

## **SAMUEL H. BERMAN**

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### **EDUCATION**

#### **2010, Wesleyan University**

Bachelor of Arts,  
Majors in Chemistry,  
Molecular Biology & Biochemistry,  
Molecular Biophysics Certificate

### **SKILLS**

#### **Bioinformatics:**

Next generation sequencing,  
microarray, nanostring & methyl-  
ation data processing & statistical  
analysis, genomic & epigenomic  
profiling, clonal decomposition

#### **Research engineering:**

DNA, protein & immune-engi-  
neering, mouse & human cell  
models, elementary natural product  
synthesis, basic electronics design,  
biophysical spectroscopy.

#### **Programming:**

R, Python, Javascript, Bash, HTML,  
CSS, Make, JAVA, Perl, Processing,  
SuperCollider, Solidity

#### **Computing:**

Process queue & container systems,  
MVC architecture, database & API  
transaction, basic server configura-  
tion & networking

#### **Operations:**

Grant writing, content & copy  
editing, event curation & production,  
digital layout & figure generation

### **RESEARCH**

#### **2016–Present, Memorial Sloan Kettering, Sadelain Group**

Developed methodology for the identification of chimeric antigen  
receptor single-ligand & combinatorial candidates. Employing RNA  
differential expression analysis toward pre-clinical optimization of ther-  
apeutic targets.

#### **2015, Memorial Sloan Kettering, Filho Group**

Evolutionary decomposition of heterogeneous & metastatic cancers.  
Establishing genomic analyses of multiple rare cancer types.  
Implemented state of the art bioinformatic tools as part of high-  
throughput sequencing work-flows.

#### **2011–2014, Memorial Sloan Kettering, Brennan Group**

Bioinformatic & genomic investigation of neurological & renal cancers,  
contributions to The Cancer Genome Atlas including RNA-Seq char-  
acterization of intragenic rearrangements & splicing variation in glioblastoma. Performed mouse model experiments to determine tumor  
heterogeneity via single cell variation. Bioinformatic experimental  
design & analysis consultation for Oncology & Pathogenesis depart-  
ment investigators.

#### **2009–2011, Wesleyan University, Beveridge Group**

Mapped protein free protein energy graphs by computing hydrogen  
protection factors via molecular dynamics simulation. Assessed the  
accuracy of metadynamics enhanced sampling techniques with respect  
to experimental proton exchange.

#### **2008, Wesleyan University, Taylor Group**

Expression & purification of E. coli dioxygenase enzymes for use in  
engineered biocatalysis. Established preliminary route for synthesis of  
glycosyltransferase substrate analogues.

### **FELLOWSHIPS, AWARDS & SCHOLARSHIPS**

2010, Scientific Computing & Informatics Award  
2009, Howard Hughes Medical Institute Summer Fellowship  
2009, Scientific Computing & Informatics Award  
2008, Howard Hughes Medical Institute Summer Fellowship  
2007–2010, Wesleyan Merit Scholarship  
2006, American Legion Boy's State Scholarship  
2006–2007, Boston University Merit Scholarship

### **PUBLICATIONS**

The Somatic Genomic Landscape of Glioblastoma. Cell. 10 Oct. 2013  
(Vol. 155, Issue 2, pp. 462-477). C. W. Brennan, R. Verhaak,... S. H.  
Berman (10/58)... L. Chin. [Cited by 800]

Quantitative Assessment of Intragenic Receptor Tyrosine Kinase Deletions in Primary Glioblastomas: Their Prevalence and Molecular Correlates. *Acta Neuropathologica*. 29 Nov. 2013 (Vol. 127, Issue 5, pp. 747–759). E. R. Kaesthuber, J. T. Huse, S. H. Berman (3/12)... C. W. Brennan. [Cited by 15]

Sleeping Beauty Mouse Glioma Models Identify Candidate Glioma Genes, *PLoS ONE*. I. Vyazunova, V. Maklakova, S. H. Berman (3/11)... L. Collier. [Cited by 3]

The Genomic Landscape of Male Breast Cancers. *Clinical Cancer Research*. March 2016 (Vol. 22, Issue 12). S. Piscuoglio, C. K. Ng, M. P. Murray, E. Guerini-Rocco, L. G. Martelotto, F. C. Geyer, F. C. Bidard, S. H. Berman (8/22)... J. S. Reis-Filho. [Cited by 9]

Epigenetic Profiling Reveals a Unique Histone Code in Chordoma. *Neurosurgery*. August 2016 (Vol. 63, Suppl. 1:208). N. Moussazadeh, S. H. Berman, I. Laufer, M. Gounder, Y. Zheng, J. Sommer, M. H. Bilsky, N. L. Kelleher, C. W. Brennan.

