

Richard D. Purcell
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DNA Healthlink, Inc. (2005 - Present)

President

Strategic Planning & Business Development Executive

DNA Healthlink is a strategic consulting practice that provides executive leadership and business development services to clients in the biopharmaceutical, information technology, and education industries. As a strategic leader with experience and vision, I help companies build innovative programs that address the needs of the marketplace. (www.dnahealthlink.com).

- Executive management with P&L responsibilities
- Operations & management
- Regulatory filings & approvals
- Business development & licensing
- Technology search and evaluation
- Mergers & acquisitions

Academics

Princeton University

Bachelor of Arts in Biochemical Sciences, '83

Thesis: Characterization of Nerve Growth Factor Receptor

Goalkeeper, Varsity Soccer

Goalkeeper Coach, Women's Varsity Soccer

Rutgers Graduate School of Management

MBA Program: Marketing & Finance

Monmouth University

Adjunct Professor, School of Science

I built and taught a course in the Biology Department: *The Business of Biotechnology from the Bench to the Market (BY360)*.

- Designed a course for biochemistry and health science majors to integrate business, finance, and communications skills into the scientific curriculum.
- Established the "Biotech Showcase" for students to present their work in a "Shark Tank" investor forum
- Instituted an industry research grant program to provide internship opportunities for summer research.

Executive Leadership

NuGenerex Immuno-Oncology (NGIO) & Generex Biotechnology (OTCQB:GNBT)

Executive Vice President, Research & Development (January 1, 2017 – February 20, 2022)

Chief Operating Officer (2012 – 2014)

NuGenerex Immuno-Oncology is a subsidiary of Generex Biotechnology with a patented immunomodulating vaccine platform called Ii-Key. Our focus is on activating T Cells to induce a multi-faceted immunologic response against target antigens in cancer and infectious disease. In the last 18 months, we have gone from concept to the clinic, creating a novel **COVID-19 vaccine**, which is set to enter clinical trials. (<http://nugenerexio.com>)

- Led the public spin-out of NuGenerex IO from Generex Biotechnology through a Form 10 filing with SEC
- Raised \$7 Million for COVID vaccine development through international licensing deals
- Developed and produced a SARS-CoV-2 vaccine using the NuGenerex IO Ii-Key technology
- Coordinated the \$4 million acquisition of Olaregen Therapeutix, a regenerative medicine company in wound care

Biopharmaceutical Executive
"From the Bench to the Market"

Richard D. Purcell

- Negotiated joint venture deal with remote patient monitoring software company to form NuGen Health

RespireRx Pharmaceuticals (OTCQB:RSPI) (October 2014 – Present)

Senior Vice President Research & Development

RespireRx is developing novel drugs for the treatment of respiratory and neurologic disorders, including opiate-induced respiratory depression, spinal cord injury, and epilepsy. I am leading the clinical development and strategic partnering efforts for the company's ampakine programs. (www.respirerx.com)

- Completed licensing deal for Ampakine Platform from University of California, Irvine
- Established a collaboration with University of Florida and the NHLBI to develop ampakines for neurologic disorders: Opiate induced respiratory distress, spinal cord injury
- Completed licensing deal for KRM-II-81 to treat epilepsy and pain from the University of Wisconsin
- Opened the company's first IND
- Conducted a Phase II study of ampakine CX1739 for the treatment of OIRD
- Clinical protocol: Ampakines for the treatment of spinal cord injury.

intelliSanté Corporation

President, Founder, Director

We designed, programmed, and implemented our HIPAA compliant, cloud-based health data platform C3HealthLink to integrate primary care and mental health services, with emphasis on patient activation & communication, collaborative care and patient self-management, and data analytics for outcomes research.

Cynvec LLC

President & COO, Director

Cynvec was an Aurora Capital company. Cynvec is a development stage biotechnology company focused on the commercial development of our lead product CYN 101 for the treatment, diagnosis, and monitoring of cancer. CYN 101 is a sindbis virus-based vector that explicitly targets tumors without affecting normal cells. The company is entering human clinical trials for the treatment of metastasized tumors, especially in ovarian cancer.

Xintria Pharmaceuticals

Chief Operating Officer

Xintria Pharmaceuticals is an Aurora Capital company. In my roles as COO, I coordinated and oversaw all aspects of pre-IND and clinical development programs for Xintria, including technology transfer, production, manufacturing, formulation, and regulatory compliance for CMC. I also designed and managed the preclinical and clinical development programs for developing a traditional Chinese medicine to treat cardiovascular and metabolic diseases.

Hackensack Meridian Health

Consultant

I consulted on a wide range of projects for Hackensack Meridian Health, one of the largest healthcare systems in New Jersey. Some projects include evaluation and reorganization of clinical research operations, developed department level strategic plans for clinical research, and wrote the Oncology Research Plan for Hackensack Meridian Cancer Center.

