



# Technical Expertise

Kilpatrick Townsend's large patent practice is characterized by a large depth and breadth of technical experience. The below list sets forth representative technical and industry expertise of selected partners & counsel who are available to work on patent due diligence matters and does not include the still wider wide range of expertise among our associates and patent agents. Many of the professionals highlighted below have expertise across multiple technical disciplines, but we have indicated areas that illustrate the diversity of our overall technical expertise. If you don't see a technology/industry listed that you are interested in, we likely have expertise – please ask us.

## Electronics & Software

### Aeronautics

**Mark Mathison**, M.S. in Aeronautical Engineering (also has expertise in electromechanical devices, software, Internet, network, e-commerce).

### AI (Artificial Intelligence)

**Kate Gaudry**, Ph.D. in Computational Neurobiology (also expertise in software, computers, and quantitative-biology).

**Rob Curylo**, B.S. Electrical Engineering (also has expertise in machine learning for online marketing and credit risk assessment, & as workflow and machine-learning solutions for image and video editing).

### Autonomous Vehicles

**Ko-Fang Chang**, former engineer at ViaSat (also has expertise in mobile devices and applications, wireless communications, networking and computer architecture).

### Bioinformatics

**Dave Raczowski**, Ph.D. in Physics (also has expertise in medical diagnostics, image processing, machine learning, databases and cloud computing; programmable logic, computer hardware, networking, energy management, nanotechnology, power supplies, and financial transactions and other Internet commerce).

### Blockchain (Cryptocurrency)

**Tom Franklin**, former engineer at Lockheed & Hughes Electronics (also has expertise in Internet technology, content delivery, business methods, clean technology, circuit design, imaging arrays, cryptographic design, telecommunications, electronic design tools, wireless communications, networking and telemetry systems).

## Cloud Computing

**Sujit Kotwal**, former software engineer (also has expertise in SaaS, PaaS & IaaS, networking, artificial intelligence (AI), chatbots, big data, complex events processing (CEP), social networking systems, multimedia and image processing, computer graphics and animation, access control and identity management, user experience/interfaces (UX/UI), IoT/E technologies, business intelligence (BI) solutions, database systems, storage technologies and bioinformatics).

**Jesse Bennett**, B.S. in Computer Engineering (also has expertise in consumer products software and stream processing).

## Consumer Electronics

**Paul Haughey**, former engineer at Hughes Aircraft (also has expertise in Internet systems, software, blockchain, financial systems, mobile phones, microprocessors, computer peripherals, analog and digital circuit design, optics and medical instrumentation).

**Justin Eureka**, former product engineer at Sipex & Legerity (also has expertise in high end gaming peripheral devices, audio devices, computer accessories, autonomous vehicles, AR/VR/MR systems and peripheral devices, medical devices, renewable energy, micro-grid systems, computer peripherals, geographic information systems (GIS), digital audio workstations, media players, UI/UX, food/beverage products).

## Data Security

**Rodney Rothwell**, B.S. in Medical Technology & Electrical Engineering, former technologist at Quest Diagnostics & St. Mary's Hospital (also has expertise in bioinformatics, medical devices, machine learning, streaming data analysis, cloud computing and data storage, data security, energy storage and consumer electronic devices).

## E-Commerce

**Mike Pavento**, M.S. in Computer Engineering (also has expertise in telecom, computers and networking systems, software, virtual payment card transactions and payment processing systems, on-line banking, mechanical systems and devices, and bioinformatics).

## Electronic Circuits, Semiconductors

**Babak Sani**, M.S. in Electrical Engineering, former circuit design engineer at Sierra Semiconductor and Exar (also has expertise in memories, mobile media devices, graphics processors, discrete power devices, telecommunications, microprocessors, telecommunications, image processing, and consumer electronics).

**Barmak Sani**, M.S. in Electrical Engineering, former engineer at Signetics and Waver Scale Integration (also expertise in memories, solid state drive (SSD) systems, semiconductor power devices, semiconductor process and packaging, electronic design automation (EDA), and ICs for wireless, home networking, and mobile TV applications).

**Hitoshi Akiba**, former IP Counsel of Hitachi and Renesas (also has expertise in Power Tools).

## Electronics Materials and Fabrication Methods

**Gene Bernard**, Ph.D. in Physical Chemistry. (also has expertise in batteries, renewable energy, high-strength ceramics, semiconductors, alternative fuels, fuel cells, cellulosic ethanol, and natural gas production).

