data and analysis tools**
- **Community**
- **Clinical applications**

Different era

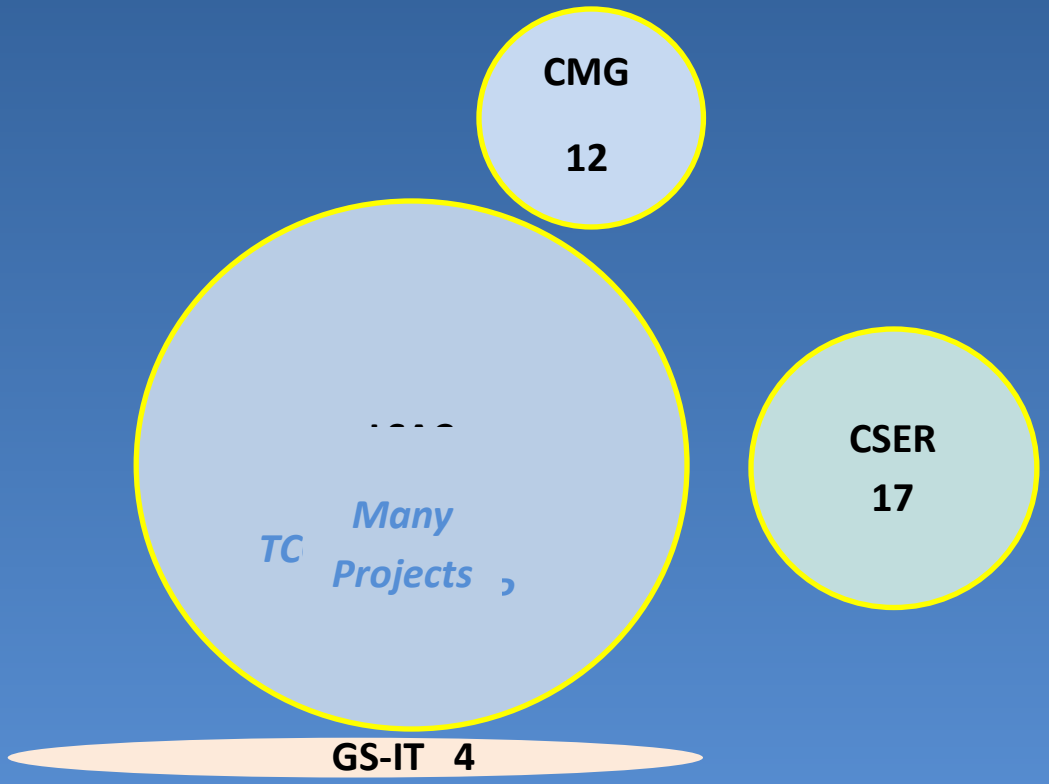
- **Federal budgets**
- **“Central planning” vs “Investigator initiated”**

Rationale: How?

- Involve the Community
- Acknowledge our history, but not be bound by it
- Agenda should not be about the existing program
- Agenda should include topics that are proximate to sequencing and could raise new scientific opportunities for exploring genomic problems at scale

Rationale: What?

Structure of Genomes	Biology of Genomes	Biology of Disease	Science of Medicine	Effectiveness of Healthcare



