

# Robert M. Plenge, MD-PhD

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## PROFESSIONAL SUMMARY

After nearly 20 years in academic medicine, I transitioned to a career in the pharmaceutical industry in 2013. While at Merck Research Laboratories, I launched a new department of Genetics & Pharmacogenomics before being promoted to lead a 300-person Translational Medicine team. In 2017 I moved to Celgene to lead Immunology & Inflammation (my clinical area of expertise) within the Research & Early Development (R&ED) organization. Upon the BMS acquisition of Celgene, I was promoted to Senior Vice President and given responsibility for Immunology, Cardiovascular, and Fibrosis within R&ED. In January 2021 my responsibilities were expanded to include Translational Medicine and in January 2023 were expanded further to include Discovery and Translational Sciences. In July 2023 I became Chief Research Officer and a member of the BMS Executive Team. I am responsible for a team ~2,500 scientists across 11 sites and a budget of >\$1.5B per year.

## SKILLS

- Internal Medicine & Rheumatology
- All major therapeutic areas and modalities
- Human genetics and genomics
- Translational medicine
- Molecular biomarkers & diagnostics
- Research & Development
- Regulatory and Medical Affairs
- Business Development

## PROFESSIONAL EXPERIENCE

**Internal Medicine Intern & Resident** | [University of California, San Francisco](#) | 2000-2002

**Rheumatology Clinical Fellow** | [Brigham & Women's Hospital and Harvard Medical School](#) | 2002-2006

**Post-doctoral Research Fellow** | [Broad Institute of MIT and Harvard](#) | 2003-2007

- > Research focus: genetic and genomics of complex traits such as rheumatoid arthritis
- > Advisor: David Altshuler (now Chief Scientific Officer at Vertex Pharmaceuticals)

**Associate Physician** | [Brigham & Women's Hospital](#) | 2006-2013

- > Board-certified in Internal Medicine and Rheumatology
- > Adult rheumatology clinic (half-day weekly) and in-patient attending (~2 weeks per year)

**Assistant Professor** | [Harvard Medical School](#) | 2008-2013

- > Academic lab of ~12 computational and wet lab scientists
- > Principle investigator on multiple grants: K08, RO1 (n=3), U01, U54, NIH subcontracts (5), Other (5)
- > Author on >125 peer-reviewed publications in top-tiered journals (e.g., *Nature*, *NEJM*, *Science*)

**Vice President** | [Merck & Co.](#) | 2013-2017

- > **Head of Genetics & Pharmacogenomics** (July 2013-February 2015)
  - o Team of ~80 computational and wet lab scientists
  - o Operating budget ~\$35M annually (e.g., FTEs, collaborations, clinical pharmacogenomics)
  - o Co-chair of Early Discovery Council (scientific oversight of early discovery programs)
  - o Genetic targets in all therapeutic areas (e.g., neuroscience, inflammation, cardiometabolic)
- > **Global Head of Translational Medicine** (February 2015-May 2017)
  - o Team of ~300 people across three Departments (Genetics & Pharmacogenomics, Translational Biomarkers, Translational Pharmacology) in US, Europe and Singapore
  - o Operating budget ~\$275M annually (e.g., FTEs, diagnostics, clinical pharmacology)
  - o MRL governance committees responsible for Discovery & Early Development portfolio

- Early (~10 new clinical programs annually) and Late Development (e.g., special populations)
- Therapeutic modality diversity (e.g., small molecules, biologics, mRNA vaccines, peptides)
- Companion diagnostics strategy for Keytruda and all other therapeutics

**Vice President, Immunology & Inflammation** | Celgene | *May 2017-Nov. 2019*

- > Team of ~40 people within Research & Early Development and dotted-line to Clinical Development
- > Operating budget ~\$30M annually (e.g., FTEs, laboratory supplies, external collaborations)
- > Governance committees responsible for Discovery, Early Development, and Late Development
- > Therapeutic modality diversity (e.g., cell therapy, protein degradation, small molecules, biologics)
- > Business Development strategy and management for I&I (e.g., new partnerships, alliances)
- > Translational support for entire early and late clinical pipeline

**Senior Vice President** | BMS | *Nov. 2019-current*

- > **Immunology, Cardiovascular, and Fibrosis** (November 2019-January 2023)
  - Team of ~200 people within R&ED responsible for strategic vision across all three areas
  - Operating budget ~\$100M annually (e.g., FTEs, laboratory supplies, external collaborations)
  - Governance committees responsible for Discovery, Early and Late Development
  - All therapeutic modalities (e.g., cell therapy, protein degradation, small molecules, biologics)
  - Business Development strategy and management for ICF (e.g., new partnerships, alliances)
- > **Translational Medicine** (January 2021-July 2023)
  - Team of ~225 people within R&ED and dotted line to Global Drug Development
  - Operating budget ~\$200M annually (e.g., diagnostics, FTEs, lab supplies, collaborations)
  - Cross functional interactions with all therapeutic areas to support late development
  - Interface w/ Regulatory, Commercial, Medical Affairs, Manufacturing, Business Development
- > **Discovery and Translational Sciences** (January 2023-July 2023)
  - Team of ~1,500 scientists within Research
  - Cross functional interactions with all therapeutic areas, modalities, and enabling functions
- > **Chief Research Officer and Head of Research** (July 2023-current)
  - Leads all of Research at BMS, including scientific functions that support Development

