# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**WASHINGTON, D.C. 20549**

# FORM 8-K

**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): April 17, 2023**

# 23andMe Holding Co.

**(Exact name of Registrant as Specified in Its Charter)**

| **Delaware** | **001-39587** | **87-1240344** |
|---|---|---|
| **(State or Other Jurisdiction of Incorporation)** | **(Commission File Number)** | **(IRS Employer Identification No.)** |

**349 Oyster Point Boulevard**
**South San Francisco, California 94080**
**(Address of principal executive offices, including zip code)**

**Registrant's telephone number, including area code: (650) 938-6300**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Securities registered pursuant to Section 12(b) of the Act:**

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| Class A Common Stock, $0.0001 par value per share | ME | The Nasdaq Global Select Market |

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

**Item 7.01. Regulation FD Disclosure.**

On April 17, 2023, 23andMe Holding Co. posted the presentation attached as Exhibit 99.1 to this Current Report on Form 8-K to its Investor Relations website at investors.23andme.com, which information is incorporated herein by reference.

The information in this report furnished pursuant to Item 7.01, including Exhibit 99.1 attached hereto, shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section. It shall not be deemed to be incorporated by reference into any of the Company's filings under the Exchange Act or the Securities Act of 1933, as amended, whether made before or after the date hereof and regardless of any general incorporation language in such filings, except to the extent expressly set forth by specific reference in such a filing.

The website address set forth above is included as an inactive textual reference only. The information contained on the website referenced herein is not incorporated into this Current Report on Form 8-K.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

| Exhibit No. | Description of Exhibit |
|---|---|
| 99.1 | Investor Presentation |
| 104 | Cover Page Interactive Data File (embedded within Inline XBRL document) |

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

**23ANDME HOLDING CO.**

Date: April 17, 2023

By: /s/ Joseph Selsavage

Name: Joseph Selsavage
Interim Chief Financial and Accounting Officer


# Investor Presentation

# Disclaimer

### Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding the future performance of 23andMe's businesses in consumer genetics and therapeutics and the growth and potential of its proprietary research platform. All statements, other than statements of historical fact, included or incorporated in this presentation, including statements regarding 23andMe's strategy, financial position, funding for continued operations, cash reserves, projected costs, plans, and objectives of management, are forward-looking statements. The words "believes," "anticipates," "estimates," "plans," "expects," "intends," "may," "could," "should," "potential," "likely," "projects," "continue," "will," "schedule," and "would" or, in each case, their negative or other variations or comparable terminology, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements are predictions based on 23andMe's current expectations and projections about future events and various assumptions. 23andMe cannot guarantee that it will actually achieve the plans, intentions, or expectations disclosed in its forward-looking statements and you should not place undue reliance on 23andMe's forward-looking statements. The forward-looking statements contained herein are also subject generally to other risks and uncertainties that are described from time to time in the Company's filings with the Securities and Exchange Commission, including under Item 1A, "Risk Factors" in the Company's most recent Annual Report on Form 10-K, as filed with the Securities and Exchange Commission, and as revised and updated by our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. These forward-looking statements involve a number of risks, uncertainties (many of which are beyond the control of 23andMe), or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. Investors are cautioned not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made. Except as required by law, 23andMe does not undertake any obligation to update or revise any forward-looking statements whether as a result of new information, future events, or otherwise.

### Use of Non-GAAP Financial Measures

To supplement the 23andMe's unaudited condensed consolidated statements of operations and unaudited condensed consolidated balance sheets, which are prepared in conformity with generally accepted accounting principles in the United States of America ("GAAP"), this presentation also includes references to Adjusted EBITDA, which is a non-GAAP financial measure that 23andMe defines as net income (loss) before net interest income (expense), net other income (expense), changes in fair value of warrant liabilities, income tax benefit, depreciation and amortization of fixed assets, amortization of internal use software, amortization of acquired intangible assets, goodwill and intangible assets impairment, non-cash stock-based compensation expense, acquisition-related costs, and expenses related to restructuring and other charges, if applicable, for the period. 23andMe has provided a reconciliation of net loss, the most directly comparable GAAP financial measure, to Adjusted EBITDA at the end of this presentation.

Adjusted EBITDA is a key measure used by 23andMe's management and the board of directors to understand and evaluate operating performance and trends, to prepare and approve 23andMe's annual budget and to develop short- and long-term operating plans. 23andMe provides Adjusted EBITDA because 23andMe believes it is frequently used by analysts, investors and other interested parties to evaluate companies in its industry and it facilitates comparisons on a consistent basis across reporting periods. Further, 23andMe believes it is helpful in highlighting trends in its operating results because it excludes items that are not indicative of 23andMe's core operating performance. In particular, 23andMe believes that the exclusion of the items eliminated in calculating Adjusted EBITDA provides useful measures for period-to-period comparisons of 23andMe's business. Accordingly, 23andMe believes that Adjusted EBITDA provides useful information in understanding and evaluating operating results in the same manner as 23andMe's management and board of directors.

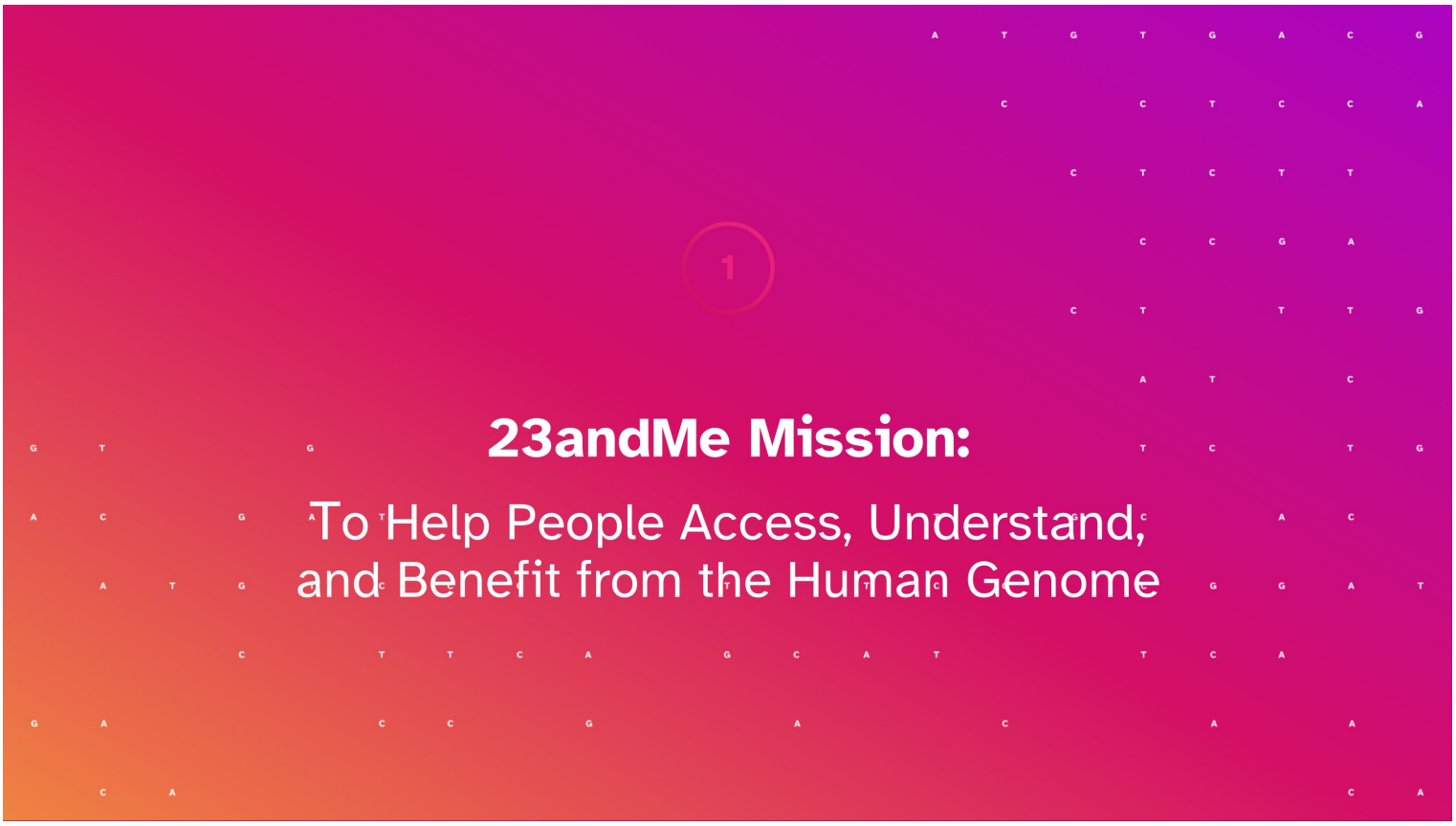
In evaluating Adjusted EBITDA, you should be aware that in the future 23andMe will incur expenses similar to the adjustments in this presentation. 23andMe's presentation of Adjusted EBITDA should not be construed as an inference that future results will be unaffected by these expenses or any unusual or non-recurring items. Adjusted EBITDA should not be considered in isolation of, or as an alternative to, measures prepared in accordance with GAAP. Other companies, including companies in the same industry, may calculate similarly-titled non-GAAP financial measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of Adjusted EBITDA as a tool for comparison. There are a number of limitations related to the use of these non-GAAP financial measures rather than net loss, which is the most directly comparable financial measure calculated in accordance with GAAP. Some of the limitations of Adjusted EBITDA include (i) Adjusted EBITDA does not properly reflect capital commitments to be paid in the future, and (ii) although depreciation and amortization are non-cash charges, the underlying assets may need to be replaced and Adjusted EBITDA does not reflect these capital expenditures. When evaluating 23andMe's performance, you should consider Adjusted EBITDA alongside other financial performance measures, including net loss and other GAAP results.