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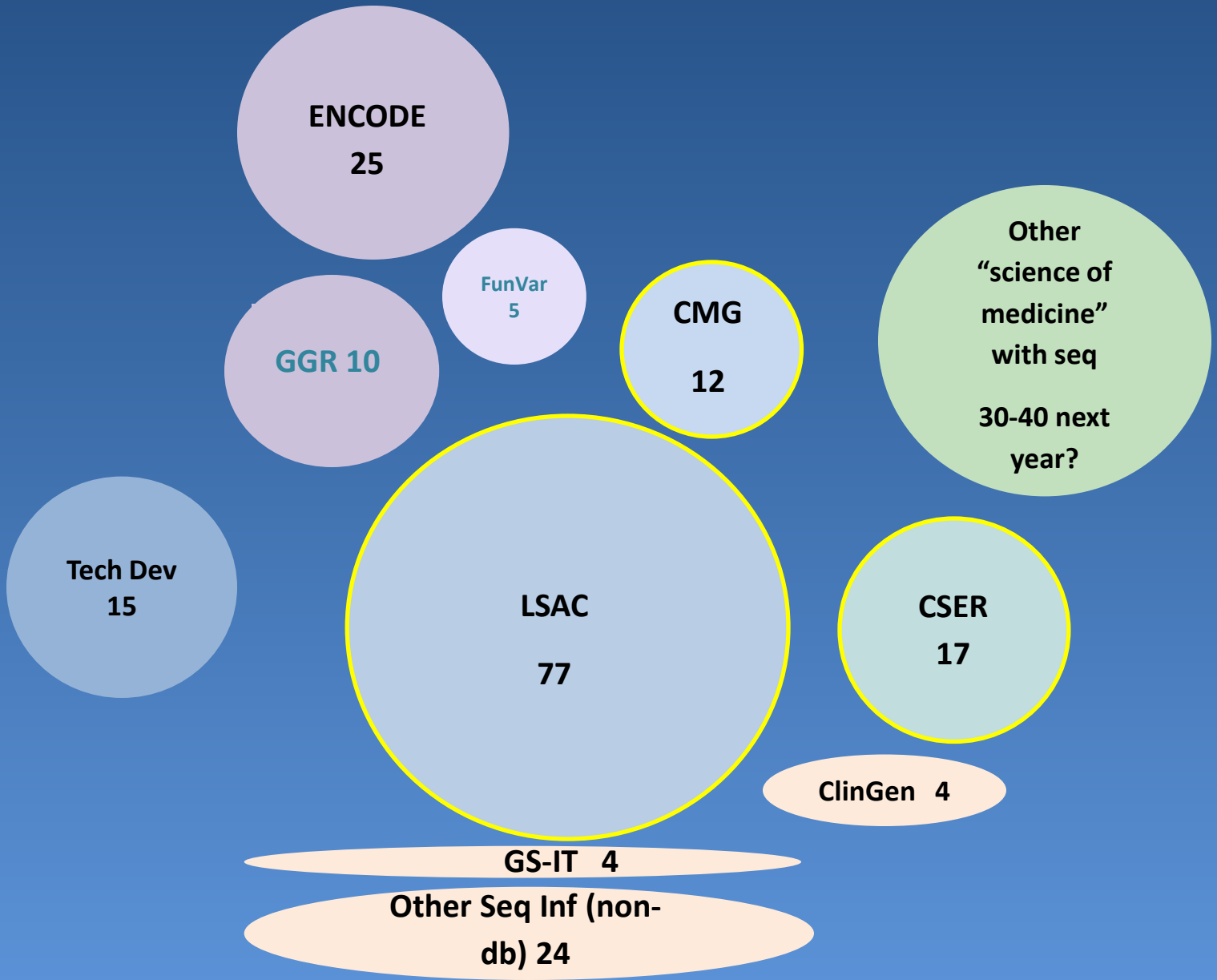

