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Roche

HORIZON

The Discovery Issue

Reaching for

NEW HORIZONS

in drug development

Redefining failure
as a driver for change

R&D Academy:
A case for change

Forging new pathways
for personal and professional growth

R&D Academy

CONTENTS

EDITORIAL

From the desk of the Editor

WELCOME

Welcome to the first issue of Horizon – our experiment where we start with this MVP and learn from all of you how to co-create together for ongoing issues.

One of the goals of Horizon is to provide thought leadership in science. We have so much knowledge and know-how in our groups, and the more we can discover that and showcase the experience within our ranks, the better equipped we will be to serve patients in the future. Every day, we each have a part to play in the name of innovation and striving to achieve our 2030 vision. However, 2020 has been quite a year: one unlike any other in our lifetime.

In this issue 'Discovery,' we focus on some of the lessons learned with two of our molecules; Balovaptan and Etrolizumab, from their Phase 3 studies. Failures are of significant value in science, and as we learn from them, we are further inspired to make science even better in the future.

You'll also hear from Larry Tsai with his perspective on the pandemic and takeaway learnings he has to share as a result. I encourage you to use his insights as inspiration – to think about innovations you and your teams have implemented during the pandemic and celebrate your contributions, tenacity, and resilience.

This issue showcases some perspectives from the new Drug Development ChangeMakers Program, created by scientists for scientists.

Lastly, we are looking for ideas from you on the themes that would interest you most. We welcome your articles, videos, or podcasts that potentially will help others through your lessons learned, innovations, and thought-provoking ideas. Please feel free to get in touch if you believe you have a contribution worth sharing. We'd love to hear from you!

Thank you for reading, and we hope you enjoy this, our first issue, and that Horizon motivates you to continue your thought leadership journey. H

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Learnings and reflections from Balovaptan

This article reflects on the learnings gained from the Balovaptan study and considers the benefits of failure being rebranded in more constructive ways, to develop a community where resilience is cultivated, and a new breed of scientist created.

There is always risk in science, in fact, it's an essential component of true scientific discovery. Ideas form and evolve, risks and outcomes are considered, yet progress is only made when a delicate balance between these choices can be achieved. Embedded within decisions around risk are always the questions of failure and its costs. Caution, budgets, and bigger picture demands will often dictate decisions, but there are circumstances where the need for answers far outweighs the most significant risk – the potential for failure.

Failure is a familiar nemesis within the scientific community and rarely valued for the positive outcomes it delivers. Vulnerability is not often spoken of, yet the capacity to build resilience and maintain persistence no matter how many setbacks and failures are presented is undoubtedly the most desirable quality a scientist can have. Why does scientific research have such a fractured engagement with failure, and how can this be overcome?

Transcending the shame of failure

It's a perplexing reality that the most valuable aspect of scientific research is cloaked in shame and discussed in hushed tones behind closed doors. Across the board, it's more often the case that outcomes are linked to tangible 'success,' and failures swept swiftly away and out of sight. Stepping forward, where the risk of failure is high, requires a certain kind of mindset, but more importantly, a healthy dose of vulnerability.

The scientific method demands failure as part of the process, with discovery itself being the outcome. The very essence of the scientific method – the thing that propels all good research forward - is what happens around step 5, as testing happens, observations are made, and conclusions are drawn. It is there in the simple act of discovery that science's real power lies.

This is especially evident where research around complex and challenging conditions, such as autism, are concerned. There is a range of clinical presentations that fall under the categorisation of autism spectrum disorders (ASD), but broadly speaking, the shared core symptoms are around deficits in social communication and interaction. With no drug treatments currently available, and around 1 to 2% of the general population affected by ASD, expectations are understandably high. The

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as a driver for change

motivation for a positive outcome is driven by a vastly unmet need amongst those living with the condition and their families. The cries for help echo loudly, and momentum builds for an intervention that clinically and unquestionably improves their quality of life. For scientists passionate for the cause, these are the times when need far outweighs the risk, and vulnerabilities are laid bare upon the table.