Prior Experience

ClinPro, Inc., Bound Brook, NJ

President

We built ClinPro to a full-service CRO through the merger of three family-run businesses focusing on integration of technology solutions for clinical research with an emphasis on oncology and cardiology.

- Responsible for business development, strategic planning, sales, and business and IT operations.

Richard D. Purcell

- Designed, coordinated, and managed clinical trials for pharmaceutical, biotech, and diagnostics companies
- Signed five strategic alliance partnerships to extend the company's reach in the marketplace and geographically.
- Signed several business development partnerships with pharmaceutical, biotech, and medical device companies on drug/device clinical programs.
- Opened European and Japanese offices.
- Spearheaded strategic technology improvement initiatives to reposition the company as a technology solutions provider in clinical development. Resulted in a 5-year partnership agreement with a medical device company involving 7 studies.

SCP COMMUNICATIONS, INC., New York, NY

Corporate Vice President/General Manager

We grew SCP from a small publishing house to a force in the pharmaceutical industry, integrating education, training, and clinical data programs to launch such blockbusters as **Lipitor** (Pfizer), **Avandia** (GSK), **Accolate** (AstraZeneca), **Tequin** (BMS), and **Biaxin** and **Meridia** (Abbott).

- Responsible for business development, strategic planning, sales, and business and IT operations.
- Designed, coordinated, and managed clinical trials for pharmaceutical, biotech, and diagnostics companies
- Signed five strategic alliance partnerships to extend the company's reach in the marketplace and geographically.
- Signed several business development partnerships with pharmaceutical, biotech, and medical device companies on drug/device clinical programs.
- Opened European and Japanese offices.
- Spearheaded strategic technology improvement initiatives to reposition the company as a technology solutions provider in clinical development. Resulted in a 5-year partnership agreement with a medical device company involving 7 studies.
- Participated in the start-up of the #1 medical web site, Medscape through sales and business development activities.

In Vivo, Princeton, NJ

Director, Business Development

At In Vivo, we revolutionized Phase IV clinical programs through integrated medical marketing initiatives and real-world data programs.

- Primary responsibilities focused on client relations, new business development, and management of all marketing activities.
- Developed and implemented sales & marketing plan.
- Designed Phase IV clinical research programs in the areas of CNS, oncology, and anti-infectives.
- Managed all advertising and promotional activity for the company.
- Managed a staff of national account representatives.

Kline Group, Fairfield, NJ

Business Manager, International Life Science Consulting Practice

I helped to build Kline & Company's pharmaceutical and life science consulting practice to help the chemical industry expand into the biotechnology sector.

- Conducted customized, proprietary consulting projects focused on translating market needs to actionable business plans.
- Developed international strategic plans and competitive intelligence projects for pharmaceutical, biotechnology, and agro-chemical companies.
- Projects included commercial development of pharmaceutical and biotechnology products for agricultural, therapeutic, and diagnostic applications.

Richard D. Purcell

- Utilized technology assessment, market analysis, process improvement, benchmarking, strategic planning, acquisitions, and joint venture and licensing partnerships.
- Convened a ground-breaking conference “The Future of Agriculture”, bringing together agrochemical, seed, industry leaders

Hoffmann-La Roche, Nutley, NJ

Research Scientist, Protein Structure/Function Laboratory

I was the only non-PhD running a laboratory at Roche as we committed to solving the AIDS crisis in the 1980's.

- Responsible for analytical biochemistry, protein purification, and basic research directed towards novel drug discovery.
- As a member of the Roche AIDS Research Task Force, purified and characterized the HIV-1 regulatory proteins *rev* and *tat*. Publications:

Purification and Characterization of Recombinant *rev* Protein of HIV-1

Proceedings of the National Academy of Science. Vol. 87, October, 1990

Structural and Functional Characterization of HIV-1 *tat* Protein

Journal of Virology. January, 1989, pp 1–8.

Integrated Genetics (Now Genzyme), Framingham, MA

Scientist, Protein Engineering Department

In my first job, I established the Protein Engineering Department at Integrated Genetics and coordinated the scale-up of mammalian cell culture systems for the production of therapeutic proteins.

- Developed and patented a second generation TPA with increased half life
- As a result of the patent, Genzyme receives royalties from Genentech on sales of TNKase®, which infringed on the Genzyme patent
- **Biochemical and In-vivo Analysis of Deglycosylated and Semi-glycosylated Tissue Plasminogen Activators**
- *Journal of Cellular Biochemistry. Supplement 12B, 297, 1988*
- Patents: US #5,344,773 , European #85306957.3, Japan #1-214-13**Semi-glycosylated Variants of TPA With Increased Half-life**

Patents

COVID-19 Vaccine: Multi-Targeting, Multi-Functional Selective Immune-Regulatory Ii-Key Peptide Vaccines for Prophylaxis and Long-Term Protection Against SARS-CoV-2 Infection and COVID-19 Disease Without Antibody Dependent Enhancement (ADE), and Related Compositions and Methods for the Design, Construction, Formulation and Use of Anti-SARS-CoV-2 Ii-Key Hybrid Peptide Vaccines U.S. Patent application 63/130,822. 27 December 2020.

