

Director's Update

Francis S. Collins, M.D., Ph.D.
Director, National Institutes of Health

NIH Tribal Consultation Advisory Committee Meeting

February 26, 2016



NIH: Steward of Medical and Behavioral Research for the United States



“Science in pursuit of fundamental knowledge about the nature and behavior of living systems ... and the application of that knowledge to extend healthy life and reduce illness and disability.”



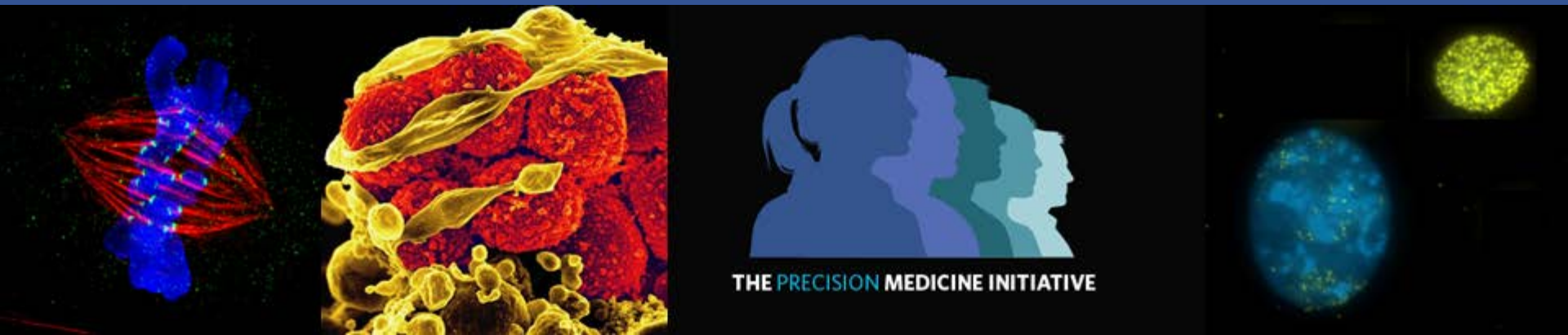
NIH: Stewardship, In Practice

- Conducts research in its own laboratories
- Supports research of non-Federal scientists
 - In universities, medical schools, hospitals, and research institutions throughout United States and overseas
- Helps train research investigators
- Fosters communication of medical information
- *148 NIH-supported researchers have become Nobel Laureates*



Exceptional Opportunities in Biomedical Research

- Unraveling Life's Mysteries through Basic Research
- Translating Discovery into Health
- New Initiatives: Precision Medicine Initiative® and the National Cancer “Moonshot”



The Human Microbiome Project

INSIGHT FEATURE

NATURE|Vol 449|18 October 2007|

nature

The Human Microbiome Project

Peter J. Turnbaugh, Ruth E. Ley, Micah Hamady, Claire M. Fraser-Liggett, Rob Knight & Jeffrey I. Gordon

ARTICLE

14 JUNE 2012 | VOL 486

A framework for human microbiome research

The Human Microbiome Project Consortium*

ARTICLE

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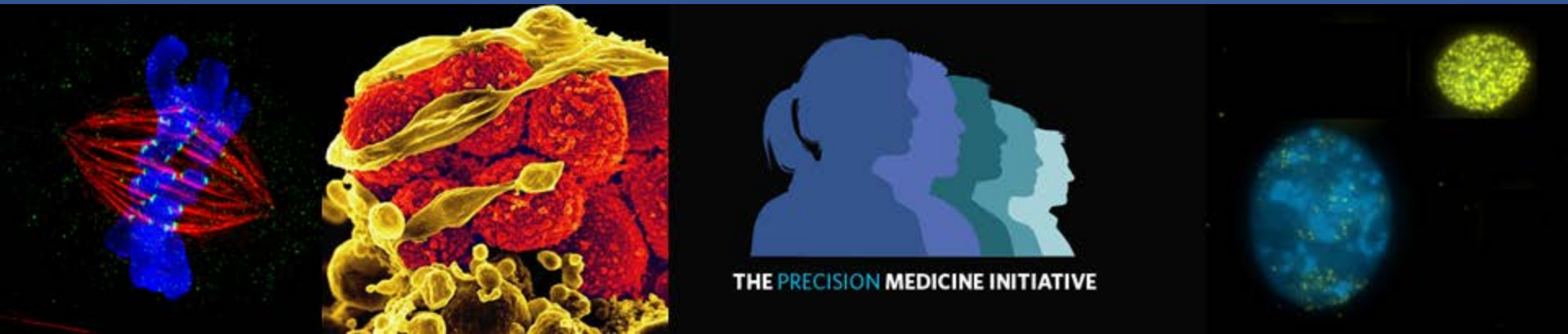
Structure, function and diversity of the healthy human microbiome

The Human Microbiome Project Consortium*



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“Family Spirit” Early Childhood Home-Visiting Intervention for Teen Mothers

- *Goal:* improve emotional, behavioral development of children; well-being of their teenage mothers, in at-risk AI communities
 - Developed in cooperation with AI communities
- *Process:* trained AI paraprofessionals taught curriculum to at risk young mothers (pregnancy to 36 months postpartum)
 - At their homes, involving their families
 - Using cultural assets-based format, activities
- *Participants:* mean age, 18.1 years
 - 3% married
 - 32% elevated depression scores
 - Lifetime drug use: 84% alcohol, 79% marijuana, 28% meth



Family Spirit Home Visiting Program

SCHOLARS



**DEANA M. (WAGNER)
AROUND HIM**

Cherokee Nation of Oklahoma

The lessons I've learned
throughout my personal, work,
and academic experiences have
fostered a...