### Intellectual Property

All rights to the trademarks, copyrights, logos and other intellectual property listed herein belong to their respective owners 23andMe's use thereof does not imply an affiliation with, or endorsement by the owners of such trademarks, copyrights, logos and other intellectual property. Solely for convenience, trademarks and trade names referred to in this Presentation may appear with the ® or ™ symbols, but such references are not intended to indicate, in any way, that such names and logos are trademarks or registered trademarks of 23andMe.

### Industry and Market Data

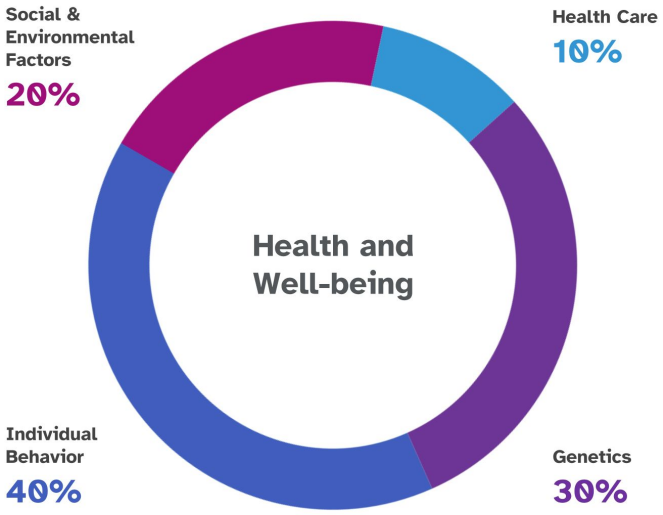
This Presentation relies on and refers to certain information and statistics based on 23andMe's management's estimates, and/or obtained from third party sources which it believes to be reliable. 23andMe has not independently verified the accuracy or completeness of any such third party information.


23andMe Mission:
To Help People Access, Understand, and Benefit from the Human Genome

**The Problem:**
Today's Healthcare System Has Only a Small Impact on Our Health and Well Being

1. Schroeder, SA. (2007). We Can Do Better – Improving the Health of the American People. NEJM. 357:1221-8.

## Impact of Different Factors on Risk of Premature Death[1]



# Today's Healthcare System is Dysfunctional

*"Of course our system isn't about healthcare, it's about maximizing revenue for a whole bunch of different players that have nothing to do with what's good for patients."*

*Elisabeth Rosenthal (Editor-in-Chief, Kaiser Health News)*

**25%** [1]

U.S. healthcare spending is **waste**

**75%** [2]

Consumers wish their healthcare experience was **more personalized**

**-15** [3]

The Net Promoter Score (NPS) Americans gave the **pharmaceutical industry**

**<12%** [4]

**Probability of success** for a drug to be approved, taking ~10 years and costing $2.6B to develop

[1] JAMA, "Waste in the US Health Care System" (2019). [2] Redpoint Global / Dynata survey of over 1,000 U.S. consumers (2020). [3] Gallup, "Americans' Views of U.S. Business and Industry Sectors" (2020). [4] PhRMA, "Biopharmaceutical Research & Development: The Process Behind New Medicines" (2015).


2
23andMe
Revolutionizing the Diagnosis, Prevention and Treatment of Human Disease

# Unlocking the Genetic Code Creates the Opportunity to Revolutionize the Diagnosis, Prevention and Treatment of Human Disease

Cracking the code...

**A C G T**

...is a data problem,
a very big data problem

We are all **99.5%** genetically alike

**3 billion** base pairs long



23andMe®

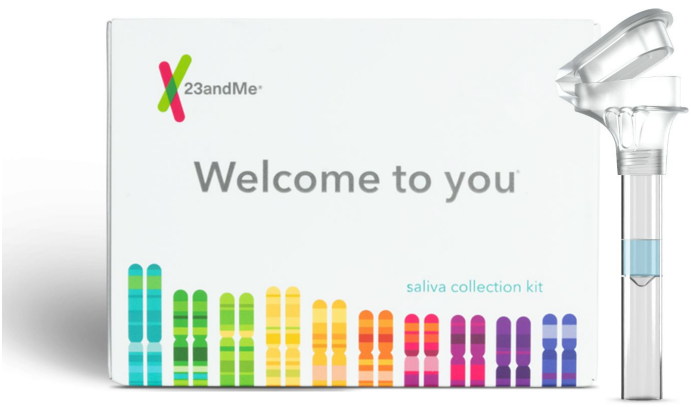
| | | |
|---|---|---|
| Media | » | YouTube |
| Commerce | » | amazon |
| Transportation | » | Uber |
| Hospitality | » | airbnb |
| Healthcare | » | 23andMe® |

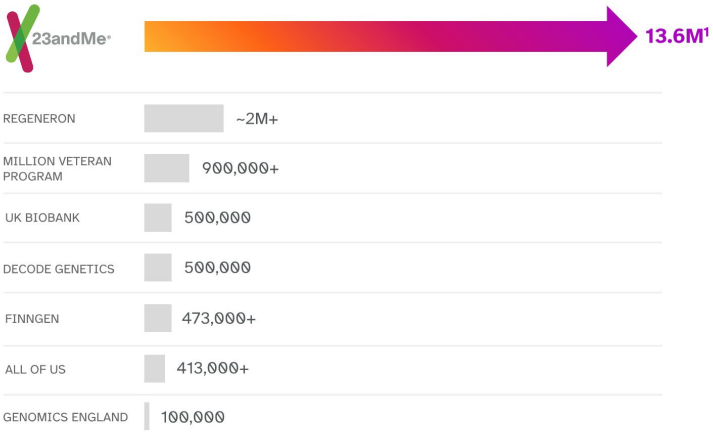
# Consumer Scale and Empowerment is the Key to Disrupting Healthcare

*"Healthcare cannot change from within, it will need an outside force to change it, and that force will be our customers."*

*Anne Wojcicki*

# The **Size and Scale** of 23andMe Enables **Rapid, Novel Discoveries**




1 Genotyped customers as of December 31, 2022.

# We Pioneered Digital DTC Healthcare to Empower Customers With Affordable, Direct Access

**8 FDA** Authorizations/ Clearances

[1] See FDA De Novo Authorizations 140044, 160026, 170046 and 180028 and FDA 510K Clearances K182784 and K193492.

**TIME MAGAZINE** INVENTION OF THE YEAR

## 1. The Retail DNA Test

By Anita Hamilton | Wednesday, Oct. 29, 2008

**Best Inventions of 2008**

*From a genetic testing service to an invisibility cloak to an ingenious public bike system to the world's first moving skyscraper — here are TIME's picks for the top innovations of 2008*

**Proven accuracy (99% NPV/PPV) and accessibility[1]**

- **2015** Carrier Status (inherited conditions)
- **2016** GHR (genetic health risk)
- **2017** BRCA (breast and ovarian cancer)
- **2018** PGt (pharmacogenetic metabolism)
- **2019** MUTYH (colorectal cancer)
- **2020** PGt (pharmacogenetic drug response)
- **2022** HOXB13 (prostate cancer)
- **2022** Simvastatin (cholesterol PGt)

**>90%**

of 23andMe+ members receive a report with meaningful genetic results

**18,000+**

Customers with an increased risk for Chronic Kidney Disease

**8,000+**

Customers with a tested BRCA1 / BRCA2 variant

**12,000+**

Customers with Hypercholesterolemia (FH) variants

Note: Estimates based on prevalence of variants in 23andMe's Database as of September 30, 2022.