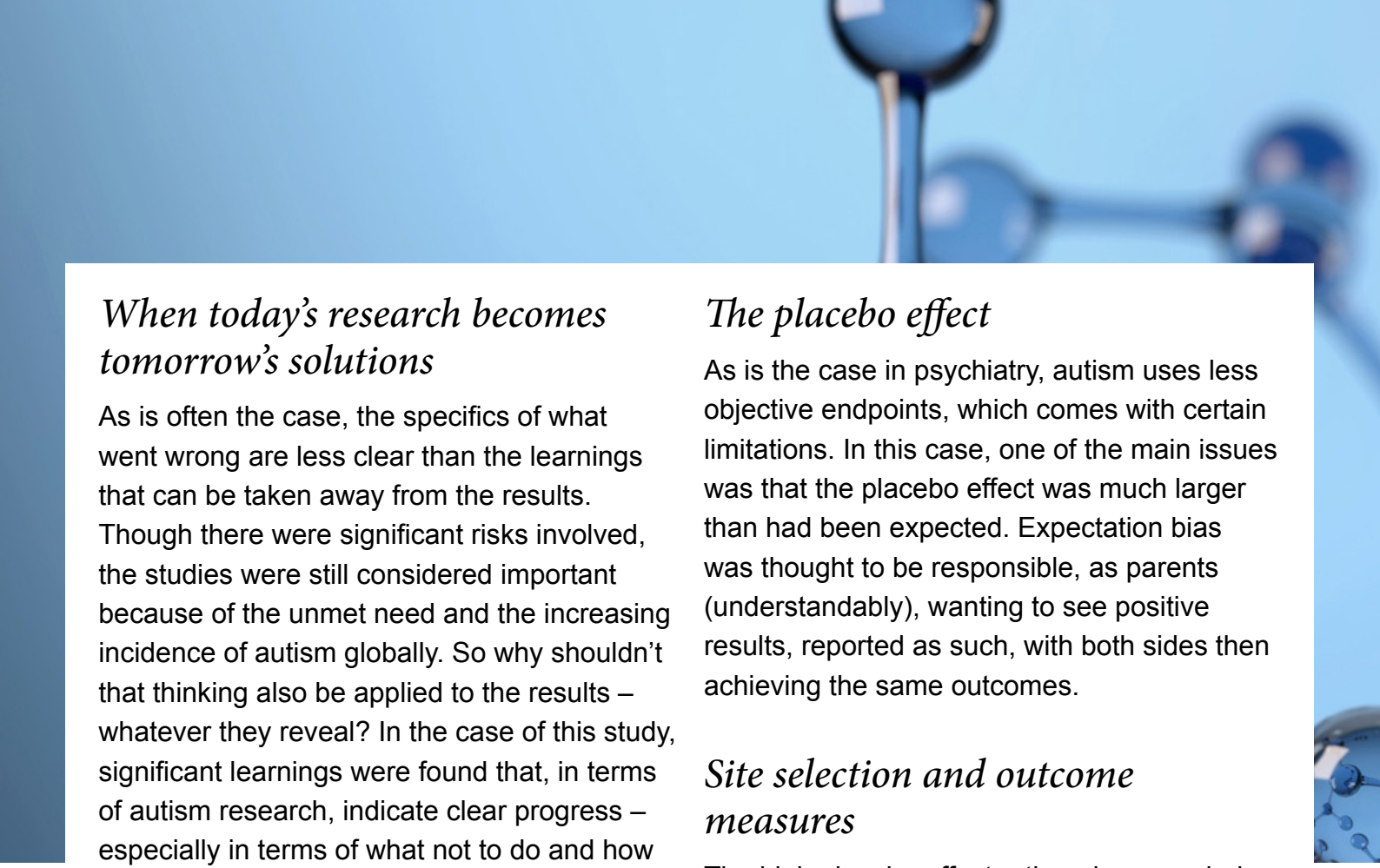
The Balovaptan molecule

The Pharma industry is littered with product failures, and there have been numerous attempts by many companies to develop an effective drug to treat autism. This includes Roche, whose work has centred around the molecule Balovaptan and its impact on vasopressin receptors. Previous studies have found that people with autism have altered levels of the hormone vasopressin in the blood and that vasopressin levels have been found to play a role in socialisation and bonding. The Balovaptan study hypothesised the drug could affect the activity of the vasopressin receptor and that by targeting it, the output of vasopressin could be modulated, and symptoms improved. In plain language: people with autism could have a better quality of life through improved communication and interaction with those in the world around them.

