



Why Biospark?

The answer is simple.

Superior results are obtained from a close relationship with top flight attorneys who become members of your extended team.

We guide clients strategically for the long term, provide input on experimental design, offer candid advice (and tough love) when necessary, and deliver a return commensurate with the investment.

Our Values.

Excellence. Innovation. Stewardship.

EXCELLENCE. Biospark aims to deliver high caliber work at every step of the client journey. Whether proactively identifying issues, tenaciously seeking solutions, or efficiently executing strategies, we are dedicated to delivering comprehensive intellectual property (IP) services that align with your specific research and business goals. We drive value creation through a working relationship that is excellent in all respects.

INNOVATION. The biotechnology, pharmaceutical, and research-intensive industries we support are innovative—and Biospark is too. We aim to be flexible and creative when discussing business objectives, project goals, and work product. We are continually improving and growing our processes and systems to better serve you.

STEWARDSHIP. Biospark is a good steward of its clients and its team. The ecosystem we create not only provides the expertise and efficiency clients desire, but also supports the professional and personal goals of all of our team members.



Representative Technologies, Services, and Experience.

TECHNOLOGIES. Biospark's team has over half a century of experience in IP matters, with a particular focus on patent drafting, prosecution, and counseling, across a broad array of technologies, including:

- Antibody technologies
- Therapeutic peptides
- Small molecule therapeutics
- HDL mimetics
- Nucleic-acid based therapeutics
- Enzyme therapeutics
- Gene therapy technologies
- Gene editing technologies
- Vaccines and related methods of use
- Recombinant expression systems
- Xenotransplantation technology
- Synthetic biology
- Stem cell and organoid technologies
- Drug delivery technologies
- Bioinformatics
- Discovery platforms
- Industrial enzymes
- Nutritional supplements
- Diagnostic tools and assays
- Manufacturing processes

SERVICES. Biospark's services include:

- **Worldwide Patent Strategy and Patent Portfolio Management**
 - Preparation and prosecution of US patent applications
 - Management and oversight of global patent prosecution
 - Analysis of inventorship claims
 - Coordination of patent and research strategies to maximize patent scope
 - Review of client publications to align with patent strategy
 - Provision of advice on strategic patent lifecycle management and IP strategies, including coordination of regulatory and patent exclusivities
 - Management of patent office administrative proceedings, including reexaminations, *inter partes* reviews, and interferences
 - Ongoing analysis of IP portfolios to ensure protection for newly developed technology
- **Competitive Patent Analyses**
 - Freedom-to-operate and patentability analyses
 - Patent searches to identify competitive third party patents
 - Identification of potentially valuable opportunities to license or acquire patent assets
 - Opinions concerning validity and infringement of third party patents
 - Analysis of the patentability and likely scope of claims that will grant from third party applications

- **Transactional Support**

- IP due diligence or preparation in connection with corporate transactions and investments
- Presentations regarding IP portfolio scope and strength to prospective investors and partners
- Negotiation, drafting, and review of IP-related provisions in deal documents, including representations, warranties, and indemnities
- Negotiation, drafting, and review of IP-related agreements, including material transfer agreements, consulting agreements, services agreements, sponsored research agreements, and collaboration agreements

- **Litigation Support**

- Competitor patent portfolio review and pre-suit investigations
- Patent litigation strategy and support efforts

EXPERIENCE. A sampling of Biospark’s collective experience (which may have occurred at Biospark or at a prior employer):

