Angel Alvarez, PhD

Director, Human Stem Cell Technologies · Research Assistant Professor, Department of Neurology
Additional Faculty Appointments: Robert H. Lurie Comprehensive Cancer Center & Center for Reproductive Science
Northwestern University Feinberg School of Medicine | Chicago, IL

136 investigators from 83 laboratories supported	**200+** stem cell training sessions provided	**1,000+** iPSC lines generated	**$3M+** saved	**11** US patents awarded; more pending and international

Reformed one of the lowest-rated core facilities to one of the best-rated cores.

CAREER TIMELINE

2026–now **Director, Human Stem Cell Technologies** — Center for Genetic Medicine, Northwestern
2026–now **Faculty** — Center for Reproductive Science, Northwestern
2025–now **Faculty** — Robert H. Lurie Comprehensive Cancer Center
2020–26 **Director, Stem Cell Core** — Northwestern University
2020–now **Research Assistant Professor, Neurology** — Northwestern University
2019–20 **Managing Director, Stem Cell Core** — Northwestern University
2018–19 **Manager, Stem Cell Core** — Northwestern University
2012–18 **Postdoctoral Fellow, Neurology** — Northwestern University
2010–12 **Predoctoral Fellow, Radiation Oncology** — Univ. of Alabama at Birmingham
2008–10 **Predoctoral Fellow** — Northwestern Brain Tumor Institute
2004–11 **Graduate Student, Biomedical Sciences** — Univ. of Central Florida
2003–04 **Visiting Research Specialist, Psychiatry** — Univ. of Illinois at Chicago

EDUCATION

Postdoc, Cancer & Stem Cell Biology: Northwestern, 2018
Grad. Cert., Life Sci. Entrepreneurship: UAB, 2012
PhD, Biomedical Sciences: Univ. of Central Florida, 2011
BS, Biological Sciences: UIC, 2003

CURRENT FUNDED PROJECTS

R01 HD114195 (co-I): endometriosis modeling, Kim PI, 2023–26
NU Equipment Grant (PI): iPSC sorting, 2024
NU Equipment Grant (PI): iPSC/organoid imaging, 2023

GRANTS SUBMITTED (PENDING REVIEW)

Deciphering genetic ancestry-associated, cell-specific signatures of Alzheimer's disease and related dementias risk in Black Americans NIH · PI: Kynon J. Benjamin · **Co-Investigator**
Neuroplasticity Platform for drug discovery in Rett Syndrome (RTT) NIH · PI: Yevgenia Kozorovitskiy · **Co-PD/PI**
Targeted metabolic and epigenetic therapies for the rare developmental disorder Kabuki syndrome NIH · PI: Zibo Zhao · **Co-Investigator**
Decoding Epigenetic Dysregulation and Targetable Vulnerabilities in MLL1-amplified Leukemia NCI (subcontract from Univ. of Southern California) · PI: Yan Liu · **Co-Investigator**
Alterations in nucleolus-centromere association in aging NIH · PI: Daniel R. Foltz · **Co-Investigator**
Ancestry-informed glial regulation of APP isoforms in AD risk among Black Americans Klingenstein Third Generation Foundation · PI: Kynon J. Benjamin · **Co-Investigator**

SELECTED PEER-REVIEWED PUBLICATIONS

1. McDowell H, Sun S, McNally R, Huerta C, Asif H, Yoon J, Alvarez A, Yildiz S, Foley KG, Boots C, Milad M, Kim JJ. Endometriosis-derived iPSCs reveal conserved stromal maturation and endocrine responsiveness. Sci Adv, 2026;12(34):eaeg2362. doi:10.1126/sciadv.aeg2362
2. Huang T, Wan X, Alvarez AA, et al. MIR93 regulates tumorigenicity and therapy response of glioblastoma by targeting autophagy. Autophagy, 2019;15(6):1100–1111. doi:10.1080/15548627.2019.1569947
3. Huang T, Kim CK, Alvarez AA, et al. MST4 phosphorylation of ATG4B regulates autophagic activity, tumorigenicity, and radioresistance in glioblastoma. Cancer Cell, 2017;32(6):840–855. doi:10.1016/j.ccell.2017.11.005
4. Lv D, Li Y, Zhang W, Alvarez AA, et al. TRIM24 is an oncogenic transcriptional co-activator of STAT3 in glioblastoma. Nat Commun, 2017;8(1):1454.
5. Huang T, Alvarez AA, Pangeni RP, et al. A regulatory circuit of miR-125b/miR-20b and Wnt signalling controls glioblastoma phenotypes through FZD6-modulated pathways. Nat Commun, 2016;7:12885. doi:10.1038/ncomms12885