# Providing Customers With Key, Actionable Insights

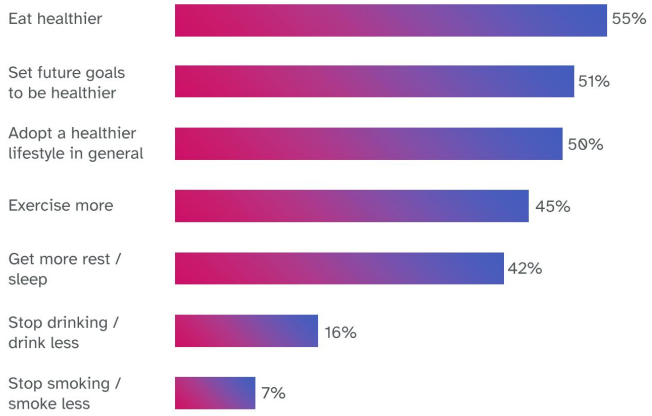
*"Like me, there are many women who have slipped through the cracks of our current medical screening system, either because they don't have a family history of breast or ovarian cancer. Or they do not know that they have Ashkenazi Jewish ancestry. In my case, even though I know I have Ashkenazi ancestry, that wasn't enough to prompt my doctor to consider screening. So there are many women walking around with this risk, who, like me, would have never known of their own risk but for this test from 23andMe."*

*23andMe customer who discovered she had a BRCA1 mutation*

# Genetic Data Helps Drive Behavior Change

**76%**

Report taking a positive health action[1]

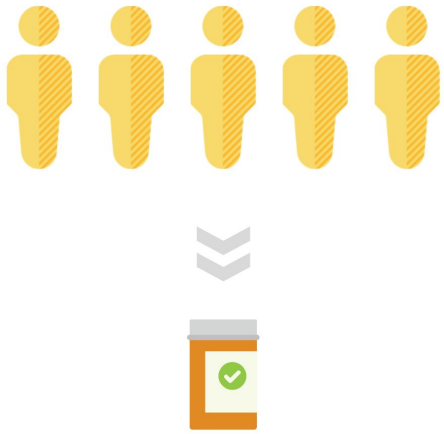



[1] Based on 2019 online survey, designed by 23andMe and M/A/R/C Research, of 1,046 23andMe Health + Ancestry customers.

# Opportunity for Personalized Healthcare at Scale

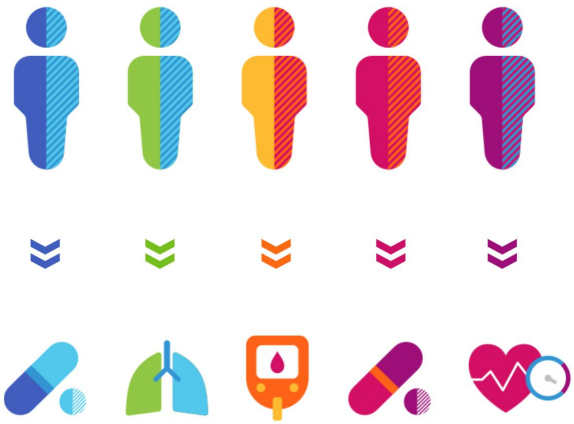
**Practice of Medicine Today**

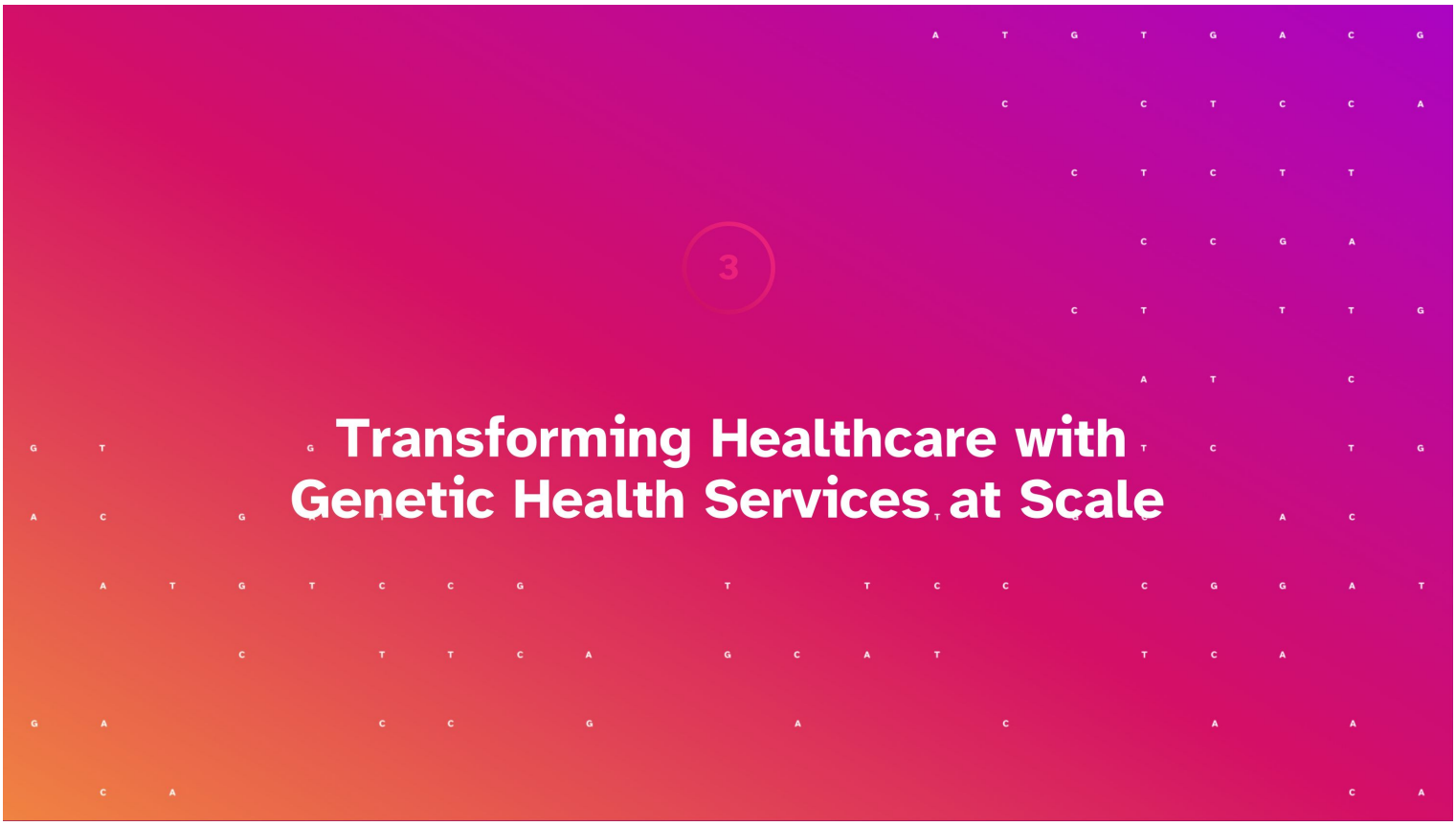
**Reactive** – no customization until symptomatic



23andMe+®

**Proactive** – truly individualized from the very beginning




3
Transforming Healthcare with Genetic Health Services at Scale

# Problems we are solving

1

### Prevention is not a focus

The majority of people living in the United States don't think about health until it's too late.

2

### Health is not accessible

Healthcare is elusive to many people and it is often gated by affordability, geography, cultural affinity, and overly complex systems.

3

### Health is not personal

Most healthcare today takes a generic approach, often missing the full context to people's lives and failing to deliver a path to their wellbeing.