NIH DIRECTOR'S BLOG

LabTV: Curious About Improving American Indian Health

Posted on November 24, 2015 by Dr. Francis Collins



Family Spirit: Outcomes

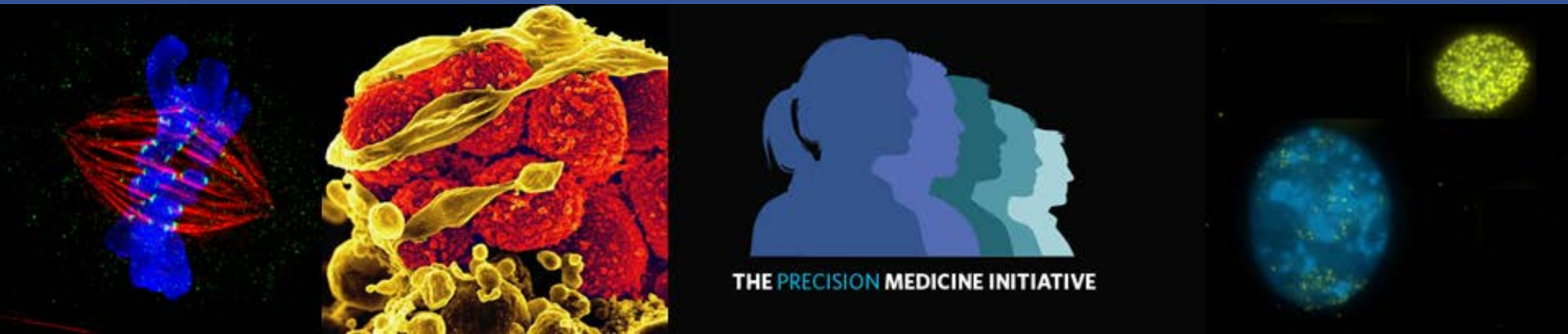
- In a trial versus mothers receiving upgraded pediatric care alone, participants showed*
 - *Parenting*: increased knowledge, self-efficacy; reduced stress
 - *Mothers*: decreased depression, substance use; fewer risky behaviors
 - *Children*: improved developmental outcomes
- Achieved highest participant retention, outstanding evaluations
- Now a model, active in
 - 67 tribal communities (14 states)
 - 2 new non-Native communities:
 - Chicago, IL
 - St. Louis, MO



*After 36 months

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Precision Medicine Initiative® (PMI) Cohort

Enrolling One Million or More U.S. Volunteers





Engaged Participants



EHRs



Technologies



Genomics



Data Science

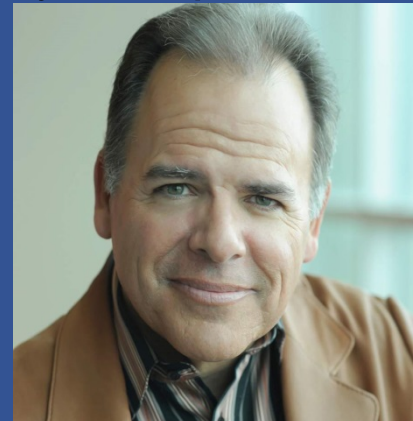
Assembling the PMI Research Cohort

- One million or more volunteers
 - Broadly reflect the diversity of the U.S. (including all ages, health statuses, areas)
 - Strong focus on underrepresented groups
- Longitudinal cohort with continuing interactions
 - Collect EHR data, provide biospecimen(s) and survey, complete baseline exam
- Two methods of recruitment
 - Direct volunteers
 - Anyone can sign up
 - Healthcare provider organizations (incl. FQHCs)
 - Consider diversity of HPO participants, robustness of EHR, patient follow-up



Assembling the PMI Research Cohort

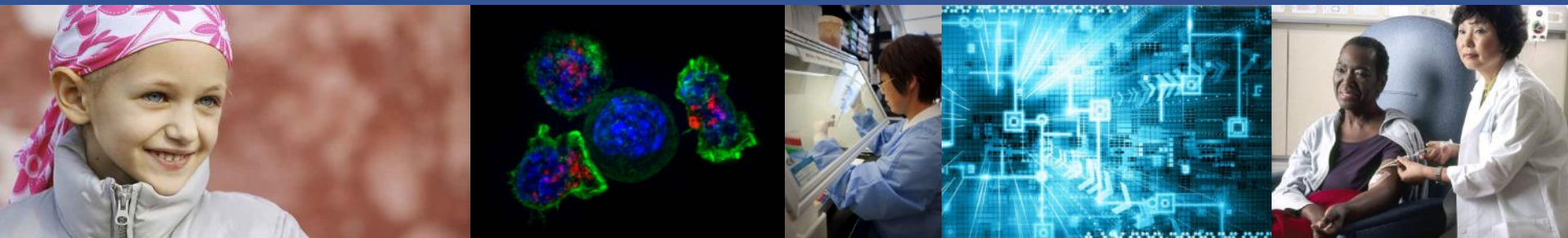
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PMI Working Group included Spero M. Manson (Pembina Chippewa),
University of Colorado Denver's Anschutz Medical Center

National Cancer “Moonshot”

- Multi-year cancer initiative, led by the Vice President
- Will accelerate research on new approaches for cancer prevention, screening, diagnosis, treatment:
 - Cancer Vaccines
 - Early Cancer Detection
 - Single-Cell Genomic Analysis
 - Cancer Immunotherapy
 - Pediatric Cancer
 - Data Sharing
 - Exceptional Opportunities Fund



“I have seen that in any great undertaking it is not enough for a man to depend simply upon himself.”

– Lone Man (Isna-la-wica) Teton Sioux



NIH... Turning Discovery Into Health

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