Genetic Analysis of Microglandular Adenosis and Acinic Cell Carcinomas of the Breast Provides Evidence for the Existence of a Low-grade Triple-Negative Breast Neoplasia Family. *Modern Pathology*. F. Geyer, S. H. Berman (2/16)... J. R. Filho. [Cited by 3]

### **Forthcoming:**

Massively Parallel Sequencing Analysis of Synchronous Fibroepithelial Lesions Supports the Concept of Progression from Fibroadenoma to Phyllodes Tumor. *npj Breast Cancer*. S. Piscuoglio, F. Geyer, M. Murray, C. K. Ng, C. Marchio, S. H. Berman, K. Burke, L. Norton, E. Brogi, B. Weigelt, J. R. Filho. [Accepted]

Whole-Exome Sequencing of Small Cell Carcinomas of the Uterine Cervix. A. M. Schultheis\*, I. Bruijn\*, G. S. Macedo, M. R. Filippa, S. Piscuoglio, S. H. Berman (5/18),... B. Weigelt. [Submitted]

Genomic Characterization of Spinal Metastases and Paired Primary Tumors to Identify patterns of Spinal Tropism and Clonal Evolution. N. Moussazadeh, S. H. Berman, C. W. Brennan. [In Preparation]

An Integrative Molecular Analysis of Chordoma. N. Moussazadeh, S. H. Berman, C. W. Brennan. [In Preparation]

Proteomics Based Identification of Novel Antigen Targets for the Treatment of Glioblastoma Multiforme Using Chimeric Antigen Receptors. R. Juthani, S. H. Berman, C. W. Brennan. [In Preparation]

### **PATENTS PENDING**

Method for identification of human single and combinatorial chiral T-cell receptor antigen candidates.

### **PROFESSIONAL EXPERIENCE**

**2014–present, Avant.org, Founder & Editor-in-chief**

Online magazine advancing critical interdisciplinary scholarship. Essays syndicated by Oxford University Center for Effective Altruism & Rhizome at the New Museum. Curatorial projects at MoMA PS1, LEAP Gallery Berlin & The School for Poetic Computation.

**2013–2014, Museum of Modern Art PS1, Curatorial Intern, Installation & Technical Advisor**

Managed the weekly installation of large-scale temporary sculpture projects. Assisted in the production of *Warmup*, PS1's summer experimental concert series.

**2012–2014, Boilerroom.tv, Producer & Technical Director**

Event organization & operation of broadcast system that streamed to tens of thousands of live viewers.

**2013, 319 Scholes Gallery, Technical Director**

Managed the installation of new media exhibitions & maintenance of audio / visual equipment.

**2010–2011, Wesleyan Scientific Computing & Programming Center, Tutor**

Held office hours, assisting students with computer science coursework & computational research.

**2009, Wesleyan University Housing, Resident Advisor**

Supervised & developed community programming for a house of 25 underclassman

**2007–2008, Wes Environmental Organizers, Waste Committee Chair**

Student liaison to university facilities, set refuse management agenda.

**2007, WesWell, Peer Health Advocate**

Ran student workshops on diet, exercise, drug & sexual health.

**2008–2009, Wesleyan University Sailing, Racing Coach**

Taught racing technique workshops to members of the sailing team.

**2007, Organic Gardening Club, Vice President**

Set cultivation agenda & ran club meetings.