**Dan McCormick**, former engineer for refrigeration systems (also has expertise in financial transactions, semiconductor fabrication, solar cells, batteries, natural gas generation and recovery, refrigeration technologies, focal plane arrays, medical devices and hemostatic compositions, chemical engineering, clean technology, wireless charging and entertainment systems).

**Kelvin Catmull**, former process engineer at Intel and Motorola (also has expertise in semiconductor devices and processing, electronics, software, telecommunications, and networking).

## Financial Services

**Patrick Jewik**, former process engineer at IBM (also has expertise in semiconductors, medical devices, electronic toys, nanofabrication, microfluidic chips, biochips, bioinformatics, Internet, microporous filters, and semiconductor die packages).

## Internet of Things/Home Automation

**Karam Saab**, former engineer at BAE Systems (also has expertise in software, medical devices, satellite communications, television programming delivery, and thermostats and carbon monoxide detectors).

## Medical Image Processing

**Ruthleen Uy**, B.S in Computer Science (also has expertise in memory management, data compression, data encryption/decryption and radiation controls).

## Microprocessors

**Cathy Cretsinger**, Ph.D. in high-energy physics (also has expertise in LEDs, optics, imaging (LIDAR, MRI), quantum computing, atomic force microscopy, software (communication protocols, signal processing, 3D graphics, user interfaces, machine learning).

## Mobile Devices

**Michael Morlock**, former research engineer for Georgia Tech (also has expertise in handheld devices, network providers, handset manufacturers, and developers of advanced mobile technologies).

## Networking

**Matt Zigmant**, B.S. in Electrical Engineering, former engineer at Micro Linear (also has expertise in 802.11 a/b, Bluetooth, CDMA, EDGE, GSM, cordless phones, fiber optic data transmission, media conversion and mass storage).

## Optics

**James Sze**, former engineer at Qualcomm, fluent in Mandarin Chinese (also has expertise in computer graphics, computer communications technology, computer architecture, and bioinformatics, analog and digital circuits, natural language processing, semiconductors, optics, ultra-violet/laser equipment, image processing, hard disk drives, Radio-Frequency antennas, nanodevices, microprocessor design, computer networking, encryption and data compression, computer simulation, and business methods).

## Point of Sale systems

**Alton Absher**, former systems engineer at Lowe's (also has expertise in software, telecommunications and computer hardware).

## Quantum Computing

**Craig Largent**, Ph.D. in Electrical Engineering (also has expertise in lasers, optoelectronics, semiconductor processing and devices, Internet of Things (IoT) systems, wireless communications, and solar cells).

## Satellite Communications

**Charles Gray**, former software engineer, Mandarin Chinese speaker (also has expertise in computer networking, cellular, and other wireless communications, computer architecture, software systems and financial transactions).

## Software

**John Alemanni**, former programmer at Ciba (now Syngenta) (also has expertise in hardware technologies, with specialties including mobile devices, bioinformatics and laboratory information management, as well as mechanical and electro mechanical devices, including aerospace components, medical devices and medical device simulations).

**Carl Sanders**, former software engineer (also has expertise in database technology, locating and dispatching systems, cellular technologies, and banking systems).

## Telecommunications

**Brenda Holmes**, M.S. in Computer Engineering (also has expertise in software, networking, smart grid, lighting fixtures, wind turbines, computer systems, wireless systems and signal processing).

**Jason Gardner**, B.S. in Electrical Engineering (also has expertise in healthcare IT, image processing and projection, Internet applications, semiconductor devices, medical devices, energy production, autonomous vehicles, artificial intelligence, telecommunications controls, cloud computing, blockchain and predictive, banking software).

**Steve Jewett**, B.S. in Electrical Engineering, former IP counsel at Qwest and NCR (also has expertise in financial services, software, wireless systems and health care systems).

## Thin Films

**Bill Shaffer**, B.S. Electrical Engineering and Computer Science (also has expertise in semiconductor manufacturing equipment, photovoltaic systems and films, chip-level packaging, computer generated imagery (CGI) animation, computer architecture, software- and Internet-based technologies and consumer products).

## Video streaming

**Scott McMillan**, M.S. in Electrical Engineering, former Intel Engineer (also has expertise in computer vision, image processing, artificial intelligence, circuit design, wireless communications, computer architecture, networks, software, optical devices, IC packaging, semiconductor devices and fabrication).