# What are **Genetic Health Services?**

## Health Predispositions

Identify risks, implement targeted prevention, monitoring, and management


## Wellness

Targeted to help you feel your best

## Pharmacogenetics

Therapeutics that work best for you

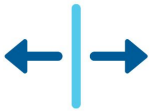
# Future of 23andMe:
# **Fully Integrated** Genetic Health Services


Genetic Health Evaluation

Telehealth Services

Lab Tests

Precision Prescribing Using Pharmacogenetics



Long-term Engagement

All connected within a single technology platform

Available in all

**50 states**

# First Step: Genetic Health Evaluation

A dynamic, longitudinal service that combines **your health data** (genetic, medical, lifestyle, environmental, wearables, etc.) with your interests and goals, and delivers a **personalized health & wellness plan** with interesting, engaging, recommendations.

# Next Step: Implementing a **Genetically Informed**, **Personalized Health** & **Wellness Plan**

Consultation with a clinician to develop a personalized health & wellness plan that could include additional labs, treatment options and lifestyle changes

# 23andMe Personal Genome Service (PGS)

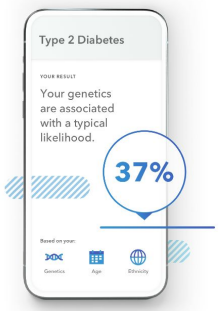
The First and Only Multi-Disease DTC Personal Genome Service that Includes FDA-Authorized Reports and Provides Personalized Genetic Insights and Tools

**8 FDA** Authorizations/ Clearances

## Health Predispositions[1]

**30+**

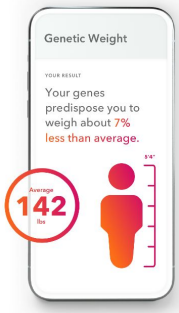
Including:
Type 2 Diabetes (Powered by 23andMe Research)
Coronary Artery Disease 23andMe+
Uterine Fibroids 23andMe+
Migraine 23andMe+
MUTYH-Associated Polyposis
BRCA1/BRCA2 (selected variants)




## Wellness[2]

**10**

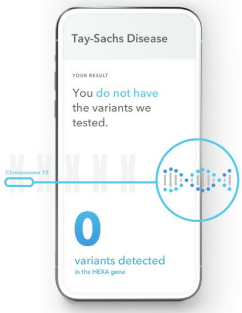
Including:
Muscle Composition
Genetic Weight
Alcohol Flush Reaction
Saturated Fat and Weight
Sleep Movement
Dog & Cat Allergies 23andMe+




## Carrier Status

**40+**

Including:
Cystic Fibrosis
Sickle Cell Anemia
Familial Hyperinsulinism (ABCC8-Related)
Tay-Sachs Disease
Glycogen Storage Disease (Type 1a)



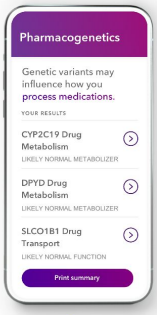

## Pharmacogenetics

**3**

23andMe+

Including:
SLCO1B1 Drug Transport
CYP2C19 Drug Metabolism
- e.g., citalopram and clopidogrel

DPYD Drug Metabolism




1. Includes FDA Authorized Genetic Health Risk Reports and Wellness Reports for Genetic Likelihood Powered by 23andMe Research.
2. Wellness information does not require FDA Authorization.



23andMe®

# Unique to 23andMe: FDA-Authorized Pharmacogenetics Reports

**3 reports** and **3 medication insights** that look at genetic variants that influence how a person responds or processes certain medications (FDA-cleared)

| | |
|---|---|
| **SLCO1B1** Drug Transport | Statin-induced myopathy |
| **CYP2C19** Drug Metabolism | Clopidogrel, citalopram response |
| **DPYD** Drug Metabolism | Fluoropyrimidine toxicity |

# Long-term Engagement with Customers

**Educate**

General education about health risks and preventative measures in context of overall health

**Passive Data Monitoring**

Monitor health data and recommend earlier testing based on risk assessment

**Follow-up Testing**

Schedule follow-up labs as needed based on risks identified in genetic health evaluation

**Automated Insights**

Tailored recommendations based on individual health data

**Clinician Consultation**

Option to consult with Lemonaid clinician as needed

**Cascade Testing**

Potential for education & testing of family members as needed

# Bold predictions for human genomics by 2030

> The regular use of **genomic information** will have transitioned from boutique to mainstream in all clinical settings, making genomic testing **as routine as complete blood counts**."

**Strategic vision for improving human health at the forefront of genomics**

National Human Genome Research Institute

*Nature*, October 28, 2020


4
Transforming the Development of Therapeutics
With the 23andMe Database

# Opportunities to collaborate with 23andMe

Target - Drug Discovery - Drug Development Collaborations

Human genetics-driven target discovery

Clinical trial recruitment based on genetics

Target Discovery | Target val | Lead opt | IND-enabling | Phase 1 | Phase 2 | Phase 3 | Marketing

Deeply phenotyped cohorts (e.g., Parkinson's)

Genetics-driven disease awareness, cascade screening, and confirmatory testing

Portfolio validation

# An Experienced Biopharma Leadership Team

100+ years of experience:
Genentech, Amgen, Gilead, GSK Loxo, Achaogen, ProNeurotech, National Cancer Institute, Albert Einstein College of Medicine

From Left to Right:

| | |
|---|---|
| **Adam Auton** | Vice President, Human Genetics |
| **Monica Viziano** | Vice President, Portfolio Strategy and AM |
| **Jennifer Low** | Head of Therapeutics Development |
| **Bill Richards** | Vice President, Target and Drug Discovery |
| **Kenneth Hillan** | Chief Therapeutics Officer |
| **Joe Arron** | Chief Scientific Officer, Therapeutics |

https://www.23andme.com/therapeutics/

# 23andMe Therapeutics Core Capabilities

## Unique 23andMe genetic and phenotypic data platform and insights

- Genetics based drug discovery and development
- Ability to recontact customers and to conduct real-time research at scale
- Advanced statistical and computational modeling

## Fully operational biopharma capabilities

- In vitro and in vivo translational research laboratories
- Antibody and protein engineering
- CMC, analytics, bio-analytics and quality assurance
- Non-clinical and early phase clinical development

## Track record of successful target and drug candidate discovery; an experienced drug development team

- Ability to move quickly from target validation to the clinic
- Extensive experience in portfolio and alliance management
- Focus on delivering value for our partners

Potential to use Genetics to More Efficiently Develop Novel Therapeutics by "**Power**, **Need**, and **Speed**"

1. IND = Investigational New Drug Application. fdareview.org. "The Drug Development and Approval Process" (2020).
2. Probability of success for a drug to be approved is estimated to be <12%.
3. PhRMA, "Biopharmaceutical Research & Development: The Process Behind New Medicines" (2015).

# Drug Development is Inefficient




23andMe®

# Our Scale Enables Real-Time Research Across Multiple Disease Areas Including

(numbers below represent the number of research participants with the condition indicated)

| Example Phenotype | Number of Cases[1] |
|---|---|
| Asthma | 1.2M |
| Type 1 / Type 2 diabetes | 40k / 413k |
| Irritable Bowel Syndrome | 742k |
| Osteoarthritis | 857k |
| Solid Tumors | > 1M |
| Basal Cell | 412k |
| Squamous Cell | 222k |
| Melanoma | 127k |
| Breast | 119k |
| Colorectal | 25k |
| Thyroid | 27k |
| Hematologic Cancers | |
| NHL | 18k |
| Leukemia | 14k |
| Retinal Diseases | |
| AMD | 106k |
| Glaucoma | 193k |
| Rare Diseases | |
| Sarcoidosis | 8.9k |
| Idiopathic Pulmonary Fibrosis | 5k |

[1] As of December, 2022. [2] MedRXiv Sept. 7, 2020 (10.1101/2020.09.04.20188318). [3] Nature Genetics, 53, pages 801–808 (2021)

