JUSTIN I. LOWENTHAL

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EDUCATION

Yale University, New Haven, CT; August 2007 – May 2011
Degree: Bachelor of Science, Biomedical Engineering
Summa Cum Laude, Distinction in the Major, *Phi Beta Kappa*

Northern High School, Owings, MD; August 2003 - May 2007
Degree: High School Diploma
Valedictorian of the Class of 2007 (rank 1 of 384)

EMPLOYMENT AND RELATED EXPERIENCE

National Institutes of Health, Center for Regenerative Medicine – Bethesda, MD; May 2012 – Present
Program Coordinator

Unpaid elective from the Bioethics fellowship (below): working with the Director of CRM to facilitate the planning and execution of a program to develop clinical grade induced pluripotent stem cell lines (for eventual clinical trials and therapy); Coordinating the efforts of staff at the Department of Transfusion Medicine and investigators around campus to develop a timeline, budget, and framework for three arms of planning tissue collection, cell line generation, and cell line expansion

National Institutes of Health, Department of Bioethics – Bethesda, MD; September 2011 – Present
Pre-Doctoral Fellow

Prestigious two-year fellowship; Directed several conceptual and empirical research projects dealing with ethics of emerging scientific technologies, stem cells, tissue banking, health policy, and other topics (*manuscripts published and in preparation*); Collaborated with Center for Regenerative Medicine (CRM) on developing resources for stem cell researchers at NIH; Observed the NIH Administrative Review Committee for federal funding of human embryonic stem cell lines; attended several NIH stem cell research conferences; Served as observer on IRBs of the NHGRI and the Combined Neurosciences Institutes, as well as on the clinical center ethics committee; Observed ethics consultation process and will be the on-call fellow starting summer 2012; Attended course on ethical and regulatory aspects of clinical research and seminar in advanced bioethics/philosophy; Attended various scientific, policy, and ethics lectures held at the NIH; Served as co-web developer for the department; Shadowed in various clinical settings

Freeman Enterprises – New Haven, CT; May 2011 – August 2011
Special Assistant to the CEO

Assisted the CEO in a variety of issues pertaining to the renovation of the Ezra Stiles residential college at Yale University and the move of assets from temporary housing and storage into the renovated facility; served as a liaison and provided direction to the moving and construction companies, various contractors, and staff and leaders of the Ezra Stiles community; calculated audits of billable hours of moving company; performed miscellaneous physical labor; organized furniture and items for the move; planned and executed library re-organization

Yale University Summer Session – Yale University, New Haven, CT; May 2011 – August 2011
Residential Counselor

Residential Advisor to high school and international students living on campus to take classes as part of Yale Summer Session; lived in dorms to provide academic and logistical support for residential students; fostered a supportive, exciting, and social environment for the students; organized activities and off-campus trips

Yale College Dean's Office – Yale University, New Haven, CT; August 2010 – May 2010
Freshman Counselor – Ezra Stiles College

Lived in dorms alongside approximately 125 freshmen; performed academic advising; mediated interpersonal conflicts; dealt with student health and building maintenance emergencies; counseled students on personal matters; organized various study breaks and social events for freshmen; fostered teamwork to built environment of fun, trust, and friendship; worked closely with residential college Master and Dean to better serve student needs.

Yale University Library – Access Services, New Haven, CT; January 2008 - May 2009
Level IV Supervisor – Sterling Memorial Library Stacks Division

Supervised large student staff in tasks such as shelving returned and relocated books, discharging books, accuracy checking, retrieving books for patrons; produced periodic statistical reports for workplace efficiency; met regularly

with supervisors and administration to address library needs; promoted to level II after two months and Level IV after just five months; gained communication, leadership, cooperation, management, and public relations skills.

Calvert Memorial Hospital - Information Technology Dept., Prince Frederick, MD; June 2007 - August 2007
Healthcare Information Technology (IT) Intern

Researched various vendors in search of a comprehensive hospital intranet solution and a single sign-on option; helped with contract negotiations and initial implementation stages of hospital intranet; attended seminars and vendor presentations to help with vendor/product analysis; shadowed various members of the hospital IT department involved with both hardware and software, covering a wide range of medical, financial, and maintenance applications

RESEARCH EXPERIENCE

Fahmy Lab – Biomedical Engineering Dept., Yale University, New Haven, CT; September 2010 – August 2011
Directed Research Student

Collaborated to develop new nanoparticle delivery system for malaria vaccination and treatment; Investigated improvements for adoptive immunotherapy treatment of cancer; performed a variety of laboratory assays to analyze cell proliferation, growth, and morphology; ran experiments using components harvested from mice; independently planned new experiments and routes for improvement; presented work in conference-style Powerpoint format to lab meetings; collaborated with other lab members to share protocols and materials; worked on publications and review articles; *manuscripts in preparation*

Qiao Lab – Dept. of Chemical & Biomolecular Engineering, University of Melbourne, Australia; June 2010 - August 2010
Summer Fellowship Appointee

Researched synthesis, structure, and function of star polymers with linked peptide arms; performed in-depth literature research using a variety of online databases and search tools; performed synthesis and characterization; collaborated with other lab members for advice on experiments; performed cell culture experiments with cancer cells to test for effectiveness of the particles; *manuscript published*

Levene Lab – Biomedical Engineering Department, Yale University, New Haven, CT; September 2008 – May 2011
Directed Research Student

