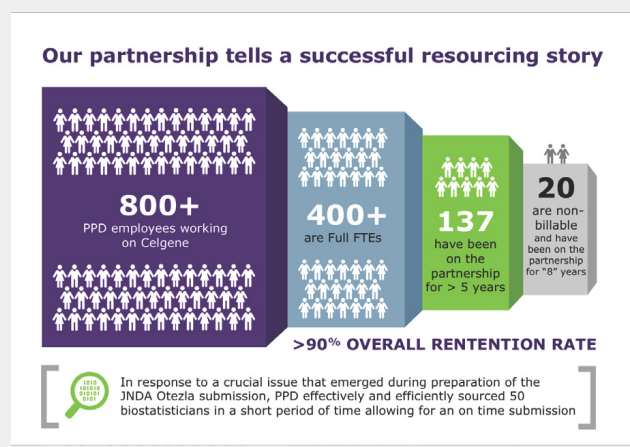
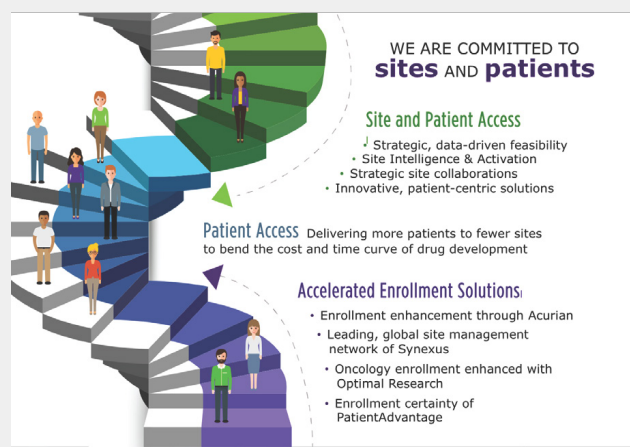
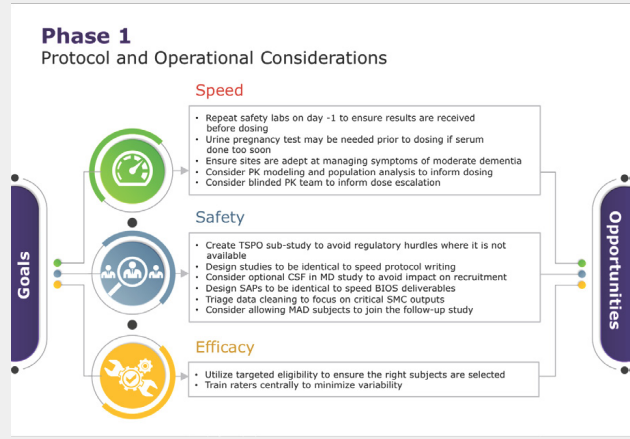


PPD Corporate Marketing Design



- Marketing Collateral
- Sales Presentations
- Infographics
- Email and Social Media
- Tradeshaw Graphics
- Digital and Print Advertising
- Website Graphics



Evolution of Clinical Trials

Today's Challenge from industry leaders (TransCelerate) and regulatory agencies (MHRA, FDA, EMA):

Harness advances and more efficiently deliver high-quality clinical trials.

PPD has built a strong foundation in our **people, processes and technology** that now allows us to transform the way clinical trials are executed and managed globally.

14,000+ employees worldwide

We will bend the time and cost curve for our clients by combining:

- Leading-edge technologies** (Preclarus, eTMF, CTMS)
- Innovative processes and strategies** (AIM, SIA)
- Efficient use of talent** (RSMM)

Bending the Curve The ideal curve reflects:

- Increased profitability
- Shortened development time
- Decreased spending

The Evolution of Clinical Monitoring

1970s Clinical monitoring begins as a way to improve protocol compliance, data integrity and patient safety.