**> 1.4M**
COVID-19 study participants[1]

**750k**
Consumers participated in the COVID-19 study in the **first 90 days**

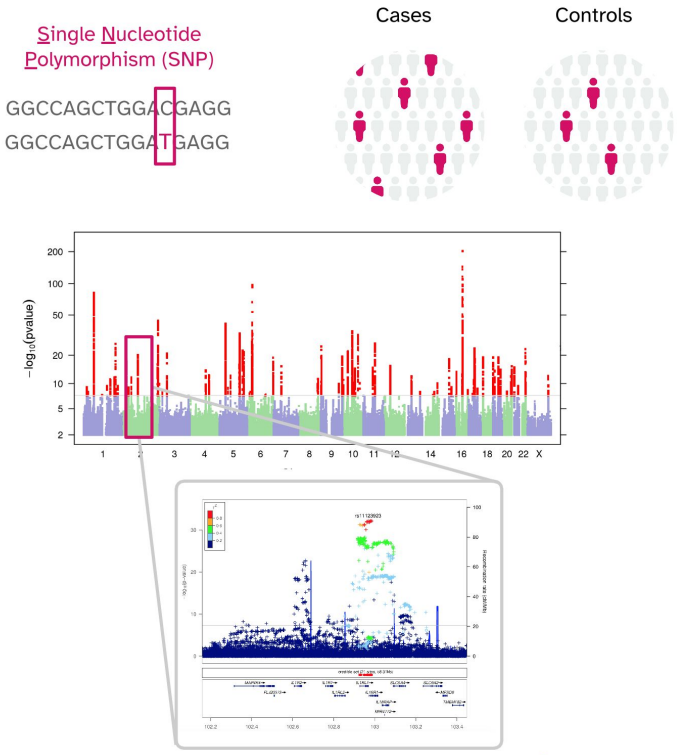
## COVID-19 Research

| | |
|---|---|
| **March 16 2020** | Kicked Off Study |
| **April 6 2020** | Launched Study |
| **June 8 2020** | Preliminary Findings |
| **Sept. 7 2020** | Posted Preprint Findings[2] |
| **April 22 2021** | Published in Journal[3] |

Re-contactable Customers Participate in Health Research

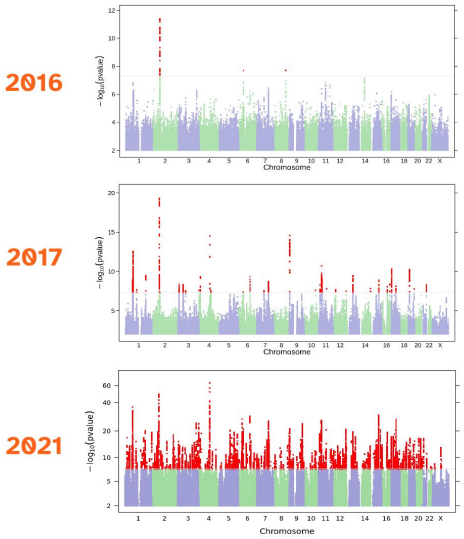
# Genome-Wide Association Studies (GWAS)

- GWAS is a statistical analysis of Single Nucleotide Polymorphisms (SNPs), looking to identify differences in frequency between disease cases and controls.
- SNPs linked with disease will be found at different frequencies in cases versus controls.
- Association is represented by the level of statistical significance (p-value) of the SNP frequency difference.
- SNPs can be tested across the genome and mapped to specific regions.

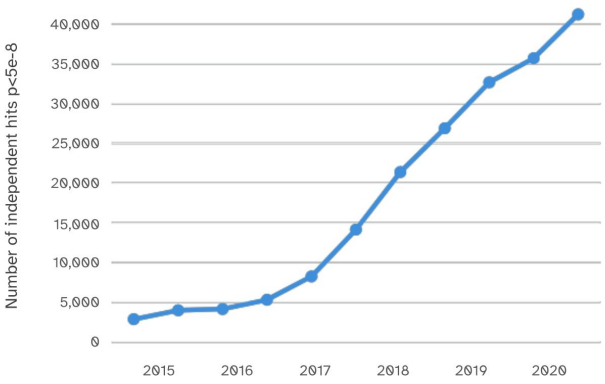


# Size and Scale Accelerate Target Discovery

**Example: Number of Osteoarthritis GWAS[1] hits dramatically increase as database grows**



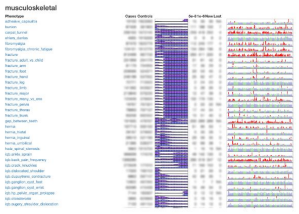

**New programs are identified through GWAS[1] hits, which increase as size of database grows**



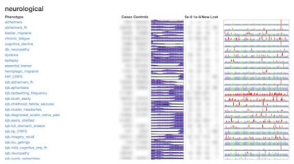

1 GWAS: Genome-Wide Association Study.

# Hundreds of Distinct Clinical Phenotypes Across Major and Rare Diseases

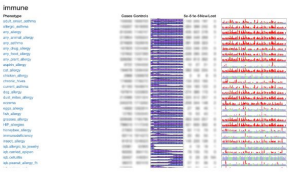
Orthopedic



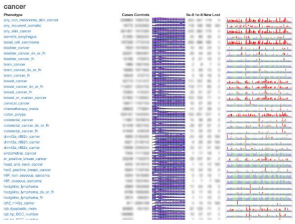
Neurology



Allergy

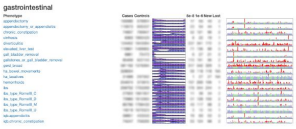


Cancer

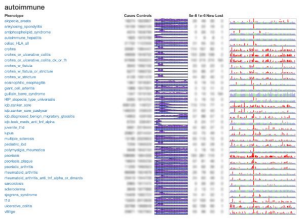


Cardiovascular

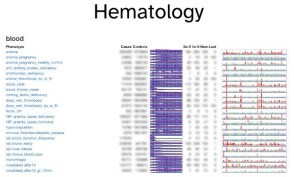
G.I.



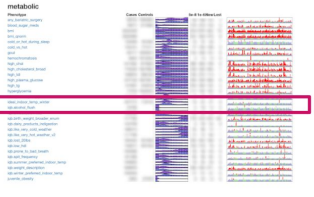
Autoimmunity



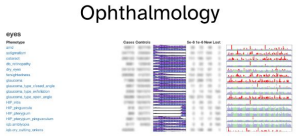
Hematology



Metabolic Disease

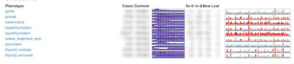


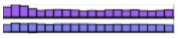
Ophthalmology



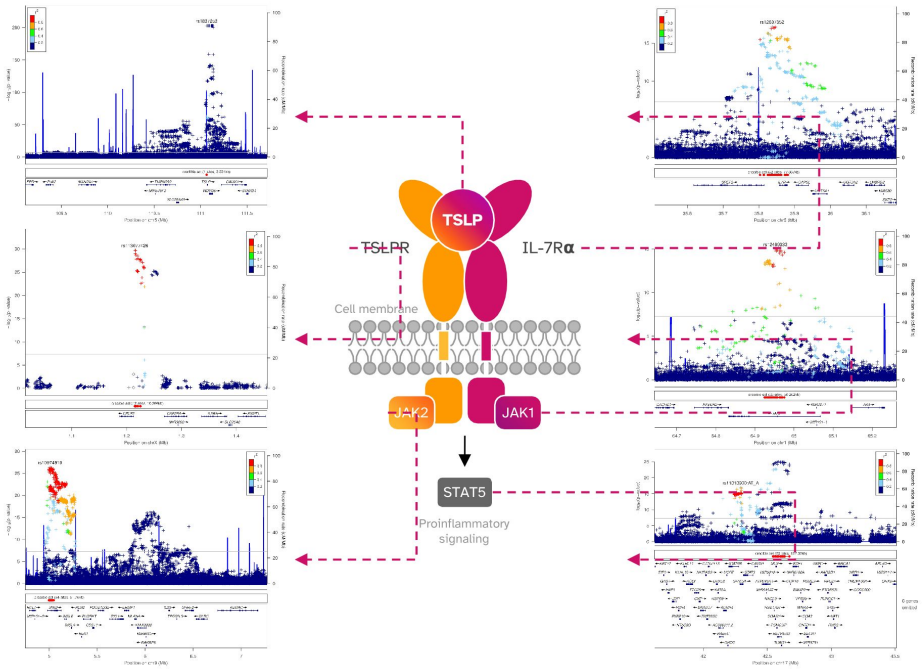
Infectious Disease

Endocrine



| Phenotype | Cases | Controls | | Hits | New | Lost | |
|---|---|---|---|---|---|---|---|
| NAFLD (Non-Alcoholic Fatty Liver Disease) | 48048 | 2517644 |  | 104 | 44 | 2 |  |