Investigated methodology to improve resolution of ultrasound imaging technology with novel techniques; performed research and software management; worked independently to optimize imaging setup and signal processing; *patent pending and manuscript in preparation*

Ringeisen Lab –Naval Research Lab, Washington, DC; June 2009 - August 2009; June 2008 - August 2008
Assistant Physical Science Researcher – Alternative Energy Section, Chemistry Division

Researched methods of improving tissue engineering via cell-printing; performed in-depth literature reviews and searches; developed a polymer prototype; researched methods of optimizing bacterial biohydrogen production for a fuel cell system; introduced to various laboratory techniques in microbiology and bacteriology, as well as systematic research procedures

Mullen Lab – Dept. of Defense**,** Patuxent River NAVAIR, Leonardtown, MD; June 2006 - August 2006
Electrical Engineering Intern – Avionics Department, Water-Based Laser Systems

Led research and development of laser system to be used to map the surface of ocean waves in real-time as part of a comprehensive laser imaging system; maintained research log and prepared research report on Powerpoint; worked with various electrical components, performing tests and creating control programs in LabView

PUBLICATIONS, PRESENTATIONS, POSTERS

Publications

- Lowenthal J, Hull SC, Pearson SD. The Ethics of Early Evidence – Preparing for a Possible Breakthrough in Alzheimer's Disease. *N Engl J Med.* 2012. 367(6): 488-490.
- Lowenthal J, Lipnick S, Rao M, Hull SC. Specimen Collection for Induced Pluripotent Stem Cell Research: Harmonizing the Approach to Informed Consent. *Stem Cells Trans Med.* May 2012. 1(5): 409-421.
- Sulistio A, Lowenthal J, Blencowe A, Bongiovanni ML, Ong L, Gras SL, Zhang X, Qiao GG. Folic Acid Conjugated Amino Acid-Based Start Polymers for Active Targeting of Cancer Cells. *Biomacromolecules*. 2011. 12: 3469-3477.
- Lowenthal J, Park J, Fahmy TM. Biomimetic and bio-inspired systems: targeted diagnostics and therapeutics at the nanoscale. Submitted to WIREs Nanomedicine & Nanobiotechnology (2012). (review article)

Presentations

- Ethics of iPS Cells. A talk given at the NIAID Clinical Research Monitoring Program Retreat. NCI Frederick. June 14, 2012.
- (Accepted, forthcoming October 2012) Lowenthal J et. al. (Mis)Representations of an Ethical Narrative: Realizing the Potential of Induced Pluripotent Stem Cells. Panel at the 2012 American Society for Bioethics & Humanities (ASBH) annual meeting.

Posters

- Informed Consent for Specimen Donation to Induced Pluripotent Stem Cell Research. Poster at National Institutes of Health CRM/SCIG Stem Cell Research Symposium. May 10-11, 2012.
- Biomimetic Engineered Microenvironment for T Cell Culture. Poster at Yale Engineering & Science Weekend. Feb 2011.

CLINICAL EXPERIENCE

- Shadowing – Johns Hopkins University Hospital Department of Hematology and Oncology, Bone Marrow Transplant Service, Oncology Clinic
- Volunteer & Shadowing – Calvert Memorial Hospital Department of Emergency Medicine
- Shadowing – Calvert Memorial Hospital Department of Vascular Surgery
- Shadowing – NIH Internal Medicine Consult Service
- Shadowing – NIH Undiagnosed Diseases Program (UDP – catch-all for undiagnosed genetic/metabolic diseases)
- Shadowing – NIH NHLBI Hematology/Oncology/Bone Marrow Transplant Team

EXTRACURRICULAR ACTIVITIES AND EXPERIENCE

- Ezra Stiles College Council – President
- "Out of the Blue" A Cappella group at Yale – Concert "Jam" Manager, Alumni Coordinator
- Tau Beta Pi Engineering Honor Society - Treasurer
- Yale Club Baseball Team – Treasurer
- Ezra Stiles College Intramural Football, Volleyball, Softball teams - Member
- Yale Biomedical Engineering Society – Vice President
- Joseph Slifka Center for Jewish Life – Residential College Jewish Life Fellow
- Maimonides Jewish Life Fellowship - Participant
- Yale College Dean's Office Standing Committee on Science and QR - Member

HONORS/AWARDS

- Recipient – Alpheus Henry Snow Prize – Top prize in Yale College, for the graduating senior who has done the most for Yale through a combination of intellectual achievement, character, and personality – 2011
- Recipient – D. Allan Bromley Prize – For the graduating senior with top performance in the Biomedical Engineering major – 2011
- Recipient – Ernest F. Thompson Cup – For "contributions to the life" of Ezra Stiles College – 2011
- Recipient – Whitaker Award – Institute for International Education (IIE) Fellowship (to perform tissue engineering research at Imperial College London) – 2011-2012 - *Declined*
- Senior Inductee – Phi Beta Kappa – Yale University Chapter – Inducted Fall 2010
- Recipient – John E. Linck & Alanne Headland Linck Fellowship - 2010
- Recipient – Alan S. Tetelman 1958 Fellowship (Yale College Fellowship for International Research in the Sciences) – 2010
- Junior Inductee – Tau Beta Pi National Engineering Honor Society – 2009
- Recipient – Northrop Grumman Engineering Scholarship – 2007
- Recipient – Carson Scholarship – 2006