"Balovaptan was our lead molecule in autism spectrum disorders, as part of the neurodevelopmental disorder franchise. It's the most advanced molecule and was in phase III for autism in adults, and in phase II for children."

Florian Islinger, MD, was one of the Lifecycle Leaders for Balovaptan in Neuroscience and Rare Diseases. The research was led by Janice Smith, Principal Clinical Scientist in PDN, and GDL for Balovaptan.

Positive trends towards social activity and adaptive behaviour were seen in a phase II study in adults with ASD. Because of this it was determined there was enough potential to move the molecule into a pivotal study for adults and also start to investigate its potential in children with an additional phase II study. This was decided, with an awareness that it was high risk and not a natural development, given the outcomes of the previous study.



When today's research becomes tomorrow's solutions

As is often the case, the specifics of what went wrong are less clear than the learnings that can be taken away from the results. Though there were significant risks involved, the studies were still considered important because of the unmet need and the increasing incidence of autism globally. So why shouldn't that thinking also be applied to the results – whatever they reveal? In the case of this study, significant learnings were found that, in terms of autism research, indicate clear progress – especially in terms of what not to do and how to advance the research to the next level, by the next cohort of scientists brave enough to step up to the plate.

In recent candid conversations, Smith and her colleague, Islinger were positively reflective about the learnings that emerged. "Balovaptan in autism was always a high-risk program for many reasons," Islinger explains. "There are not well-established endpoints and there's limited experience concerning clinical studies in that field, and no clearly established development process for a drug in ASD, so there's very little standardisation. There is still a very limited understanding of the actual broad patient population and very little understanding of the mode of disease."

Both Smith and Islinger shared similar reflections, with the key learnings coming down to a few main points.