# Biotechnology & Chemistry

## Biologics and Pharmaceuticals

**Tina Williams McKeon**, Ph.D. in neuroscience (also has expertise in neuroscience, immunology, therapeutic antibodies, oncolytic virus therapy, stem cells, recombinant technologies, cardiac technology, imaging and diagnostics, small molecule pharmaceuticals).

**Cindy Rothschild**, Ph.D. in Biological Chemistry (also has expertise in immunology, biotechnology, medical devices, and chemical compounds).

## Cell Biology

**John McDonald**, Ph.D. in Anatomy, former professor at Emory University School of Medicine (also has expertise in biotechnology, pharmaceutical and chemical industries).

## Chemical Engineering

**Jeffrey Gendzwill**, B.S. in Chemical Engineering (also has expertise in chemistry, clean energy, nutritional/pharmaceutical supplements, mechanical and biomechanical engineering, nanotechnology, physics, composite materials and medical devices).

## Chemistry

**Joe Snyder**, Ph.D. in Chemistry (also has expertise in life sciences, small molecule pharmaceuticals, drug delivery technologies, diagnostics and clean technology).

**Justin Krieger**, B.S. in Chemistry (also has expertise in chemical engineering, medical devices, metallurgy, nanotechnology, mechanical engineering and consumer products).

**Nicoletta (Nicky) Kennedy**, B.S. in Chemistry (also has expertise in polymers, pharmaceuticals, transdermals and cosmetics).

## Clinical Diagnostics

**Charles Calkins**, B.S. in Chemical Engineering & Life Sciences (also has expertise in robotics; bioinformatics; genome mapping; genetic testing; gene mapping and counseling; companion diagnostics; blood testing services, aerospace, pharmaceuticals, medical devices, personalized genetic medicine, semiconductors and DNA sequencing).

## CRISPR

**Matthew Hinsch**, Ph.D. in Plant Pathology (also has expertise in PCR, diagnostics, antibodies, immunology, oncology and plant biology).

## Diagnostics

**Joe Hao**, Ph.D. in Neuroscience (also has expertise in biologics, nucleic acid therapies, protein engineering, immunotherapy, molecular and cellular biology, genetics, neuroscience, stem cells, drug formulations, drug delivery, pharmaceuticals, and medical devices).

## Immunology

**Jamie Graham**, M.S. in Immunology & Molecular Pathogenesis, former research scientist in cancer & drug metabolism (also has expertise in biotechnology, diagnostics, isolation and purification methodology and pharmaceuticals).

**Andrew Serafini**, Ph.D. in Immunology (also has expertise in immunology, cancer therapeutics, molecular biology, chemistry, antibody engineering and therapeutics, vaccines, stem cell technologies, molecular genetics, genomics, proteomics and protein chemistry, pharmaceuticals, medical therapeutics, nanotechnology, clean energy, medical diagnostics, and personalized medicine).

## Molecular Biology

**Jennifer Giordano-Coltart**, Ph.D. in Molecular Biology (also has expertise in biochemistry, genetics, cell biology, biochemistry, immunology, vaccines, physiology, cancer biology, biologics, pharmaceuticals, diagnostics, and medical devices).

**Chuan Gao**, Ph.D. in Molecular Biology, fluent in Mandarin Chinese (also has expertise in biochemistry).

**Allison Dobson**, Ph.D. in Basic Medical Sciences, former Assistant Professor of Biology (also has expertise in biotechnology, medical devices, pharmaceuticals, biochemistry, genetics, cell biology, and toxicology).

**Matias Ferrario**, B.S. in Cellular and Molecular Biology (also has expertise in biotechnology, medical devices, pharmaceuticals, semiconductors, call processing systems, business methods, software systems and mechanical devices).

**Kathryn Wade**, Ph.D. in Microbiology and Molecular Genetics (also has expertise in biotechnology, disease treatment and diagnostics, pharmaceuticals, and biomedical devices).

## Oil & Gas Petrochemicals

**Keith Fredlake** (also has expertise in chemistry, chemical engineering, oil & gas-petrochemicals, medical devices and pharmaceuticals).

## Organic Chemistry

**Eugenia Garrett-Wackowski**, M.S. in Biotechnology & Chemistry (also has expertise in inorganic chemistry, biochemistry, molecular biology and immunology).

