Curriculum Vitae

Brian T. McVerry, Ph.D.

Marina del Rey, California | bmcverry@gmail.com

PROFILE

- Founder, Scientist, inventor, and entrepreneur with experience bringing together new technology and developing strategic partnerships to grow a successful organization
- National Science Foundation GRFP Recipient and Finalist in the U.S. Patent and Trademark Office National Collegiate Inventor Competition
- Author of several high-profile academic publications and patents

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EMPLOYMENT HISTORY

June 2016 – Present — Chief Scientific Officer, Co-Founder, Silq Technologies — Los Angeles, CA

- Conceived and developed the Silq technology for implanted medical devices from the ground up
- Built partnerships with CMOs to scale both the technology and business from proof-of-concept to revenue generation in 3 years
- Lead investment presentations demonstrating technology, market opportunity, and business strategy - Raised $12M+ to date
- Generated first revenue by targeting NLUTD patient populations with the greatest complication rates - which is the current sales strategy used by Silq's commercial team
- Leader of regulatory strategy and worked closely with CRO to obtain FDA clearance for urethral (in 1 year), suprapubic, and nephrostomy devices (additional 1.5 years) to reduce patient complications
- Built relationships with physicians, nurses, patients, and KOLs – all now Silq technology champions - and recruited physicians for Silq's scientific advisory board
- Architect of two integral randomized and quasi-experimental clinical studies to demonstrate improved clinical outcomes and patient QoL of devices treated with Silq technology
- Began collaboration with leading the largest long-term and short-term implant OEMs to reduce complication for their devices (Boston Scientific, Abbott, Johnson & Johnson, Abbvie, etc.); business engagements ongoing with leading players in cochlear implants, breast implants, contact lenses, gastric balloons, medical grade raw materials manufacturing, and lung biopsy devices
- Lead IP strategy and built patent portfolio with legal team for patents, licensing, and FTO
- Lead reimbursement and claim strategy
- Initiated and secured deals with domestic and international manufacturers that anchor current supply chain

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EDUCATION

Sept 2011 – June 2016 — Chemistry, Ph.D. University of California, Los Angeles — Los Angeles, CA

- Patent: *A Universal Scalable and Cost-Effective Surface Modification for Anti-Fouling Polymeric Membranes* - Licensed to Silq Technologies Corp.
- Patent: *Non-flammable electrolyte for energy storage devices* - Licensed to Nanotech Energy with royalty agreement
- Publication: **McVerry et al.** Bio-inspired zwitterion-treated silicone catheters reduce device-related
- complications in chronically catheterized patients. *Sci. Adv.* 2025. *Under review*.
- Publication: **McVerry *et al.*** A Readily Scalable, Clinically Demonstrated, Antibiofouling Zwitterionic Surface Treatment for Implantable Medical Devices. *Adv. Mater.* 2022, 34, 2200254. Highlighted in ScienceDaily, MSN, World Medicine Foundation, American Association for the Advancement of Science, Healthcare in Europe, NBC Los Angeles. **Impact Factor: 32**
- Publication: **McVerry *et al.*** Next-Generation Asymmetric Membranes Using Thin-Film Liftoff. *Nano Lett.* 2019, 19, 8, 5036–5043. Highlighted on Phys.org. **Impact Factor: 12**
- Authored proposal that awarded National Science Foundation Sustainable Chemistry Grant: Funded $330k for 3 years
- Finalist in the National Collegiate Invention Competition - U.S. Patent Office, Alexandria, Virginia
- Recipient of the National Science Foundation Graduate Research Fellowship: Most prestigious national graduate fellowship program - 16% national acceptance rate with over 12,000 Ph.D. program applicants

- Recipient of National Science Foundation IGERT Fellowship: Clean Energy for Green Industry
- Recipient of Inorganic Faculty Award, UCLA Chemistry and Biochemistry, 2016
- Leader in Sustainability, Anderson School of Management, UCLA
- GPA: 3.6/4.0

Sept 2007 – June 2011 B.S. Biochemistry and Molecular Biology, University of California, Santa Barbara Santa Barbara, CA