The placebo effect

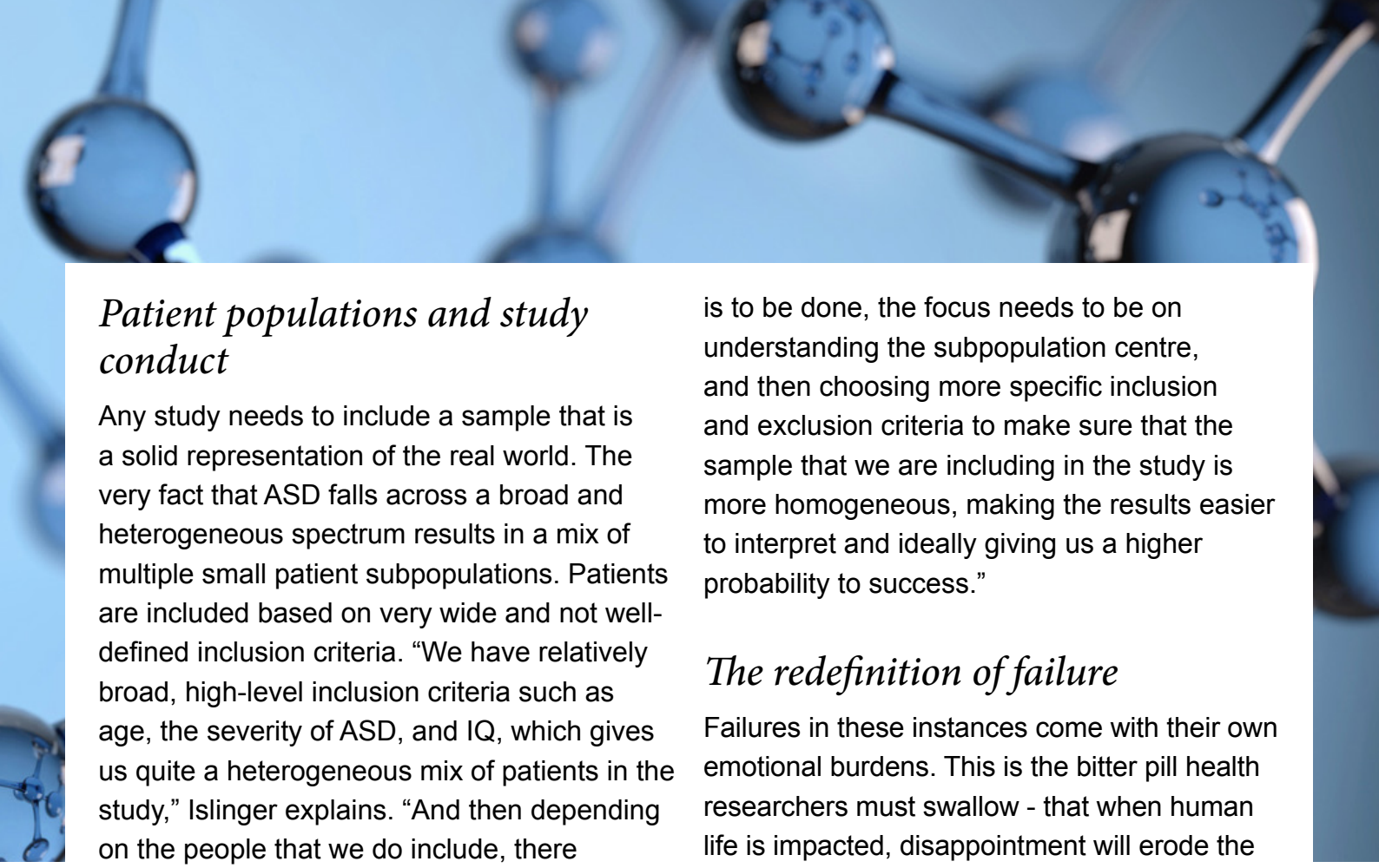
As is the case in psychiatry, autism uses less objective endpoints, which comes with certain limitations. In this case, one of the main issues was that the placebo effect was much larger than had been expected. Expectation bias was thought to be responsible, as parents (understandably), wanting to see positive results, reported as such, with both sides then achieving the same outcomes.

Site selection and outcome measures

The high placebo effect rating also revealed a critical issue in the quality of investigators or raters being used. Site selection was revealed as a critical component: sites that used less experienced raters; or that were naïve to earlier Balovaptan trials, for example; or were commercial sites, showed typically higher placebo responses than those using experienced physicians, or those in academic sites.

The high placebo effect rating also revealed a critical issue in the quality of investigators or raters being used.

Smith sees this discovery as advantageous for future research teams moving forward. "This was something that was considered very problematic and there are reasons to consider, that come back to the understanding of autism. Some of these sites may not have had the same level of understanding as others, so there are some things to take a look at from that perspective."



Patient populations and study conduct

Any study needs to include a sample that is a solid representation of the real world. The very fact that ASD falls across a broad and heterogeneous spectrum results in a mix of multiple small patient subpopulations. Patients are included based on very wide and not well-defined inclusion criteria. “We have relatively broad, high-level inclusion criteria such as age, the severity of ASD, and IQ, which gives us quite a heterogeneous mix of patients in the study,” Islinger explains. “And then depending on the people that we do include, there might be certain subpopulations where you have a higher or lower chance for response, depending on what defines those subpopulations, but we don’t know that.”

Smith also believes the complexity of autism must be given more consideration in study design. “With autism, there is a landscape behind the patient population, if you like, which kind of makes it more interesting. Often, they don’t consider themselves to be patients, or they may need some help in with dealing with particular symptoms, but then not all of them do, so you’re already dealing with a non-homogeneous group, then you’ve got perhaps different reasons or explanations for autism, so there’s quite a lot of factors at play.”