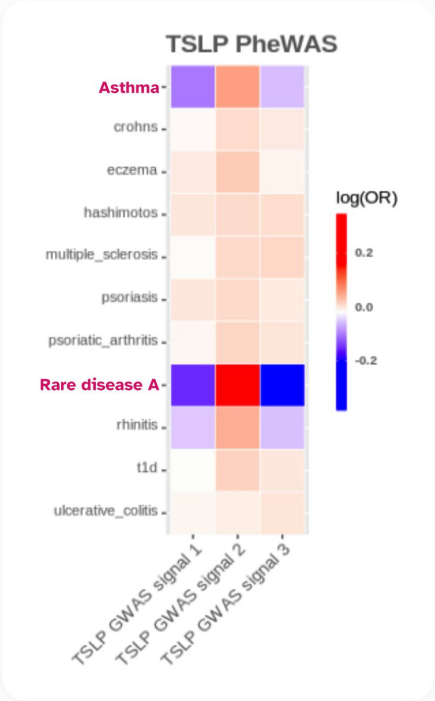
# Genetic Association of the TSLP Signalling Pathway With Asthma



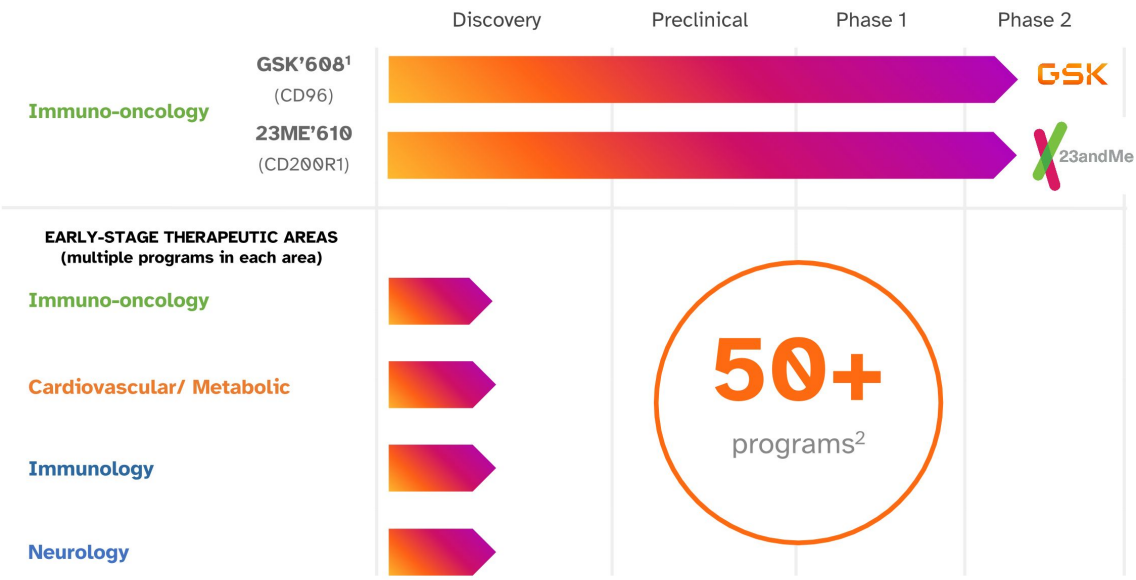

- TSLP is a well-known cytokine with a role in maintaining immune homeostasis and regulating inflammatory responses at mucosal barriers.
- The TSLP signaling pathway is an attractive therapeutic target. e.g. Tezepelumab, a TSLP-blocking monoclonal antibody for treatment of asthma.
- Our genetic data shows that multiple genes within the TSLP pathway associate strongly with asthma.

# Breadth of Phenotyping Provides Deeper Genetic Understanding Beyond Single Diseases

- PheWAS = Phenotype Wide Association Study
- Every SNP in the genome can be interrogated at >1,000 medically related phenotypes.
- Besides the role of a gene in a disease of interest, we can use genetics to learn potential indication expansions or possible unwanted toxicities.
- For TSLP, PheWAS indicates lack of effect in eczema but also highlights potential indication expansion in a rare disease.

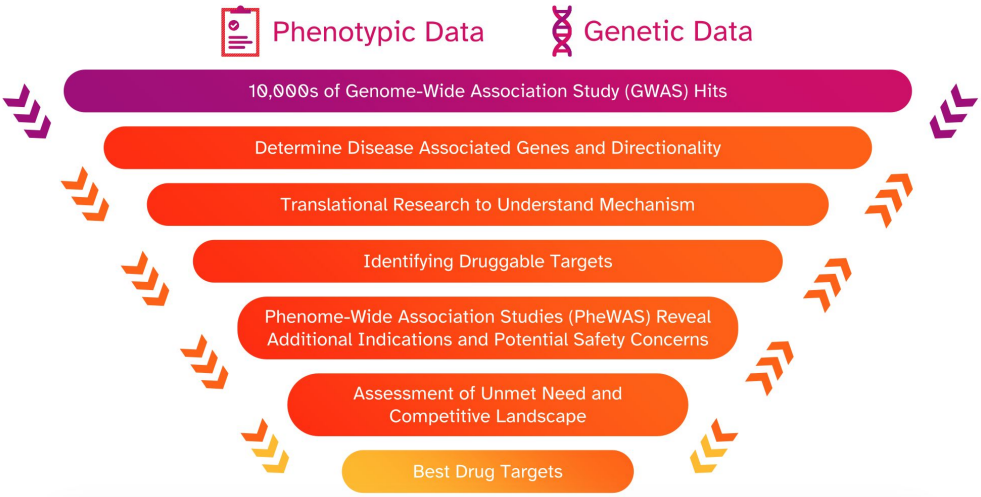


# A Research and Development Pipeline Covering Multiple Therapeutic Areas




1. GSK is solely responsible for the development of GSK6097608 (GSK'608) in later-stage clinical trials. Subject to its successful commercialization, 23andMe is eligible to earn tiered worldwide royalties up to the low double digits.
2. The 50+ programs in the combined therapeutic areas include 100% owned and royalty interest targets as well as those in collaborations. The majority of the programs are in collaboration with GSK. Note: As of March 31, 2022

# Systematic, Scalable Research Platform Yields Novel Drug Targets




Wet lab validated targets progress through standard stages of research toward the selection of preclinical lead molecules and clinical development

23andMe's database yields thousands of GWAS hits

Advanced biology and medicinal chemistry guide design of optimal compounds from initial targets

Phenotypic breadth provides unique ability to uncover potential safety issues or possible indication expansions

# 23andMe Immuno-oncology (I/O) Programs

# Our I/O Programs Were Identified With ML and AI Applied to Our Proprietary I/O Genetic Signature

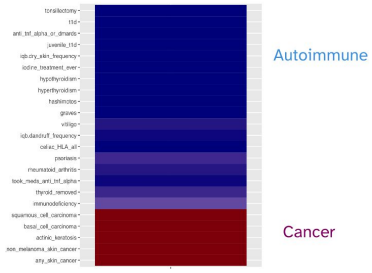
**Large I/O market with $60B in 2021 sales**

2021 sales of leading checkpoint inhibitors

| | |
|---|---|
| KEYTRUDA | $17.2B |
| OPDIVO | $7.5B |
| YERVOY | $2.0B |

**23andMe's proprietary I/O genetic signature developed with ML which also identifies marketed I/O drugs**

I/O genetic signature shows opposing effects on autoimmune and cancer phenotypes




**We discovered additional targets that have a similar genetic I/O signature**

CD200R1
(23ME'610)

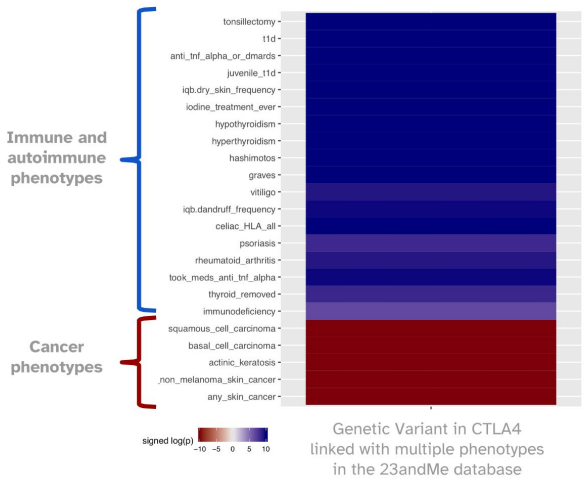
CD96
(GSK'608)

+ others

# 23ME'610 Targeting CD200R1

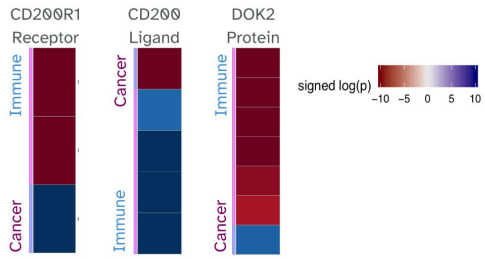
# CD200R1 was Identified as a Promising Anti-Cancer Drug Target with 23andMe's Proprietary Immuno-oncology (I/O) Genetic Signature

Identified novel immuno-oncology signature around CTLA4.