- Patent strategy and prosecution for a startup company creating antibody-drug conjugates (ADCs) that target the immune system as well as third party agreements with virtual team and CROs
- Patent strategy and prosecution for a startup company developing monoclonal antibodies against tumor antigens and T-cell engagers
- Freedom-to-operate and patentability analyses for an established company with respect to bispecific antibody targets for new development projects
- Preparation and prosecution of foundational patents relating to an approved ADC
- Patent strategy for an established biotechnology company relating to its multispecific antibody formats
- Global management of a patent portfolio surrounding an antibody approved for a hematologic malignancy, including restructuring the claims to maximize patent term adjustment in the US, take advantage of supplemental protection certificate opportunities in Europe, and preparation of the portfolio for downstream partnering deals and the contemplated product life cycle
- Global management of a patent portfolio surrounding an antibody approved for treatment of multiple sclerosis, including working with medical experts on declarations that resulted in patent issuances in key jurisdictions
- Patent strategy for a platform technology for biobetter antibodies and the resulting antibody molecules, including identifying a unique angle of patentability for each successive product
- Successful challenge to an examiner’s rejection of claims covering an approved pharmaceutical formulation at the pre-appeal stage where the foundational patent on the active pharmaceutical ingredient (API) would expire shortly following approval
- Freedom-to-operate and patentability analyses for multiple glucagon-like peptide (GLP) receptor agonist peptides

Meet Our Team.

Muna Abu-Shaar

Managing Partner



Muna was born in Jordan and as a young woman was fortunate to attend boarding school in the UK. She continued her studies at Cambridge University, where she was awarded a B.A. in Natural Sciences (with honors) in 1992.

After completing her undergraduate degree, Muna moved to New York City, where she pursued a scientific career and earned a Ph.D. in Cellular, Molecular, and Biophysical Studies (with distinction) from Columbia University in 1999.

Towards the end of her graduate studies, Muna made the decision to use her scientific knowledge in patent law, seeking exposure to a greater variety of technologies and intellectual challenges. Muna attended law school while working full-time as a law clerk at the firm of Pennie & Edmonds LLP. By the time she earned her J.D. at Fordham Law School in 2003 (*cum laude*, Law Review, and Order of the Coif), Muna already had broad experience in patent law, including patent prosecution, litigation, interferences, and opinion work. After Pennie & Edmonds, Muna had a successful career at two AmLaw 50 firms, Jones Day and Dechert LLP, the last few years as a partner, and was recognized with a Super Lawyers “Rising Star” Award in New York (2011, 2013).

With the backing of her clients, and based on her extensive research into alternative approaches for providing legal services, Muna moved to one of the main hubs of the biotechnology industry—Cambridge, Massachusetts—and launched Biospark Intellectual Property Law in 2014.

Muna is admitted in Massachusetts and New York and before the USPTO.

Muna is an avid consumer of podcasts and audiobooks, always seeking to expand her knowledge on a wide variety of topics, including professional development, productivity, and individual performance. She also mentors and collaborates with other small business owners to implement these learnings to drive business success.

Adam Krol

Partner



As a young child, Adam's favorite subject in school was always science. Adam's interest in biology and chemistry in particular grew during his high school years, which led him to major in Medicinal Chemistry at the State University of New York at Buffalo, where he received a B.S. degree (*summa cum laude*) in 2004. Adam continued his education at SUNY at Buffalo as a graduate student, where he focused his studies on chemical and biological engineering and received an M.E. degree in Chemical Engineering in 2006. Adam became interested in patent law during graduate school and subsequently enrolled in SUNY at Buffalo's law school. Adam received a J.D. (*magna cum laude*) from SUNY at Buffalo in 2009.

Following law school, Adam joined Cooper & Dunham LLP, a New York IP boutique, as an associate. Adam subsequently joined Dechert LLP, an AmLaw50 firm where he and Muna first worked together, and later returned to Cooper & Dunham LLP. Adam joined Biospark in 2015, where he counsels biotechnology, pharmaceutical, and chemical industry clients in the areas of biologics, small molecules, pharmaceutical and chemical formulations, and manufacturing processes. Adam was recognized with a Super Lawyers "Rising Star" Award in Massachusetts (2017-2020).

Adam is admitted in Massachusetts, New Jersey, and New York, and before the USPTO.

Adam enjoys swimming, homebrewing, and spending time with his wife, two young children, and dog.

Shirley Wang

Special Counsel



Growing up and as an undergraduate, Shirley was interested in both science (particularly biology) and the humanities (particularly literature). Continuing this dual interest path, she received her B.S. degree in Biomedical Engineering from Yale University (with honors) in 2003 and her J.D. from University of Chicago Law School in 2007.