6. Alvarez AA, Field M, Bushnev S, Longo MS, Sugaya K. The effects of histone deacetylase inhibitors on glioblastoma-derived stem cells. J Mol Neurosci, 2015;55(1):7–20. doi:10.1007/s12031-014-0329-0
7. Alvarez AA, Bredel M. Primary tumors of the nervous system. Emery and Rimoin's Principles and Practice of Medical Genetics, 6th ed., 2013, ch.124.
8. Bredel M, Scholtens DM, Yadav AK, Alvarez AA, et al. NFKBIA deletion in glioblastomas. N Engl J Med, 2011;364(7):627–637.

US PATENTS (11 AWARDED · MULTIPLE PENDING AND INTERNATIONAL)

8,080,420 Biasing cellular development
8,105,832 Modifying stem cell characteristics
8,192,988 Increasing potency of adult MSCs
8,361,791 Potency via Nanog expression
8,513,017 Biasing cellular development
8,518,698 Glioblastoma cell apoptosis
8,759,090 Stem cell banking system
8,906,683 Increasing potency of cells
9,127,291 Biasing cellular development
9,243,226 Biasing toward retinal/corneal/lens
9,506,031 Increasing potency of cells

SELECTED HONORS

- 2025 Award for Excellence in Summer Student Mentorship, Lurie Cancer Center
- 2015–19 Clinical Research Loan Repayment Program Awardee, NIH
- 2015–17 T32 Postdoctoral Fellowship, Signal Transduction & Cancer, NIH/NCI
- 2013–15 NIH Research Supplement to Promote Diversity in Health-Related Research

SERVICE & OUTREACH

- Advisory Council on Diversity & Inclusion — Northwestern Graduate School, 2019–2020
- Faculty Councilor — Chicago Society for Neuroscience, 2019–present
- Faculty Advisor — STEMResearcHER nonprofit
- Undergraduate research mentor — 20+ independent projects advised

TEACHING EXPERIENCE

- **Science Teacher** — Hispanic Math and Science Education Initiative
- **Algebra Teacher** — Saturday College and UIC Early Outreach Program
- **Human Anatomy Lab Instructor** — University of Central Florida
- **Stem Cell Biology and Technology: From Patients to Patents** — IMSA
- **Biotechnology Teacher** — Northwestern Center for Talent Development
- **Graduate Student Thesis Committee Advisor** — Northwestern University
- **Health Equity and Advocacy small group leader** — Feinberg School of Medicine

Civic Leadership & CPS Advocacy

Over a decade of CPS policy advocacy and original research to identify and end racial disparities in:

Budget: CPS's budget isn't transparent and doesn't support what schools actually need to improve learning. My analysis showed CPS isn't following its own funding formula and revealed racial disparities in what schools actually receive.

Special education: CPS fails to identify students early and to provide the legally mandated supports that let students with disabilities reach their potential. My analysis revealed racial disparities in identification and support.

Evaluations & Accountability: CPS isn't properly evaluating students, so it fails to provide effective interventions for those who fall behind, or enough enrichment for academically talented students, particularly in schools serving mostly low-income families. My analysis showed racial disparities widen the longer students are in CPS, and that Black and Latino students were less likely to qualify for gifted education after CPS launched an equity initiative. I also revealed that English learners are more likely to become less proficient after 4th grade.

LEADERSHIP ROLES

- **President,** CPS Office for Students with Disabilities Family Advisory Board — SY2025–26; re-elected SY2026–28
- **Local School Council member** — Poe Classical and Edison Regional Gifted Center
- **CPS Parent Leadership Council member**
  - Committees on Finance & Budget, Special Education & Transportation, and Assessments & Accountability