1990s Electronic data capture makes data entry more efficient and portable

1997 CDISC establishes global standards and innovations to streamline research

2000s Improved interactive clinical trial management systems enable Site intelligence and complex randomization schemes

2012 Debut of PPD-CTMS, the next generation of (Web or voice) clinical trial management systems enable Site intelligence and activation launches, reduces startup cycle times 15% in less than a year*

2013 Adaptive and intelligent monitoring (AIM) strategy minimizes risk and maximizes quality at each site

2014 PPD moves entirely to electronic trial master files (eTMF) for improved efficiency and quality

2015 Select Preclarus™ dashboards available to all clients. Remote site monitoring combines onsite, centralized monitoring as PPD's new standard

Bringing a single molecule to market can take 12 years and cost up to \$2 billion dollars

New requirements and demands


- More and larger clinical trials
- Stronger privacy requirements and information controls
- Increased competition in providing final data faster

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PPD Corporate Collateral Design




- Brochures
- White Papers
- Overview Sheets
- Case Studies
- Brand Guide
- Templates



HELPING DELIVER LIFE-CHANGING THERAPIES





NEUROSCIENCE

A GLOBAL TEAM OF NEUROSCIENCE EXPERTS

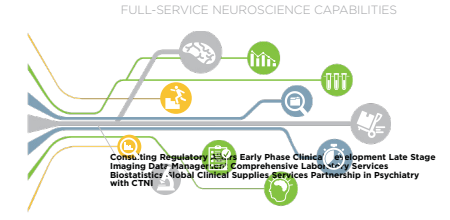
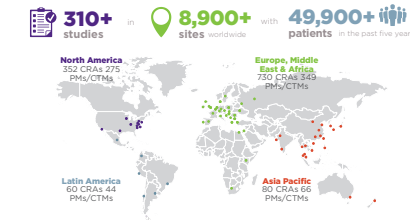
PPD's dedicated neuroscience team is comprised of senior medical and operational professionals including seven board-certified physicians with specialties including neurosciences, psychiatry and ophthalmology. This cross-functional team also includes experts in trial management, pharmacovigilance, regulatory, medical writing, biostatistics and data management who partner together to deliver successful outcomes for complex neuroscience trials.

WIDE-REACHING NEUROSCIENCE EXPERIENCE AND SERVICES

With experience conducting more than 310 studies covering a broad range of neurological, psychiatric and pain disorders within the past five years, our team of drug development professionals can expertly manage neuroscience trials. From feasibility studies and protocol design to simultaneous multinational submissions and study execution, PPD has the global infrastructure, resources, integrated technologies and commitment to quality to help ensure successful clinical outcomes.

PARTNERSHIPS THAT DRIVE SUCCESS

PPD's established partnerships with Synexus, a global network of more than 185 sites, and Acurian, a leading patient recruitment organization, provide a comprehensive, integrated enrollment solution for neuroscience trials. Synexus has deep neuroscience experience that enables faster recruitment and enrollment, having enrolled thousands of patients in a wide-range of neuroscience studies. We continue to innovate and drive global expansion of our total enrollment platform to deliver industry-leading global patient recruitment capabilities to our clients.



THERAPEUTIC EXPERTISE ACROSS THE NEUROSCIENCE LANDSCAPE

Multiple Sclerosis Our team of more than 520 members experienced in multiple sclerosis (MS) and four full-time neurologists bring a deep disease understanding to each study. This team has been involved in the development of the top-selling MS therapies including five of the six top-selling MS drugs. Three of the four approved MS drugs in the past five years, and three of the four top-selling drugs in 2015.

Neurodegeneration Within the past five years, PPD has conducted 13 global Alzheimer's disease studies, including studies in early Alzheimer's disease and mild cognitive impairment. Additionally, we have extensive global Parkinson's disease experience that includes 13 studies conducted in the past five years across various phases, ranging from early to advanced Parkinson's.

Pain Psychiatry PPD has managed more than 30 acute and chronic pain trials. PPD assists clients in isolating the unique challenges associated in the past five years across a variety of therapeutic areas, with psychiatric studies such as subjective assessments, including multiple drug delivery methods. Our use of various inter-rater reliability, scale validation and placebo response data collection technologies allow for rapid review, analysis rates. Over the past five years, we have conducted more than and delivery of quality data for single country or global 50 studies from schizophrenia to anxiety, expertly overseeing studies. Our key pain experience includes acute pain, chronic global programs of all sizes, pain, neuropathic pain and migraine pain.

Ophthalmology We offer a clinical operations and therapeutic focus on ophthalmology studies with experienced project teams dedicated to all ophthalmic programs. Our professionals are experts in facilitating multinational submissions and expeditious agency reviews and have global experience in age-related macular degeneration, conjunctivitis, dry eye, glaucoma, keratitis, lens opacification and intraocular lenses (IOLs), diabetic macular edema, retinal vein occlusion and geographic atrophy.