- Major GPA: 3.5/4.0
- Dean's Honor Roll: Spring 2009, Fall 2009

SKILLS

- Technology Development and Licensing
- Patent, Manuscript, and Grant Authorship
- Supply Chain Management
- Regulatory Strategy (FDA)
- Go-to Market Strategy
- Medical Device Design
- Computer-aided Design
- Clinical Study Design
- Fundraising
- Microfluidics
- Organic Synthesis
- Polymer Synthesis
- Large Scale Chemical Synthesis
- Nuclear Magnetic Resonance
- Chemical Work Up
- Chemical Characterization
- Tangential Flow Filtration
- Thin-film Membrane Fabrication
- Zeta Potential Analysis
- Goniometry
- Atomic Force Microscopy
- Scanning Electron Microscopy
- Profilometry
- UV-Vis spectroscopy
- Lithium-ion Battery Fabrication and Characterization
- Data Analysis
- Microsoft Powerpoint, Excel, Word
- ChemDraw

PUBLICATIONS AND PATENTS

- Biofouling resistant coatings and methods of making and using the same. US Patent 12,121,634
- Non-flammable electrolyte for energy storage devices. US Patent 12,199,238
- A readily scalable, clinically demonstrated, antibiofouling zwitterionic surface treatment for implantable medical devices. Advanced Materials. 2022. 34, 20, e2200254
- Universal scalable and cost-effective surface modifications. US Patent 11,084,002
- Polyaniline-based chlorine resistant hydrophilic filtration membranes. US Patent 10,532,328
- Energy providing devices and applications thereof. US Patent 11,258,134
- Nanostructured graphene oxide composite membranes with ultrapermeability and mechanical robustness. Nano Letters. 2020. 20, 4, 2209-2218
- Ultrapermeable organic solvent nanofiltration membranes with precisely tailored support layers fabricated using thin-film liftoff. ACS Applied Materials and Interfaces. 2020. 12, 27, 30796-30804
- Asymmetric composite membranes and uses thereof. US Patent App. 16/762,435
- Enhancing polyvalent cation rejection using perfluorophenylazide-grafted-copolymer membrane coatings. ACS Applied Materials & Interfaces. 2020. 12, 37, 42030-42040
- How permeable could a reverse osmosis membrane be if it was specifically developed for uncharged organic solute rejection? AWWA Water Science. 2020. 2, 5, e1189
- Direct grafting of tetraaniline via perfluorophenylazide photochemistry to create antifouling, low bio-adhesion surfaces. Chemical Science. 2019. 10, 16, 4445-4457

- Next-generation asymmetric membranes using thin-film liftoff. Nano Letters. 2019. 19, 8, 5036-5043
- Electrostatically varied grafted copolymers for enhancing multivalent ion rejection for nanofiltration. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY. 2019. 258
- Separation techniques using conjugated polymers. Conjugated Polymers. 2019. 4th Edition, CRC Press. 629-677
- Integration of Porous Piezoelectric Separator for a Self-Charging Supercapacitor. Electrochemical Society Meeting Abstracts. 2018. 233, 44, 2547
- Roll-to-roll functionalization of polyolefin separators for high-performance lithium-ion batteries. ACS Applied Energy Materials. 2018. 1, 7, 3292-3300
- Surface modification of reverse osmosis membrane by graphene oxide grafting with different oxidation degrees. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY. 2017. 253
- Low-fouling antibacterial reverse osmosis membranes via surface grafting of graphene oxide. ACS applied materials & interfaces. 2016. 8, 23, 14334-14338
- Flash converted graphene for ultra-high power supercapacitors. Advanced Energy Materials. 2015. 5, 18, 1500786
- Novel chlorine resistant low-fouling ultrafiltration membrane based on a hydrophilic polyaniline derivative. Journal of Materials Chemistry A. 2015. 3, 16, 8725-8733
- Scalable antifouling reverse osmosis membranes utilizing perfluorophenyl azide photochemistry. Macromolecular Rapid Communications. 2014. 35, 17, 1528-1533
- Fabrication of low-fouling ultrafiltration membranes using a hydrophilic, self-doping polyaniline additive. Chemistry of Materials. 2013. 25, 18, 3597-3602
- Synthesis and Characterization of Semicrystalline Polyethylene-graft-Poly (acrylic acid) Copolymers. Macromolecular Chemistry and Physics. 2011. 212, 5, 507-514.