Islinger sees this as a positive for future research teams. “If more research on autism is to be done, the focus needs to be on understanding the subpopulation centre, and then choosing more specific inclusion and exclusion criteria to make sure that the sample that we are including in the study is more homogeneous, making the results easier to interpret and ideally giving us a higher probability to success.”

The redefinition of failure

Failures in these instances come with their own emotional burdens. This is the bitter pill health researchers must swallow - that when human life is impacted, disappointment will erode the joy out of any small victory. Disappointment that can be, in some cases, heartbreaking, in others career-ending. Why is it that there’s no celebration to be found in the outcomes that disprove a hypothesis? The results that tell us, no, but now we can try this instead. The credit for science’s very success, in fact, lies in the billions of failures of every shape, size, and cost.

“Many of us know a family, who have an autistic child, and so it became that the team was incredibly engaged - more so than I’ve ever experienced.”

“Many of us know a family, who have an autistic child, and so it became that the team was incredibly engaged - more so than I’ve ever experienced,” said Islinger. “So, when it failed, even though we knew it was a higher risk program, it was, of course, a huge disappointment. But after a few days of being disappointed, the team recovered. They switched on their scientific mindset and said, okay, let’s now analyse the data, and let’s really

try to find out, what it was and what we can learn? And, of course, in doing that, you get more clarity that this was not a mistake and you have to accept it."

The great advantage of a pressing need is that abandonment of lessons learned is impossible. Collaboration is essential and incentives to move forward increase exponentially. Not using the learnings from 'failures' is to stand obtusely in the way of scientific discoveries and the future possibilities they represent. Any alternatives simply encourage ASD and other communities to give up hope.

The fact remains that outcomes resulting from the study offer insights useful in future research. Islinger felt there was a particular value gained from the close collaboration with their pRED colleagues. "A lot of the learnings have been discussed with them, to inform their early research with new molecules for ASD and neurodevelopmental disorders," he explains. "This collaboration and the sharing aspects are a very important component of learning from failures!"

The current state of the industry, with failure neglected as a constructive tool, means learnings such as these often lie dormant. Repositories that are curated in open and collaborative ways would create a collective knowledge base providing invaluable advances to research, not only in autism but across the board.

This is, of course, just one of the goals that the R&D Academy hopes to achieve. "The Academy addresses the critical importance of knowledge sharing, learning, and innovation in delivering on our Roche group 10-year ambitions and the Pharma vision. This will help to deliver 3-5 times the patient benefits at half the cost to society," explains Mark Lee, Roche's Global Head of Personalised Healthcare in Product Development. "None of this will be possible without leveraging the unique scale and diversity of talent expertise and experience that we have across the Roche group."

The importance of discovery
THROUGH FAILURE
in drug development

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Learnings from Etrolizumab

This article reflects on the learnings gained from the Etrolizumab ulcerative colitis clinical development program. It draws on the importance of discovery through failure and the value this lends to the development of drugs for chronic conditions.

There is a delicate balance pharmaceutical research and development is constantly striving to maintain, between developing drugs that improve the quality of people's lives and sustaining the capacity to do so through commercially viable research. This is especially challenging in the case of studying chronic diseases, where conditions are complex, often fall across a spectrum of disorders, and require nuances in a drug's modes of action that can be frustratingly elusive.

The very essence of discovery is dependent on critical thinking and the reflections on whatever may result. The practice of observation and measurement exists solely to critically assess right and wrong - to identify landmarks in the discovery process and adjust course. More often than not, each failure is unique and almost always come with revelations that guide the journey forward. Failure in the discovery process is inevitable, in fact essential, yet the value this lends to the development of drugs for chronic conditions is time and again undermined. Though the obligations to publish key data are always fulfilled, this undermining is evidenced by millions of folders lying dormant on hard drives across the scientific world, with distinctions unshared, potentially valuable learnings unrevealed, and experiences that could be crucial to other research, unpublished.