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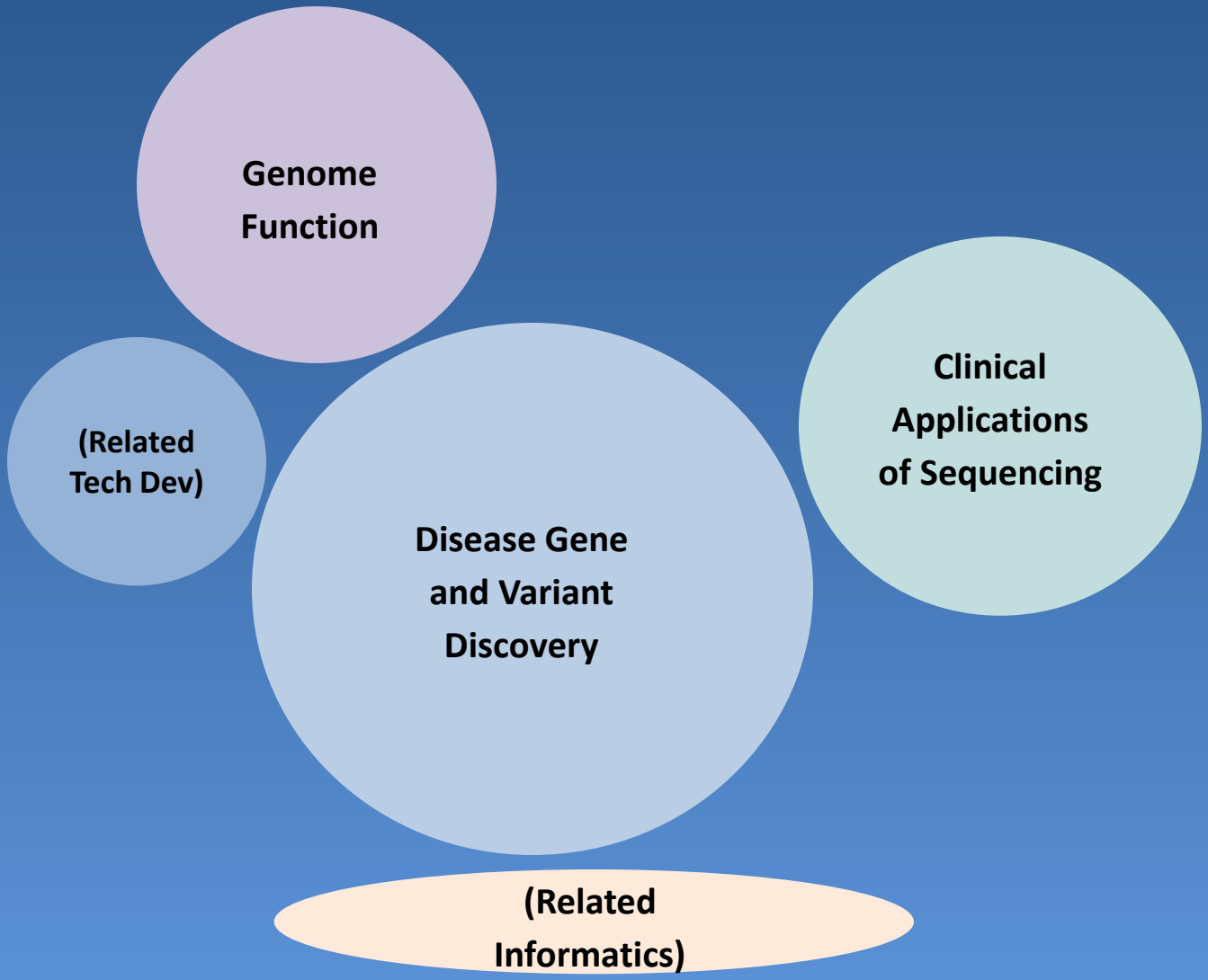


Another "What"

What can (or should) be done "at scale"?

- **Explicit part of workshop: opportunities that can only (or best) be addressed at scale.**

Scaled efforts have two kinds of deliverables:

- **Answers to the scientific questions that require scale to address**
- **High-quality comprehensive resources; developed technologies, approaches, project designs, analysis methods, policies, file formats, etc.**

Agenda Walk-Through

Science

1. Talks: State of the science; Important questions

2. Breakouts: Four* topic discussions

3. “Challenge talks”: some examples of large scale projects that are not addressed in the current way NHGRI is thinking

4. Breakout reports

Implementation

5. “Program Elements”

Acknowledgements

National Advisory Council for Human Genome Research

Scientific Advisors to the Genome Sequencing Program

Workshop Agenda Committee: Ewan Birney, Eric Boerwinkle, Carlos Bustamante, Joe Ecker, Jim Evans, Bill Gelbart, Len Pennacchio