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**EDUCATION**

**Brophy College Preparatory** | Phoenix, AZ | *1984-1988*

- > Awards & recognitions: Senior Class President, Varsity Basketball, National Honor Society

**University of California, San Diego** | San Diego, CA | B.S. General Biology | *1988-1992*

- > Awards & recognitions: *cum laude*, Phi Beta Delta International Honor Society

**Case Western Reserve University** | Cleveland, OH | MD-PhD | *1992-2000*

- > PhD thesis: Genetic control of X chromosome inactivation
- > Advisor: Hunt Willard (now Chief Scientific Officer, Genome Medical)

- Awards & recognitions: American Society of Human Genetics Pre-doctoral Clinical Award (1995), Alpha Omega Alpha Research Award (1995)

## OTHER ACCOMPLISHMENTS

### Top publications (out of [>125 publications](#) with [~40,000 citations](#) to date):

1. **Plenge RM**, Hendrich BD, Schwartz C ... Willard HF (1997) *A promoter mutation in the XIST gene in two unrelated families with skewed X chromosome inactivation*, Nature Genetics Vol. 17 (3): 353-356.
2. **Plenge RM\***, Seielstad M\* ... Klareskog L, Gregersen PK (2007) *Genome-Wide Search Identifies TRAF1-C5 as Rheumatoid Arthritis Risk Locus*, New England Journal of Medicine Vol. 357 (12): 1199-209.
3. **Plenge RM**, Cotsapas C, Davies L, Price AL ... Altshuler D (2007) *Two independent alleles at 6q23 associated with risk of rheumatoid arthritis*, Nature Genetics Vol. 39 (12): 1477-82.
4. Raychaudhuri S, Remmers EF, Lee AT ... Klareskog L, Gregersen PK, Daly MJ, **Plenge RM** (2008) *Common variants at CD40 and other loci confer risk of rheumatoid arthritis*, Nature Genetics Vol. 40 (10): 1216-23.
5. Stahl EA, Raychaudhuri S, Remmers EF ... Gregersen PK, Klareskog L, **Plenge RM** (2010) *Genome-wide association study meta-analysis identifies seven new rheumatoid arthritis risk loci*. Nature Genetics Vol. 42 (6): 508-14.
6. Stahl EA, Wegmann D, Kraft P ... Raychaudhuri S\*, **Plenge RM\*** (2012) *Bayesian inference reveals polygenic architecture of four common disease*, Nature Genetics Vol. 44 (5): 483-9.
7. Li G, Diogo D, Wu D ... **Plenge RM** (2013) *Human genetics in rheumatoid arthritis guides a high-throughput drug screen of the CD40 signaling pathway*, PLoS Genetics Vol. 9 (5): e1003487.
8. **Plenge RM**, Scolnick EM, Altshuler D (2013) *Validating therapeutic targets through human genetics*, Nature Reviews Drug Discovery, Vol. 12 (8): 581-94.
9. Okada Y, Wu D, Trynka G, ... **Plenge RM** (2014) *Genetics of rheumatoid arthritis contributes to biology and drug discovery*, Nature Vol. 506 (7488): 376-81.
10. **Plenge RM** (2016) *Disciplined approach to drug discovery and early development*, Science Translational Medicine Vol. 8 (349): 349ps15.
11. **Plenge RM** (2017) *Human genes lost and their functions found*, Nature Vol. 544 (7649): 171-172
12. Diogo D...**Plenge RM**, Runz H (2018) *Phenome-wide association studies across large population cohorts support drug target validation*, Nature Communications Vol. 9 (1): 4285.
13. Sun BB, Maranville JC...**Plenge RM**, Danesh J, Runz H, Butterworth AS (2018) *Genomic atlas of the human plasma proteome*, Nature Vol. 558 (7708): 73-79

### National Awards

- Career Award for Medical Scientists, Burroughs Wellcome Fund
- The American Society for Clinical Investigation

### Board of Directors (select)

- Translate Bio (TBIO), Board of Directors (April 2019-September 2021) – *acquired by Sanofi for \$3.2B*
- Alltrna, Board of Directors (August 2022-*current*)
- PhRMA Foundation (June 2023-*current*)

## PERSONAL

I am married (Alexa) with three daughters (Lucy [20], Molly [18] and Lila [15]). I enjoy outdoor activities [tennis, golf, hiking], socializing with family & friends, Boston sports [especially when they are winning], and participating in any activities my kids want to do.