**Kimberlynn Davis**, Ph.D. in Organic Chemistry (also has expertise in chemistry and nucleosides).

## Plant Biology

**Ken Weber**, Ph.D. in Plant Pathology (also has expertise in chemistry, pharmaceuticals, plant and agricultural sciences, medical devices, and microbial genetics).

## Polymers

**Jennifer Blackburn**, Ph.D. in Organic (polymer) Chemistry (also has expertise in specialty chemicals - e.g., textile treatments, medical device coatings, agricultural chemicals).

**Troy Petersen**, B.S. in Chemistry (also has expertise in chemical, medical device and pharmaceutical arts).

## Sequencing

**Ted Apple**, Post-Doctoral Fellow at Genentech (also has expertise in immunology, genetics, re-purposing, biologics, diagnostics, microfluidics, sequencing, and green technologies).

## Mechanical & Medical Devices

### Aerospace & Defense

**Dean Russell**, M.S. in Electrical Engineering, former government contractor designing computer simulations for guidance and blast systems of the U.S. Army's PATRIOT missile (also expertise in blast mitigation systems, commercial aircraft equipment and systems, and swimming pool equipment).

### Athletic Equipment

**Tiffany Williams**, former process engineer at ExxonMobil Chemical (also has expertise in aerospace, software, telecommunications, Internet technology, medical devices, and architectural products)

### Biomedical

**Babak Kusha**, B.S. in Nuclear Engineering, former manager at Fluent, Inc. (also has expertise in electromechanical, consumer products, construction and heavy equipment, equestrian arts, food and beverage, furniture, medical devices, jewelry and luxury items, lifestyle and apparel, power generation, pumps and turbo machinery industries).

### Consumer Products

**Mike Bertelson**, B.S. in Genetics (also has expertise in medical devices and industrial products).

### Green Technology

**Rich Christiansen**, former engineer at Raytheon (also has expertise in medical devices, software/business methods, automotive, aerospace and consumer electronics).

### Industrial engineering

**Kris Doyle**, B.S. Industrial Engineering (also has expertise in lighting, medical device, animal processing, floorcovering, heat transfer tubing, industrial process and textile industries).

### Manufacturing Systems

**Steve Gardner**, M.S. in Electrical Engineering (also has expertise in software, computer hardware, medical devices, chemical compositions, Internet and e-commerce systems, electronics, mechanical devices, optics, pharmaceuticals, and telecommunications).

## Medical Devices

**Nena Bains**, former bioengineer & VP of IP at Boston Scientific (also has expertise in endoscopy and pulmonary technologies, robotic surgical systems, minimally invasive electrosurgical devices, drug delivery means, aneurysm grafts/filaments, laser eye surgery systems, dental appliances, contraceptive implants, spine surgery, radiation, cryo, and ultrasound devices, pulse oximeters, occlusion devices, dialysis valves, and numerous guidewire, stent and catheter-based technologies).

**Roger Wylie**, formerly worked as engineering coop for General Motors (also has expertise in software, medical devices, automotive, aircraft parts, consumer goods, complex machinery and sporting goods).

**Darin Gibby**, former catheter engineer at Abbott (also has expertise in aerosolizing medicaments, heart condition treatments, dental implants, drug delivery systems, insulin formulations, atherectomy and imaging catheters, CPR methods, chemical synthesizing systems, computer peripherals, software, financial transactions, sporting goods, cheese making processes, disk drive heads and baby products).

**Kristin Crall**, B.S. Neurobiological Sciences (also has expertise in joint, craniofacial & dental implants, wound care, operating room supplies, lab equipment, aerospace/aircraft technologies including aircraft water systems, galley equipment, evacuation slides and rafts, aircraft arresting systems, respirators, seats).

**Clark Weight**, former engineering technician at US Synthetic (also has expertise in heart implants, interventional devices, Lasik, CPR devices, medication distribution and carts).

## Metallurgy

**Rena Wainwright**, B.S. Industrial Engineering (also has expertise in consumer products, fastening and architectural products, aerospace, merchandising displays, pool care, machines for heat treating thread, and medical devices).

## Motion Control Systems

**David Boyd**, M.S. in Mechanical Engineering, former engineer at Hewlett-Packard (also has expertise in mechanical design, computer programming, and optics, especially illumination design and stray light analysis).