**CD200R1 pathway identified as a critical immune checkpoint with our I/O genetic signature**

I/O genetic signature shows opposing effects on autoimmune and cancer phenotypes



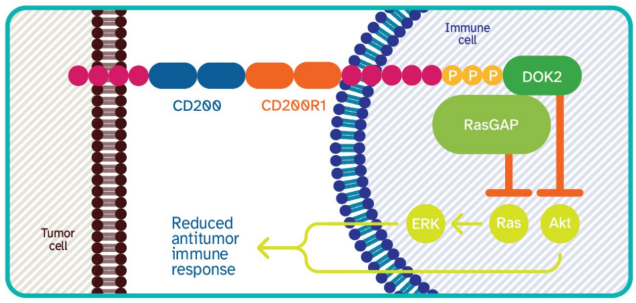

We discovered that *3 components* of the signaling pathway for CD200R1 have a similar genetic signature to other I/O drugs

# CD200R1 is an Immune Checkpoint

- CD200R1 is an inhibitory receptor expressed on T-cells and myeloid cells
- CD200 is the only known ligand for CD200R1 in humans and is highly expressed in certain cancers
- Binding of CD200 to C200R1 decreases the ability of T-cells to recognize and kill cancer cells
- Several viruses have co-opted CD200 analogues to suppress and evade the host immune response

References: J Virol 2012;86:6246, J Virol 2004;78:7667, J Immunol 2005;175:4441, Structure 2013;21:820, JCI Insight 2018;3:e96836

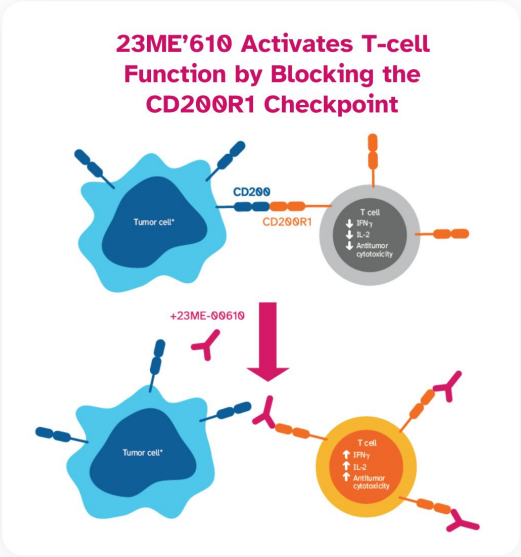
## CD200:CD200R1 Signaling



# 23ME-00610 (23ME'610) Binds with High Affinity to CD200R1 and Inhibits Immunosuppressive Signaling

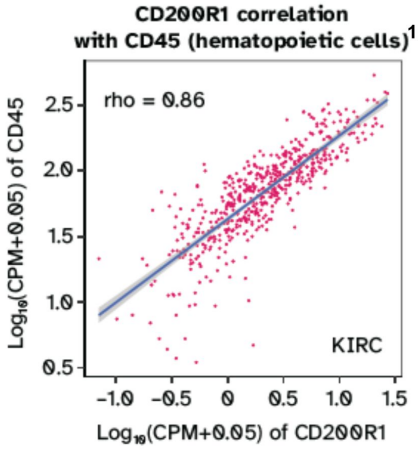
- 23ME '610 is a fully humanized, effectorless, IgG1 antibody against human CD200R1
- 23ME '610 binds CD200R1 with high affinity ($K_D$ < 0.1 nM)
- 23ME '610 blocks CD200 ligand binding to CD200R1, resulting in inhibition of immunosuppressive signaling
- The restoration of T-cell activity by 23ME '610 was demonstrated using in vitro models of the tumor microenvironment
- No adverse effects of blocking CD200R1 have been observed in nonclinical toxicology studies

*CD200-expressing cell types include tumor, stroma and endothelial
IFN, interferon; IL, interleukin



# CD200R1 is expressed on tumor-infiltrating lymphocytes (TILs) from The Cancer Genome Atlas (TCGA)

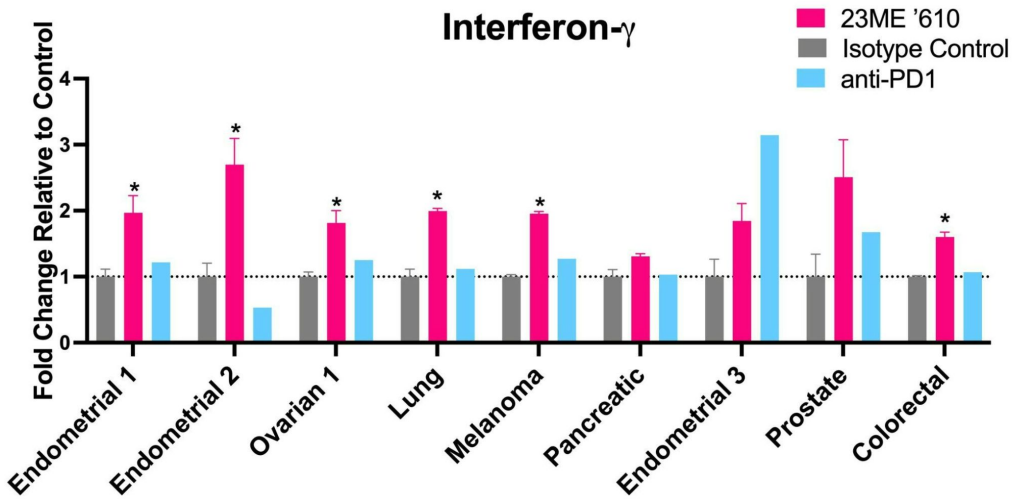
- CD200R1 expression (using RNAseq data from TCGA) is correlated with several immune cell markers: CD4, CD8, CD45 (shown), and CD11b
- CD200R1 is co-expressed with antigens or markers that are expressed on lymphocytes seen in most cancer types




1. Clear cell renal carcinoma (KIRC) is shown and was chosen because it had high immune infiltration in the TCGA dataset

# Inhibition of CD200R1 has the potential to address resistance to anti–PD1 therapies

**Blocking the CD200R1 pathway enhanced IFN production from SEB-stimulated PBMCs compared to isotype control and anti-PD1 in the majority of samples tested**

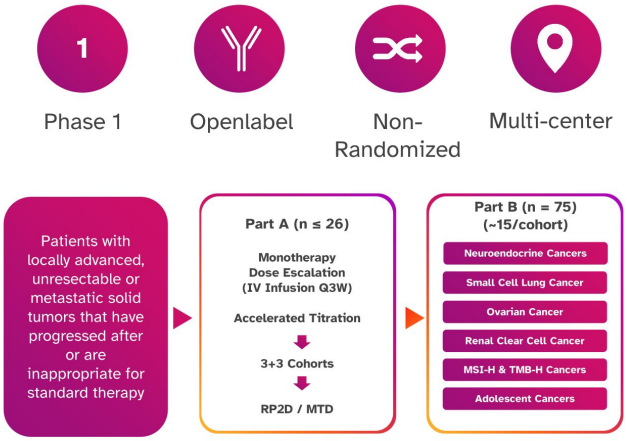



PBMC, peripheral blood mononuclear cell; PD-1, programmed death–1; SEB, staphylococcal enterotoxin B.

PBMCs from each respective patient were incubated with 100 nM of 23ME-00610, anti–PD-1, or isotype control. Cells were stimulated with SEB. IFN levels were determined by enzyme-linked immunosorbent assay. Mean biologic triplicates were normalized to isotype control. * $P < 0.05$.