Following law school, Shirley joined the IP Transactions group at Shearman & Sterling LLP, a large international law firm, in its New York office. She then went in-house at a California biotechnology startup that went public with its enzyme technology during her tenure. Seeking wider exposure to life sciences and biotechnology licensing deal work, she joined Dechert LLP, where she met Muna and Adam. Following one more in-house role at Deloitte LLP providing support for their life sciences and healthcare practice in both the consulting and advisory spaces, she joined Biospark in 2021.

Shirley brings over fourteen years of experience in counseling clients on IP aspects in corporate transactions, such as mergers, acquisitions, IPOs, and financing rounds, as well as complex licensing deals, with a focus on collaboration and license agreements for pharmaceutical and biotechnology clients, ranging from platform technologies to pharmaceutical compounds. She also has extensive experience in daily contract work that both startups and more established companies encounter, such as confidentiality agreements, material transfer agreements, early-stage research, development, and evaluation agreements, services agreements, consulting agreements, and software licenses. Her pragmatic approach is a result of her prior in-house experience, which also included oversight of certain corporate and contract compliance matters.

Shirley is admitted in California and New York.

Shirley enjoys reading, strength training, and spending time with her family.

Sarah Bernard

Patent Agent & Project Manager



Sarah has always been interested in innovation and science. During her childhood many of her teachers commented on her “inquisitive mind” and several family legends exist regarding Sarah’s relentless need to ask “why” to get to the heart of an issue!

Sarah is a European patent attorney and a US Patent Agent with over a decade of experience in patent counseling for biotechnology, pharmaceutical, and academic clients in the areas of small molecules, pharmaceutical and chemical formulations, and manufacturing processes. Sarah also has experience in Business Development and Strategic Alliances for early drug discovery research as well as decades of experience in client relationship management and project management.

Sarah completed her training for the European Qualifying Patent Exams in Dublin, Ireland. She has a Ph.D. in Biochemistry from the University of Manchester and a B.Sc. (Hons) in Biochemistry from the University of Leeds. Sarah is based in Massachusetts and supports Biospark part-time as a patent agent and project manager. Prior to relocating to Massachusetts, she was a Senior Associate at a Dublin-based IP law firm.

Sarah enjoys spending time with her family and dog and running half marathons and marathons.

David Stark

Technology & Contracts Specialist



David decided to become a scientist at age 9, and a biologist at age 12, after reading about the phospholipid bilayer model of the mammalian cell membrane. He chose developmental biology over neuroscience during his first degree, after a traumatic experience with a locust. His interest in pattern formation was confirmed during a Ph.D. in amphibian limb regeneration with Jeremy Brockes, and studies of Hedgehog signaling with Phil Ingham. His love of skiing however encouraged him to qualify as a lawyer.

David is a UK-qualified solicitor with a Graduate Diploma in Law (GDL) and Legal Practice Course (LPC) from BPP Law School, London (both with distinction), a Ph.D. in Biochemistry from University College London, and a B.A. in Natural Sciences from the University of Cambridge. He has fifteen years of experience assisting clients in a broad range of commercial settings. David is based in the UK and supports Biospark part-time as a technology and contracts specialist.

David enjoys weightlifting, skiing, and cooking.

Raquel Aidun

Patent Paralegal & Accounts Manager



Raquel has a B.A. in Latin American Studies from George Mason University and over seven years of experience in professional administrative positions with an emphasis in the legal sector. Raquel is responsible for managing Biospark's patent and annuities docket, preparing patent prosecution documents, and reporting patent correspondence.

Raquel is interested in fitness and nutrition, and enjoys painting and spending time with her children.

Karla Johnson

Patent Administrator & Administrative Assistant



Karla has a B.A. in History from George Mason University and over six years of experience in professional office administration. Karla provides patent docketing, patent prosecution, and IP transaction support.

Karla enjoys reading, crafting, and spending time with friends and family.

Contact us.

We are here to help.

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