NHGRI Leadership: Larry Brody, Bettie Graham, Eric Green, Teri Manolio, Jeff Schloss, Mark Guyer*, Jane Peterson*

Shannon Biello, Deborah Colantuoni, Lucia Hindorff, Carolyn Hutter, Lu Wang, Elise Feingold, Mike Pazin, Mike Smith, Heidi Sofia, Chris Wellington, Kris Wetterstrand

About Advice

Logistics

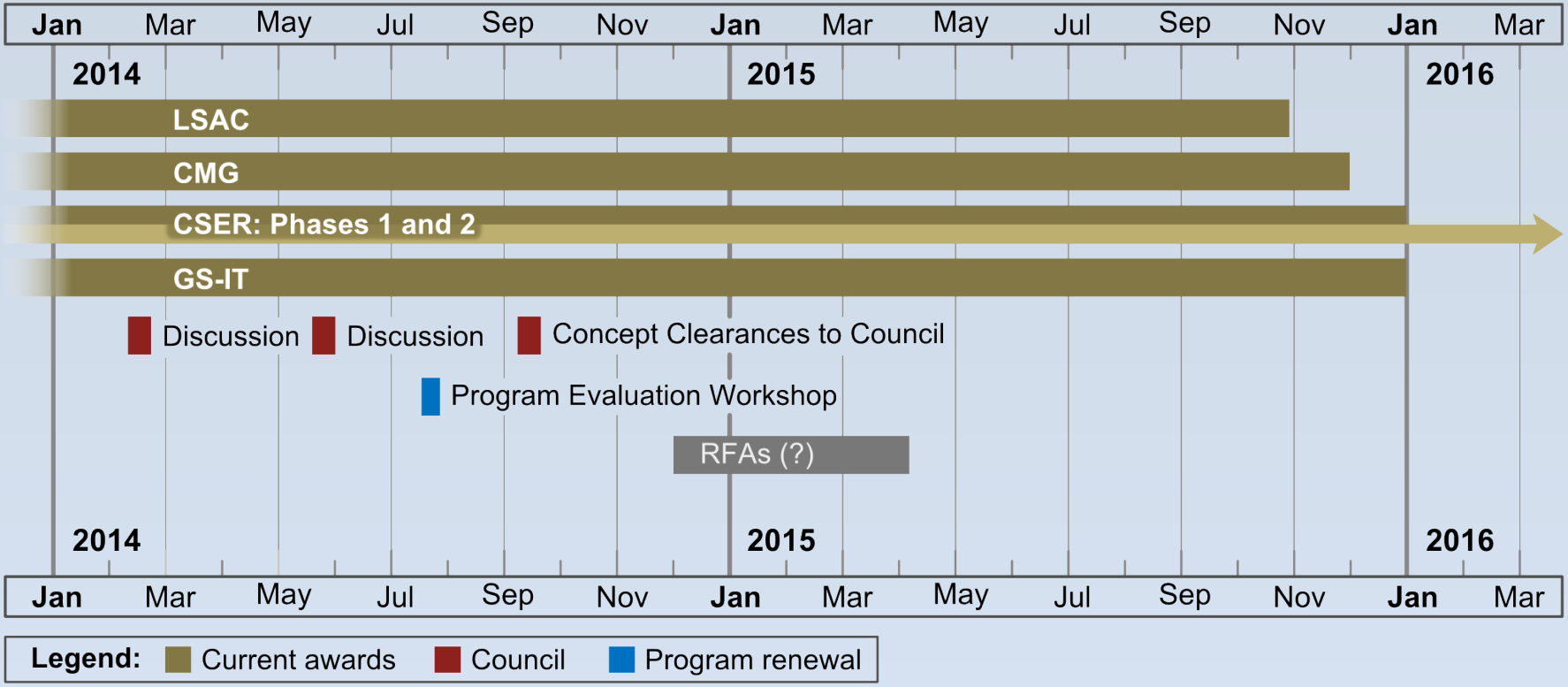
- Registration desk/Taxis/Re-imbursement vouchers
- Presentations
- Name badges/breakouts
- Food
- Hotel check out
- Free Wi-Fi
- Do not leave personal items/electronic devices in meeting room
- Workshop is being webcast (#GSPfuture)