WHITEPAPER





January 2018

Rare Diseases of the Eye Development—Opportunities for Novel Therapies

Jonas C. Bull, M.D., Vice President and Medical Director, Ophthalmology


Executive Summary

In part one of this rare disease whitepaper series, Dr. Jonas Bull provides an overview of orphan drug development, discusses the unique challenges associated with developing therapies for rare eye disorders and provides information on PPD's patient-centric strategies to overcome these challenges.

HELPING DELIVER LIFE-CHANGING THERAPIES www.ppd.com

Clinical Trial Support Services

Helping you reduce the burden on sites while delivering a seamless clinical trial experience

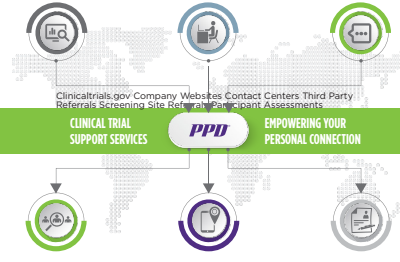


PPD's Clinical Trial Support Services provide a dependable source of information and support for:

- Ensuring only relevant calls reach the site
- Patients routed directly to their navigator
- Providing patient screening services
- Delivering global support

Our process involves each step of the process for you and your site throughout the patient journey:

- Expedited enrollment
- Increased retention and less patient drop out
- Alignment of potential investigators and sites
- Insights/data obtained during outreach



HELPING DELIVER LIFE-CHANGING THERAPIES www.ppd.com

CASE STUDY

Patient-centric Remote Enrollment Eases Enrollment Challenges in

BACKGROUND

PPD conducted a multicenter, phase II study to evaluate transfer of drug into treatment for Crohn's or rheumatoid arthritis.

OBJECTIVE

We needed to identify and enroll patients in a study that was geographically diverse and evaluate if the selectable drug based study data from the study would be sufficient for women planning for pregnancy.

CHALLENGES

Enrollment criteria for the study were both currently broad-ranging and the U.S. investigators were not able to access a sufficient patient population. Traditional approaches of establishing a central site in North America and transporting eligible patients was not a feasible solution. Patient travel was a significant barrier. Traveling of prolonged specimen collection would not be possible.

STRATEGY

Patient-centric Remote Enrollment

To enroll interested patients, PPD implemented a patient-centric enrollment strategy that allowed North American subjects to participate.

To develop this enrollment model, PPD implemented a patient-centric enrollment strategy that allowed North American subjects to participate.

HELPING DELIVER LIFE-CHANGING THERAPIES

PPD Biotech Brand Creation



- Key Visual
- Folders
- Brochures
- Presentations
- Website Design
- Infographics
- Overview Sheets
- Case Studies
- White Papers
- Business Cards
- Print Advertising



A unique solution for a unique set of challenges

Small- to mid-size pharma and biotech companies face a unique range of challenges. When working with leaner teams and tighter timelines, a CRO partner with extensive global capabilities is a necessity. At the same time, we understand the fear of getting lost in a large global organization.

PPD Biotech is a full service CRO solely dedicated to biotech companies and small- to mid-sized pharma. As a company within a company, we provide a truly unique solution.

The tailored, personalized approach to a boutique CRO



200+ operational, medical and commercial staff—fully dedicated to biotech companies



PPD Biotech leadership with limited reporting layers for rapid access to executive attention



Flexibility and seamless team integration for the right cultural fit

With far-reaching global resources and capabilities to execute any trial—anywhere



Immediate access to scale and expertise of a global, 18,500 person strong organization



Full-service early phase through post approval and laboratory drug development



Medical and regulatory experts, providing therapeutic guidance across the development spectrum

In the past five years, we've worked with 200+ biotech clients on 400+ studies

We understand there is no singular need from a CRO partner. We can build the right team that understands your goals and a commercial framework that meets your organization's unique needs.