**WRITING & EDITING**

2016, *In Search of Personalized Time* (Editor), Los Angeles Museum of Art Press [forthcoming]

2014–2016, 40+ essays published through Avant.org

2014, *Egalitarian Economics*, Avant.org

2014, *Critical Engineering*, Avant.org

2013, *Future Organisms*, Dazed and Confused

2013, *Extrapolation Factory*, Dazed and Confused

2013, *Sampling Sonic Culture: MoMA's Cautious Entry Into a World of Noise*, Rhizome at the New Museum

**CONFERENCE PRESENTATIONS & TALKS**

**2016, Engineered Ecology, Lower East Side Ecology Center**

Biological & ecological design for urban estuaries, on possibility & institutional responsibility at the LES Ecology Center, co-curated with Chris Woebken.

**2016, Speculation in City Government, Apexart**

Round table discussion on forecasting, contingency & the public administration of risk with the NYC Office of Emergency Management, part of *Alternative Unknowns*, curated by Chris Woebken & Elliott Montgomery.

**2016, Åzone Summit, Guggenheim Museum**

Numeral Corporation, a fabricated multinational conglomerate demonstrating the capacities & ironies adopting algorithmic finance as critical media. Presented in collaboration with Dan Taeyoung.

**2014, *The House in the Sky*, Eyebeam**

On possibility & risk in simulating the future. Restaging of conversations held at the Cold War era RAND corporation. Organized by Sascha Pohflepp & Chris Woebken

**2014, *Artists & Brands: Defining Rules of Engagement*, NEWINC, New Museum**

Fostering productive & equitable relationships between creative professionals & the brands which increasingly fund their practice. In collaboration with Julia Kaganskiy.

**2013, *Digital Wasting Deception*, Transmediale Berlin**

Tracing the spatial & ontological suppression of waste to flawed post-digital mores. Conversation held with Julian Oliver & Stephen Fortune.

**2013, *Anonymonth*, CTM Berlin**

Discussing the potential for an online platform for pseudo-anonymous exchange. In collaboration with Mat Dryhurst & Olof Mathé.

**2012, *Mapping the Free Energy Landscape of BPTI*, Molecular Biophysics Retreat**

Using molecular dynamics simulation to map the transition topology of protein free energy spaces.

## **CURATION & PRODUCTION**

**2016, *Circuit Scores: Electronics After David Tudor*, Curator & Producer, Original Bell Labs, now Westbeth**

An evening of environmental sound work dedicated to David Tudor, a leading figure in the emergence of live circuit-based electronic music of the 1960s & 1970s. Co-organized with Charles Eppley.

**2015, *Sonic Research: Psychoacoustics Sessions*, Curator & Producer - MoMA PS1**

An experimental symposium in dialogue, performance & installation. Co-organized with Charles Eppley.

**2015, *Variable World: A Symposium on Simulation*, Producer, LEAP Gallery Berlin**

Toward a critical history of simulation, tracing the influence of simulation on our perception of the future.

**2014, *Inventing Time on Film*, Producer, SOHO House NYC**

How digital post-production tools shape depictions of time & place. Curated by Danny Snelson & Alex Anthony.

**2014, *Life on Film*, Scientific Consult, AND Festival**

Film series on parallel histories of recording & understanding living organisms. Curated by Stephen Fortune.

## **EXHIBITION**

**2016, *PAN Showcase*, Institute of Contemporary Art, London**

Premier of *oo*, a project produced in collaboration with Aedrhlsomrs Lauecehrofn dramatizing the cultural imminence of biometrics through a series of publishing actions derived from Aedrhlsomrs' own genome.

**2016, *Åzone Futures Market*, Guggenheim Museum**

Wrote algorithmic trading software for the Åzone exchange, a virtual marketplace social futures increasingly shaped technology. Curated by Troy Conrad Therrien.

**2016, *Alternative Unknowns*, Apexart**

*Fog of War*, catastrophe simulacra & quarantine pocket guide offering a framework for situational assessment & critical spectatorship. Curated by Chris Woebken & Elliott Montgomery.

**2015, *Art Hack Day: Deluge*, Pioneer Works**

*Weather Machine*, prototype climate war game with simulated real estate futures market. In collaboration with Chris Woebken & Phillip Stearns.

**2013, *Evil Media Distribution Center*, Transmediale Berlin (Premier) & Netherlands Architecture Institute**

Organized by Matsuko Yokokoji & Graham Harwood.

**2010, *Self Assembly*, Zilkha Gallery**

Solo exhibition, curated by Nina Felshin.