Compositions and Methods for Treating Spinal Cord Injuries. Lippa, A., Purcell, R., USPTO Patent application #63033818. June 2020.

Concepts for Promoting Health & Wellness and Engagement Therein. U.S. Patent Application #62003619, Filed May 2014.

Semi-glycosylated Variants of TPA With Increased Half-life

US #5,344,773 European #85306957.3, Japan #1-214-13

Concepts for Promoting Health & Wellness and Engagement Therein. US Patent Application #62003619, Filed May 2014.

Publications

Richard D. Purcell

Brain Vacuolation Resulting from Administration of the Type II Ampakine CX717 is an Artifact Related to Molecular Structure and Chemical Reaction with Tissue Fixative Agents. Richard Purcell, Gary Lynch, Christine Gall, Steven Johnson, Zhong Sheng, James Cook, Michael Rajesh Stephen, Robert H. Garman, Bernard Jortner, Brad Bolon, and Arnold Lippa. *Toxicol Sci.* 2017 Dec 15.

Oncolytic Properties of Ampakines In Vitro. Daniel Radin, Richard Purcell, Arnold Lippa. *Anticancer Research.* 2018 Jan;38(1):265-269.

Tarps Differentially Affect the Pharmacology of Ampakines. Daniel P Radin, Yong-Xin Li, Gary Rogers, Richard Purcell, Arnold Lippa. *Biochem Pharmacol.* 2018 Aug;154:446.

Stargazin Differentially Modulates Ampakine Gating Kinetics and Pharmacology. Daniel P Radin, Yong-Xin Li, Gary Rogers, Richard Purcell, Arnold Lippa. *Biochem Pharmacol.* 2018 Feb;148:308-314.

Ampakines Attenuate Staurosporine-induced Cell Death in Primary Cortical Neurons: Implications in the 'Chemo-Brain' Phenomenon. Daniel P Radin, Gary Rogers, Kimberley E Hewitt, Richard Purcell, Arnold Lippa. *Anticancer Res.* 2018 Jun;38(6):3461-3465.

Effects of Chronic Systemic Low-Impact Ampakine Treatment on Neurotrophin Expression in Rat Brain. Daniel Radin, Steven Johnson, Richard Purcell, Arnold Lippa. *Pharmacother.* 2018 Sep;105:540-544.

Acute Ampakine Treatment Ameliorates Age-Related Deficits in Long-Term Potentiation. Daniel Radin, Sheng Zhong, Richard Purcell, Arnold Lippa. *Biomed Pharmacother.* 2016 Dec;84:806-809.

Antagonism of Remifentanyl-Induced Respiratory Depression by CX1739 in Two Clinical Models of Opioid Induced Respiratory Depression (OIRD). Andrew Krystal, MD, John Greer, PhD, Dariusz Nasiek, MD, Eva Krusinska, PhD, Arnold Lippa, PhD, Richard Purcell. Poster presented at Sleep 2017 the Annual Meeting of the American Academy of Sleep Medicine.

Purification and Characterization of Recombinant rev Protein of HIV-1. Carlo M. Nalin, Richard D. Purcell, Douglas Antelman, Dale Mueller, Lorraine Tomchak, Bogda Wegrzynski, Eileen McCarney, Voldemar Toome, Richard Kramer, and Ming-Chu Hsu. *Proceedings of the National Academy of Science. Vol. 87, October, 1990*

Structural and Functional Characterization of HIV-1 tat Protein. Steven Ruben, Ann Perkins, Richard Purcell, Keith Joung, Rey Sia, Robert Burghoff, William A. Haseltine, AND CRAIG A. ROSEN. *Journal of Virology. January, 1989, pp 1-8*

Biochemical and In-vivo Analysis of De-glycosylated and Semi-glycosylated Tissue Plasminogen Activators. *Journal of Cellular Biochemistry. Supplement 12B, 297, 1988*

Winning the Healthcare Revolution with Technology for Care Coordination, Collaboration & Communication. Published on *Healthcare Intelligence Network. September 8, 2015*

Freedom to Feel Good - Patient Self-Management Through Collaborative Health Technology: intelliganté software systems for patient self-management and collaborative care.

Presentation to the Annual Meeting of the NJ Health Information Management Systems Society. October 2016. The results demonstrated clinically significant weight loss, enhanced medication compliance, improvements in cardiovascular (blood pressure) and metabolic (glucose) measures, and overall patient satisfaction with care.