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 & methylation data processing & statistical analysis, genomic & epigenomic profiling, clonal decomposition

Research engineering:

DNA, protein & immune-engineering, 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 configuration & 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 therapeutic 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 characterization 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 department 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. Kastenhuber, 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. 25 Nov. 2014 (Vol. 9, Issue 11). I. Vyazunova, V. Maklakova, S. H. Berman (3/11)… L. Collier. [Cited by 3]

The Genomic Landscape of Male Breast Cancers. Clinical Cancer Research. Aug. 2016 (Vol. 22, Issue 16, pp. 4045-4056). 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. Aug. 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. 7 Oct. 2016 (Vol. 1, Issue 16, pp. 1). 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. Filippo, S. Piscuglio, S. H. Berman (5/18)… B. Weigelt. [Submitted]

Genetic Heterogeneity in Therapy-Naïve Synchronous Primary Breast Cancers and Their Metastases. Clinical Cancer Research. C. K. Ng*, F. C. Bidard*, S. Piscuoglio, F. Geyer, R. Lim, I. Bruijn, R. Shen, F. Pareja, S. H. Berman(8/18)… J. R. Reis-Filho. [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.

2009–2010, Wesleyan University Housing, Resident Advisor

Supervised & developed community programming for a house of 25 underclassman

2008–2009, Wes Environmental Organizers, Waste Committee Chair

Student liaison to university facilities, set refuse management agenda.

2007–2008, WesWell, Peer Health Advocate

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

2007–2008, Wesleyan University Sailing, Racing Coach

Taught racing technique workshops to members of the sailing team.

2006–2007, 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]
2016, *Handmade Computer* (Editor), Avant.org [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, *The 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, *Cybersecurity*, 47 Canal

Practical introduction to privacy and cybersecurity topics. Presented with Charles Broskoski & Francis Tseng.

2016, *Platforms*, Triangle Gallery

What are the material and rhetorical conditions of the platform? Why are they valuable organizational patterns & how can we specify platforms as a useful social technology. Presented with Momo Ishiguro & David Borgonjon.

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*, NEW INC, 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. In conversation with Julian Oliver & Stephen Fortune.

2013, *Anonymonth*, CTM Berlin

Discussing the potential for an online platform for pseudo-anonymous exchange. A conversation 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, The School for Poetic Computation

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 modeling 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.