- Emerging organizations with virtual teams, laser focused on milestones that ensure next-stage financing
- Established Biotechs looking for an ideal cultural fit
- Midsize Pharma in need of flexible commercial constructs
- Pre-revenue Platform Companies seeking resources for rapid scale-up of a program
- In-licensing Focused Investment Organization in need of consulting and full-service global portfolio development

Experienced executive leadership overseeing a dedicated team of 250+ professionals



Anshul Thakral
Global Head of PPD Biotech

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Elisha Talley-Rothner
Vice President, Global Head of Operations

READ MORE



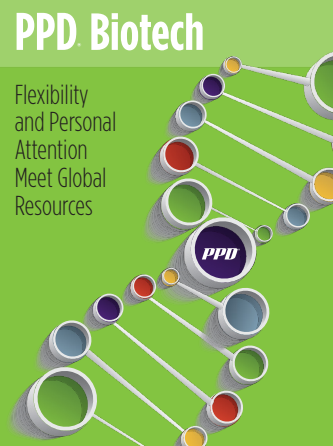
Daniel Burch
Vice President, Global Medical Officer

READ MORE



Sheldale Carstarphen
Vice President, Global Commercial

Head READ MORE



Flexibility and Personal Attention Meet Global Reach

Distinct Advantage

- A fully dedicated team that prioritizes biotech clients while increasing global reach and experience
- Deep relationships with venture capitalists and other funding agents
- Dedicated medical experts to help fill expertise and resource gaps
- Creative commercial constructs and payment terms to balance financial needs

Never Lack the Resources and Capabilities You Need

PPD BIOTECH OFFERS YOU A TRULY UNIQUE SOLUTION

Fully dedicated teams
A strong culture of flexibility
A vast suite of global resources

MULTIDISCIPLINARY THERAPEUTIC EXPERTISE

We've collaborated with biotech and small pharma to bring treatments to patients across all key areas and indications.

FAR-REACHING GLOBAL FOOTPRINT

While the size and focus of PPD Biotech allows for a unique footprint, we also have access to PPD's complete scope of resources and a global team of 20,000 professionals at our fingertips.

Full-service early phase • Extensive global consulting • Product development • In the world

• Consulting services across all therapeutic areas • Laboratory services • Consulting

PPD Biotech combines the global power and capabilities of PPD with the personal attention, flexibility and extensive knowledge of biotech operations you could previously only find at niche CROs. We stand ready to partner with you to drive your innovative therapies forward.

Successful Transfer of Multiple Studies Enabled by Close Executive Engagement and Resource Planning CASE STUDY

BACKGROUND PPD Biotech partnered with a mid-sized biotech company to begin transitioning 14 studies as a part of a multiple asset transfer from a large pharmaceutical company. Our approach resulted in successful transfer, significant improvement in data quality and a recent successful audit.



OBJECTIVE While working with the biotech client, as well as the company from which the assets were being transferred, we were tasked with planning and executing an efficient transition, while ensuring quality and completeness of data transferred.



CHALLENGES Transition of projects from one company to another can be challenging for many reasons—working effectively across multiple companies, issues with proprietary information and data, and ensuring the outgoing company remains engaged. This was, at points, a contentious situation. The outgoing company had to relinquish trials and data they had been working on for years. Many on the team were disappointed by the transition and thus were not always forthcoming with information. Further complicating this particular process, together with the client, we found out there were multiple problems with the studies, most significantly with data collection processes, which required addressing.



STRATEGY PPD Biotech was able overcome these challenges by leveraging our considerable program experience, relationship management expertise—with both sites and client—and our professional teams.

Resource Mobilization and Empowerment PPD Biotech, the client and the outgoing company assembled oversight teams to review projects and anticipate, identify and/or resolve issues. This allowed us to rapidly mobilize resources where needed as new studies were transitioned and problems were identified.

14 STUDIES successfully transitioned, including



250 SITES in all key regions



1,000 PATIENTS

CONSISTENT, CAREFUL COMMUNICATION & EXPERT OVERSIGHT

PPD Biotech Partnering to Drive Innovation

www.ppdbiotech.com

PPD Biopharma Partnership



- Key Visuals
- Sales and Marketing
- Co-brandied Folders
- Brochures
- Presentations
- Website Design
- Infographics
- Overview Sheets
- Case Studies
- White Papers
- Internal Communications
- Templates

Partnership

Solid Foundation. Top-tier Results.

PPD

Delivering Bayer an Experienced, Engaged Partnership Team

BAYER **PPD**

Partnership **Solid Foundation. Top-tier Results.**

CRO Self Reflection

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First Last Name PPD
 First Line of Title PPD
 Second Line of Title PPD
 Third Line of Title

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Building a Partnership to Maximize Value and Create Profitable Growth for Bayer

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