Why discovery matters more than results

Discovery is defined by Merriam Webster as 'the act of finding or learning something for the first time'. Every attempt to find out more reveals answers that create questions that will eventually lead to solutions. Discovery, however, is not just about the first time ever that something is found or learned. It's also about how each subsequent individual experiences that information as it is passed on, in the discovery process, and then what they choose to do with it next. Success after relentless effort, collaboration, and determination is a glorious thing to behold.

At the most fundamental level, no discovery can be made without failure. Every failure has the potential to birth new ideas or change the course of a strategy altogether. This is fundamentally why risks – that often result in failure - need to be taken and why the tension between prioritising the health of the population over the necessary commercial aspects of global health care provision and drug development is so great.

Scientists working on conditions categorised as Inflammatory Bowel Diseases (IBD) know this tension all too well. The umbrella term refers broadly, as the name implies, to conditions characterised by prolonged and/or chronic inflammation of the gastrointestinal tract (GIT). Specifically, classified as two conditions: Crohn's disease or Ulcerative Colitis. There is no cure for either condition, and treatment investigations aim for the healing of tissues in the GIT to hopefully improve the integrity of the bowel walls. It is this that is determined by the measurement of outcomes. A range of treatments currently exist for IBD, but there is an unmet need for new treatments with more effective outcomes across the treatment scenarios.

The Etrolizumab molecule

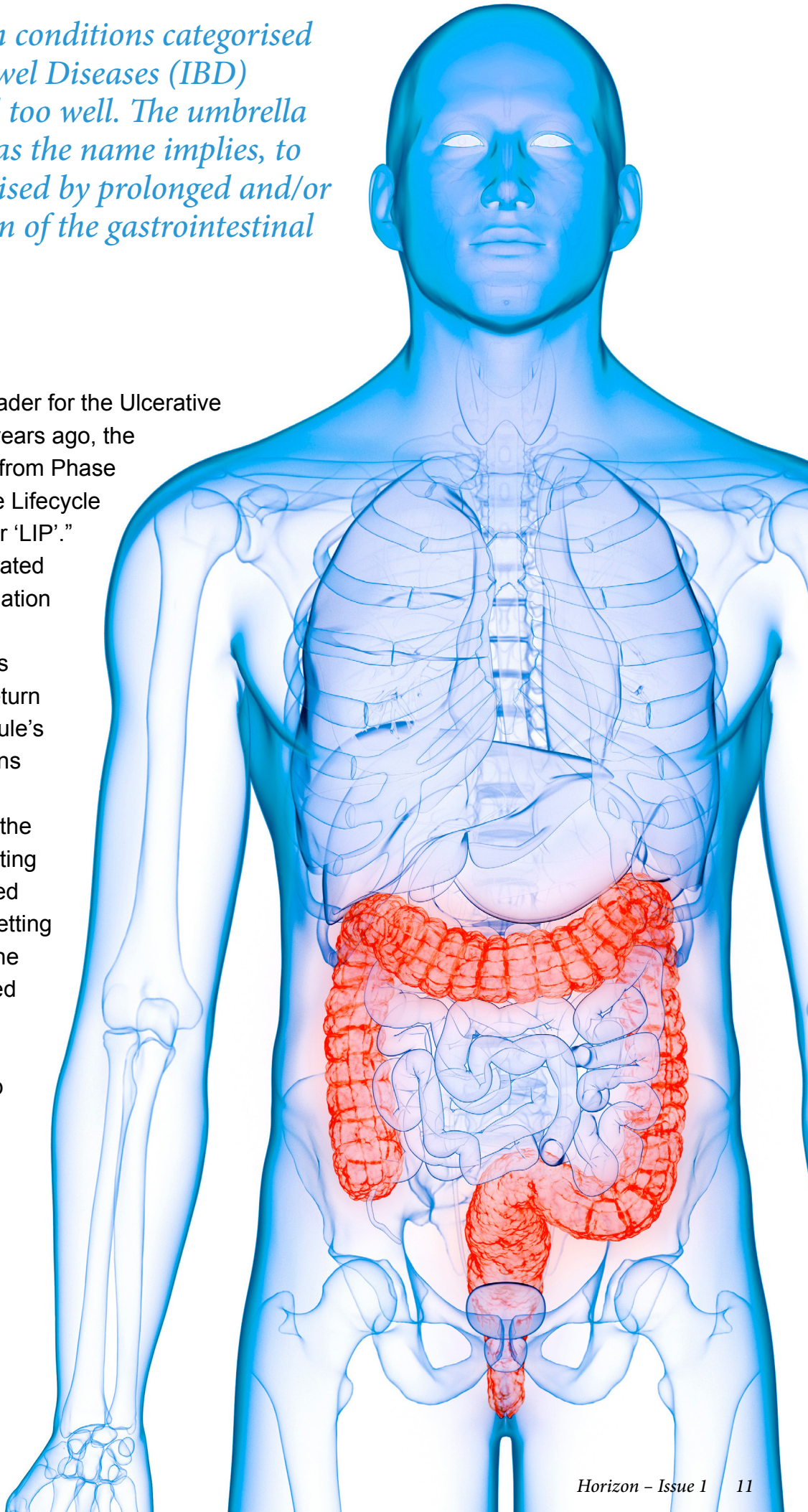
With almost 70 million people across the globe diagnosed with IBD, Roche has committed significant resources to further their understanding of its conditions. The Etrolizumab molecule has been the subject of significant amounts of funding, along with immeasurable personal investment from the research and development teams as part of the most extensive IBD clinical trial program ever undertaken. The program included eight randomised-controlled trials, with more than 3,100 patients taking part in more than 40 countries.