END

Morning Speakers

- Michael Boehnke—University of Michigan
- Roderick McInnes—Lady Davis Institute for Medical Research
- Dan Roden—Vanderbilt University
- Joseph Ecker—HHMI and Salk Institute for Biological Studies

Timeline


Jan
Mar
May
Jul
Sep
Nov
Jan
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May
Jul
Sep
Nov
Jan
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2014
2015
2016
LSAC
CMG
CSER: Phases 1 and 2
GS-IT
Discussion
Discussion
Concept Clearances to Council
Program Evaluation Workshop
RFAs (?)
2014
2015
2016
Jan
Mar
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Jan
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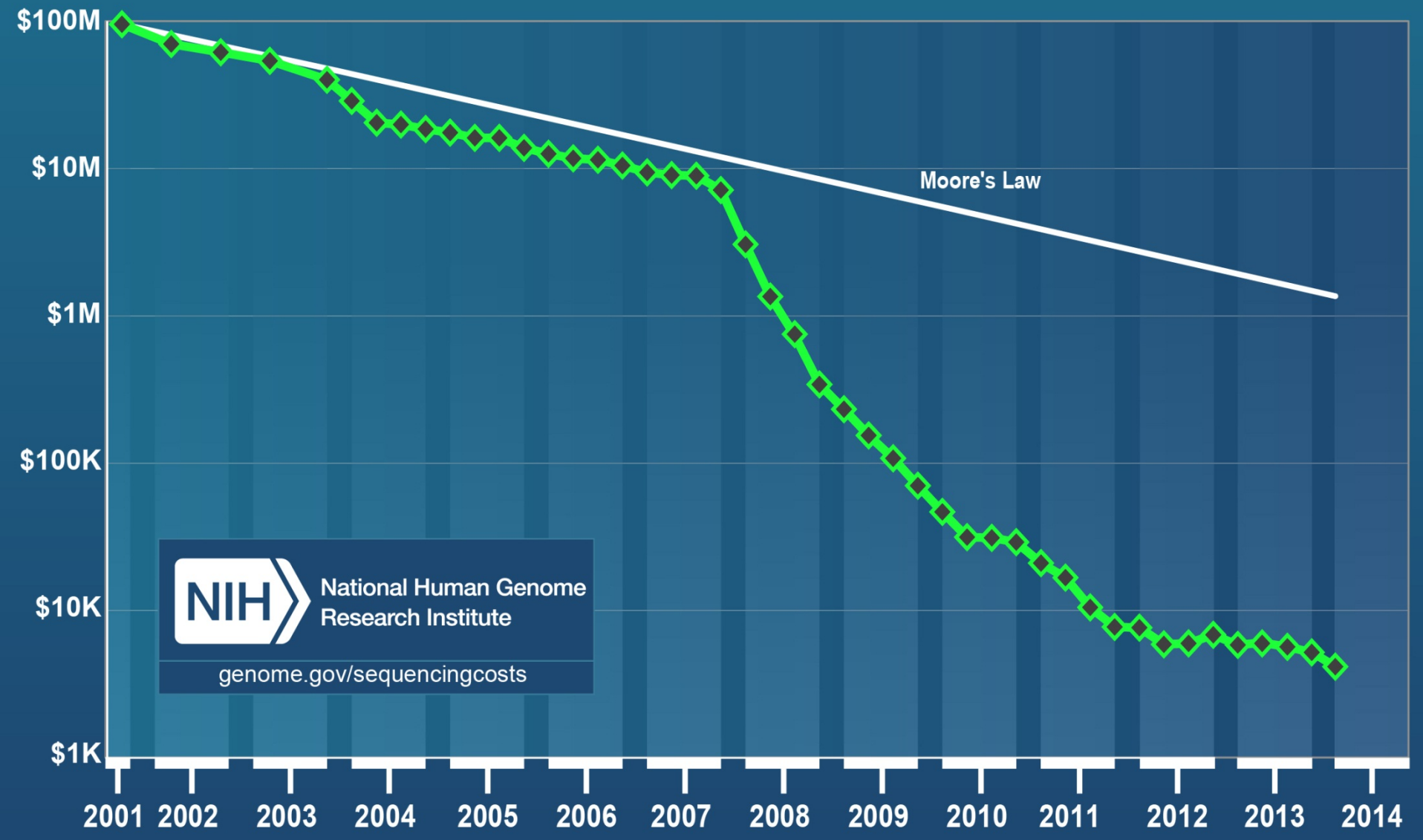
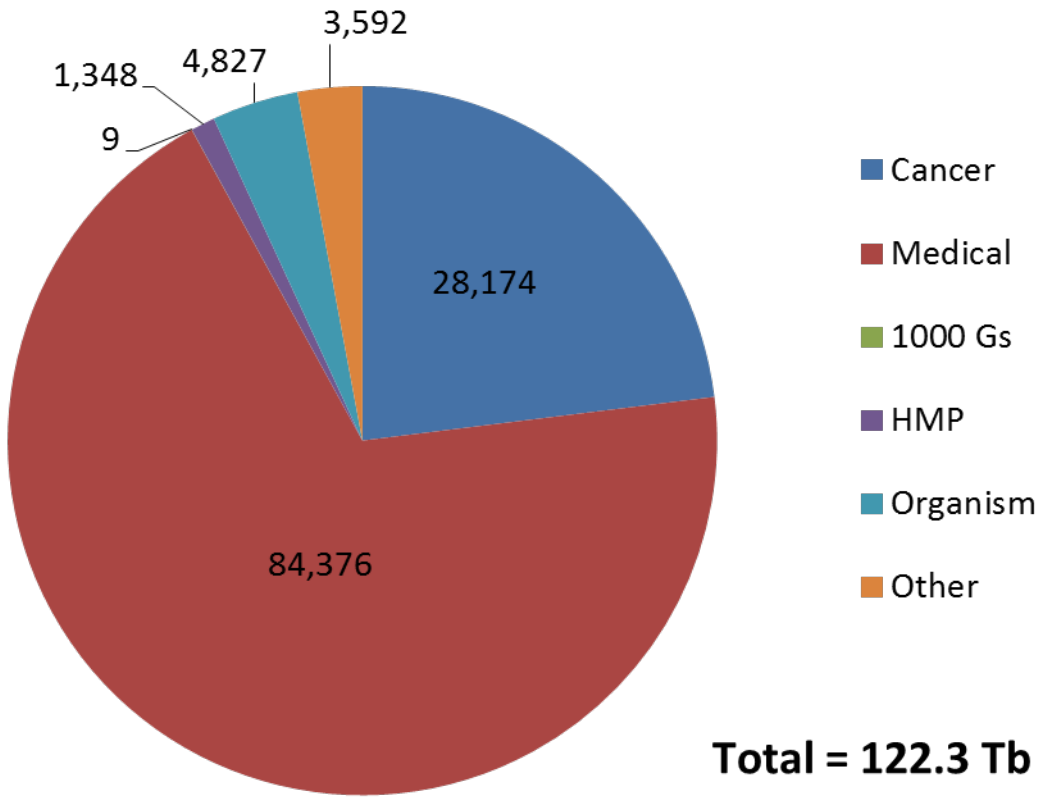
Sep
Nov
Jan
Mar
Legend:
Current awards
Council
Program renewal

Cost per Genome



Total Production (Gb) Y11Q2



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