# Phase 1/2a Study of 23ME'610 in Patients with Locally Advanced or Metastatic Solid Malignancies

## Study Design




## Objectives

### Primary

- Part A: Safety (DLTs, AEs)
- Part B: Efficacy (ORR)

### Secondary and Exploratory

- Efficacy (ORR [RECIST and iRECIST]), DoR, PFS, OS) and Safety
- Pharmacokinetics
- Pharmacodynamic biomarkers

Abbreviations: AEs: Adverse Events; DLT: Dose limiting toxicity; DOR: duration of response; IV: intravenous; ORR: Objective Response Rate; OS: Overall Survival; PFS: Progression Free Survival; Q3W: every three weeks; RECIST: Response Evaluation Criteria in Solid Tumors; RP2D: Recommended Phase 2 Dose

# 23ME'610 Targeting CD200R1: A Genetically-Validated Approach to Anti-Cancer Therapy

- CD200R1 is an immune checkpoint with a strong I/O signature in three components of the pathway.
- 23ME-00610 is a high-affinity, first-in-class, anti-CD200R1 antibody with immune-activating properties, including:
  - Prevention of CD200-mediated suppression of chronically stimulated T cells
  - Enhancement of cytokine secretion from peripheral blood mononuclear cells (PBMCs) isolated from cancer patients
  - Augmentation of PBMC-mediated tumor cell killing
- CD200R1 expression was observed on tumor infiltrating lymphocytes from The Cancer Genome Atlas, suggesting that this pathway contributes to an immunosuppressive tumor microenvironment.
- CD200R1 was also expressed in immune checkpoint inhibitor non-responders, indicating that inhibition of the CD200R1 immune checkpoint has the potential to address resistance to anti–PD-1 and anti–CTLA4 therapies[1].
- Phase 2a portion of the study study will evaluate five tumor indication-specific expansion cohorts and a cohort of adolescents with locally advanced unresectable, or metastatic solid malignancies.

1. Data presented in poster at 2022 American Association for Cancer Research (AACR) annual meeting.

# GSK6097608 (GSK'608) Targeting CD96

# The GSK’608 Program is a Prime Example of the Value 23andMe Brings to Drug Discovery and Development

- Inhibition of CD96 leads to immune activation and tumor growth inhibition in non-clinical models
- GSK’608 is a high affinity monoclonal antibody against CD96
- GSK’608 is currently being evaluated in an ongoing Phase 2 study
- In January 2022, 23andMe elected to take a royalty option on GSK’608. As a result, GSK is now solely responsible for the development of GSK’608.

5

# Financials

# Investing in Future Growth in a Fiscally Responsible Manner

1. Investing in future growth potential. For those business segments expected to drive future growth, including the new genetic health services and our therapeutics business, we plan to focus on the most strategically and financially valuable options and invest appropriately in each.

2. Employing a conservative approach to planning. Recognizing the current uncertainties in the economy and financial markets, we are prioritizing the minimization of Adjusted EBITDA deficit rather than maximizing top-line growth in our Consumer business (PGS and telehealth).

3. Solid cash position. Cash of $433 million[1] supports 23andMe's plans for significant investment in Therapeutics portfolio and strategic initiatives.

[1]As of December 31, 2022.

# Revenue Composition

| | Three Months Ended December 31, | | | | Year Ended March 31, | |
|---|---|---|---|---|---|---|
| | FY2023 | | FY2022 | | FY2022 | |
| *(in $M, except percentages)* | **Amount** | **Percentage of Revenue** | **Amount** | **Percentage of Revenue** | **Amount** | **Percentage of Revenue** |
| Consumer Services | $54 | 80% | $46 | 81% | $222 | 82% |
| Research Services | 13 | 20% | 11 | 19% | 50 | 18% |
| Therapeutics | - | - | | - | - | - |
| **Total Revenue** | **$67** | ***100%*** | **$57** | ***100%*** | **$272** | ***100%*** |

# Consumer Services Revenue Seasonality by Fiscal Quarter

| | Q1 | Q2 | Q3 | Q4 | Full Year |
|---|---|---|---|---|---|
| FY 2019 | 28% | 19% | 18% | 35% | 100% |
| FY 2020 | 24% | 24% | 21% | 31% | 100% |
| FY 2021 | 18% | 21% | 22% | 39% | 100% |
| FY 2022 | 22% | 20% | 21% | 38% | 100% |

Note: Fiscal year ends March 31.

# Research and Development Expense

| | Three Months Ended December 31, | | | | YoY |
|---|---|---|---|---|---|
| | FY2023 | | FY2022 | | |
| *(in $M, except percentages)* | **Amount** | **Percentage of total R&D expense** | **Amount** | **Percentage of total R&D expense** | **% Change** |
| Therapeutics | $28 | 50% | $23 | 46% | 22% |
| Consumer and Research Services | 29 | 50% | 27 | 54% | 7% |
| **Total R&D Expense** | **$57** | | **$50** | | |

Investing in Therapeutics

# Sales and Marketing Expense Composition

| | Three Months Ended December 31, | |
|---|---|---|
| | FY2023 | FY2022 |
| *(in $M)* | **Amount** | **Amount** |
| Advertising and Brand | $17 | $32 |
| Personnel-related expenses | 6 | 4 |
| Outside Services, equipment and supplies | 2 | 2 |
| Depreciation and Amortization | 13 | 2 |
| Facilities and other OH Alloc | 2 | 2 |
| **Total S&M Expense** | **$40** | **$42** |

Note: Balances may not add up due to rounding

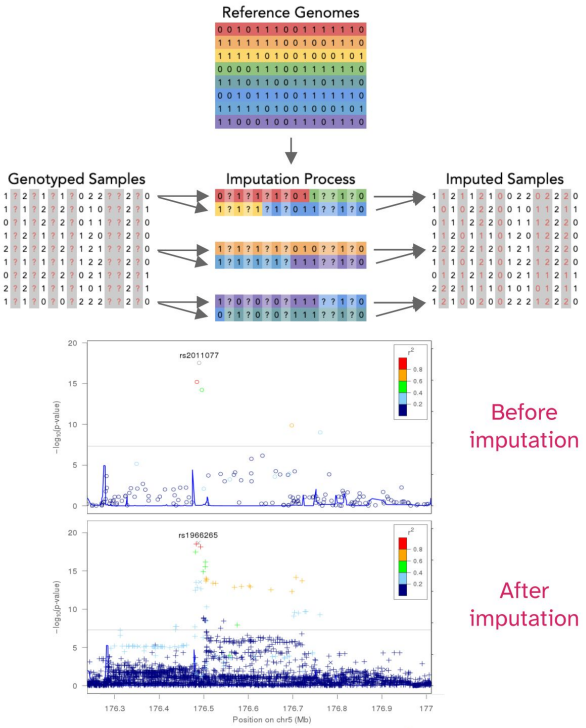
# Appendix

# The Vast Majority of GWAS Discoveries Can be Made Without Large-scale Sequencing

- Nearby genetic variants are correlated with each other. Knowing the variant in one position allows nearby variants to be inferred.
  - E.g. Fill in the blanks:

    **The q***k brown f*x jumps ov*r the **zy dog.**

  - The same principle applies in genetics. The process of filling in the gaps is known as 'genotype imputation'.
- **We type ~650,000 SNPs using our genotyping array, which allows accurate imputation for >35m SNPs in the genome.**
- **Genotype imputation is much more cost effective than large-scale sequencing.**
  - Whole-genome sequencing ~$1000 / sample.
  - Exome sequencing ~$400 / sample.
  - Imputation < $0.01 / sample
- We do deploy sequencing in situations where there is a clear benefit over and above imputation (e.g. rare disease).




Before imputation

After imputation

# 23andMe's Value Proposition

1. **Disrupting the Healthcare experience.** 23andMe is building a personalized health and wellness experience that caters uniquely to the individual by harnessing the power of their DNA. Integrating Lemonaid Health's online digital health platform to deliver personalized, prevention-oriented, genetically-based healthcare at scale

2. **The world's premier re-contactable phenotype-linked genetic database.** A vast (>13M genotyped customers) proprietary dataset rich with both genotypic and phenotypic (health) information allows insights that unlock revenue streams across digital health, therapeutics, and much more

3. **Continuously increasing quantity and quality of phenotypic data.** Impressive customer participation provides >4 billion phenotypic data points for unprecedented statistical power to discover new insights into health and potential therapies.

4. **Over 50 identified therapeutic programs validates the approach of developing novel therapeutics using genetic data.** One program in clinical development with GSK, one wholly owned program started clinical trials in January 2022.

5. **Difficult to replicate platform for value creation.** The FDA-authorized consumer platform, the therapeutics efforts, and the rich database combine to create multiple opportunities for substantial value creation

6. **Solid cash position.** Solid balance sheet supports 23andMe's plans for significant investment in therapeutics portfolio and strategic initiatives