Calculating risks for phase II to phase III transition

With so much at stake, it has been a challenging but illuminating time for Roche's Global Development Leaders (GDLs) for Etrolizumab and their teams.

Scientists working on conditions categorised as Inflammatory Bowel Diseases (IBD) know this tension all too well. The umbrella term refers broadly, as the name implies, to conditions characterised by prolonged and/or chronic inflammation of the gastrointestinal tract (GIT).

Helen Tyrrell was Study Leader for the Ulcerative Colitis clinic trials. “Seven years ago, the molecule was transitioning from Phase II into Phase III, through the Lifecycle Investment Point process or ‘LIP’.” When a drug has demonstrated efficacy in the patient population and dose selection through Phase II studies, a business case is made around the return on investment of the molecule’s development. This transitions it into a full “pivotal” clinical development program with the potential to apply for marketing authorisation. “I was involved from that point onwards - getting the green light to develop the molecule and being awarded the budget to develop the molecule,” Tyrrell explains. “From then on, you develop the protocols to support its development, interact with the health authorities. And then, you know, we go through the whole Phase III development of the molecule.”



It's this transition from Phase II to Phase III that generated the most commentary as those involved reflected on Etrolizumab's outcomes. Stewart Campbell is Lifecycle Leader (LCL) for Etrolizumab's Global Product Strategy. "We kind of set ourselves up for a daunting task, as a massive Phase III was predicated off of a fairly modest Phase II." Campbell continues, "one of the things that we're probably guilty of quite often is these Phase II programs, where speed is of the essence." This is particularly pertinent when looking at a highly competitive program like IBD. "Time to market is critical, but it's secondary to actually having something viable with strong efficacy."

Akiko Chai was Global Development Leader for Etrolizumab. "We have 8 Phase IIIs, which is a huge undertaking, considering such little data we had in Phase II". Chai had the same opinion as Campbell, concerning why speed to market won out over possibly doing more in Phase II. "You have a competitive landscape; you already have a drug out in the market with a similar MOA (mechanism of action). Etrolizumab has a second part to that and we want to be best in class," she explains. "Sometimes you've got to go longer, be more patient with Phase II, and go back and learn. I'd rather fail in Phase II than Phase III."

Securing key Phase III deliverables depends on robust Phase II outcomes

Disappointingly for everyone involved, it was found that Etrolizumb did not show enough statistical significance to achieve the primary endpoint across the majority of studies conducted. According to all three scientists, dosing selection was a critical deliverable that failed. "It feels like we probably could have done a more robust Phase II, then expanded the Phase II program, either in size or scope," says Campbell. "The first and foremost checkbox is that we need to make sure we invest our time in Phase II and really hammer out a dose and make sure of what we're bringing to market." Tyrrell agrees, "we really need to have robust data in support of an appropriate dose, and to put the right energy into finding the right dose before we embark on big Phase III programs."

"The technology that we used was developed independently by small groups of individuals to a scale that we weren't accustomed to, and we were working to very tight deadlines"

Campbell's feeling is that overall a more robust Phase II program would have given the teams more to work with in terms of the key deliverables. "I think overall, the challenge of the program was probably that it was overly optimistic, along with the insecurity around the dose."

Chai felt the patient population could also have an impact on the results. "who you include in the studies is going to be one of the very important lessons learned from Etrolizumab."

"What we're focusing on at the moment is conducting a deep dive into the data, to enable a full understanding of lessons we can learn from the program and compiling these together to make it accessible to all relevant parties."

Weighing up the pros and cons of fast enrollment over selecting the right patient for the study is essential. "If you're going to put the time and effort into any development program, you need to balance faster recruitment times vs getting the right patients coming into the study."

Tyrrell felt tech issues had a significant impact also. "The technology that we used was developed independently by small groups of individuals to a scale that we weren't accustomed to, and we were working to very tight deadlines" she explains. "Then when we tried to synchronise data from the different technologies the systems failed, making it difficult to randomise patients into the trials. It didn't really work the way we wanted it to, which made it difficult to randomise patients, things like that were very influential and had a big impact."

There's alignment amongst the Roche teams on patient outcomes being the key priority. "I just think we needed to give these molecules the best chance for providing benefit to patients," explains Campbell. "I think the learning for us will be to focus on making sure when we LIP a molecule that we know what we're lipping, and we know what we're bringing to Phase III, where all the investment starts. Being worried about bringing something quickly is certainly a consideration. But, you know, it's the secondary consideration, to be honest."

The crucial importance of a central repository of learnings

The practice of sheer volumes of data laying waste in the scientific community must indeed be relegated to the past. Part of being a scientist is developing a tolerance for failure and recognising its value in the process of discovery. The teams' experiences with Etrolizumab have, of course, been bitterly disappointing on many levels. Still, the positive story indeed lies in their unwavering perseverance over 10 years and the learnings emerging now, for future use. "The good thing is, we have so much data that we can inform the rest of the IBD community with now, in Roche and outside of Roche," says Campbell. "We need to have the ability to learn that we need to move on," says Tyrrell. "I think we all surprised ourselves at how quickly you can just brush yourself off and move on by remembering all of those valuable learnings and taking them with you."

Etrolizumab is not being filed by Roche for marketing authorisation at this stage. “That means that at the moment in ulcerative colitis, we won’t be applying for marketing authorisation, however, the Phase III clinical trials are continuing in Crohn’s disease,” explains Tyrrell. “We’re trying to see if there’s a way we can carve a regulatory path forward for Crohn’s disease,” explains Campbell. “So we can reclaim something out of Etrolizumab and provide some sort of benefit to those patients.”

Maximising the opportunities to better understand the data is a priority for Tyrrell and her team. “What we’re focusing on at the moment is conducting a deep dive into the data, to enable a full understanding of lessons we can learn from the program and compiling these together to make it accessible to all relevant parties.” This could be shared more generally or within the R&D Academy. “The Etrolizumab UC team works closely with the CD team. We will make available and /or generate data to inform the CD team to support their potential marketing application.”

The R&D Academy has great potential for knowledge sharing that would transform the experiences of researchers. The creation of a central repository for learnings, findings, reflections, and more, replaces the notion of ‘failure’ with a respectful recognition and acknowledgment from the scientific community of the passion and time invested and the valuable lessons unearthed to inspire potential and continue to fuel the engines of discovery. H

R&D Academy: A Case for

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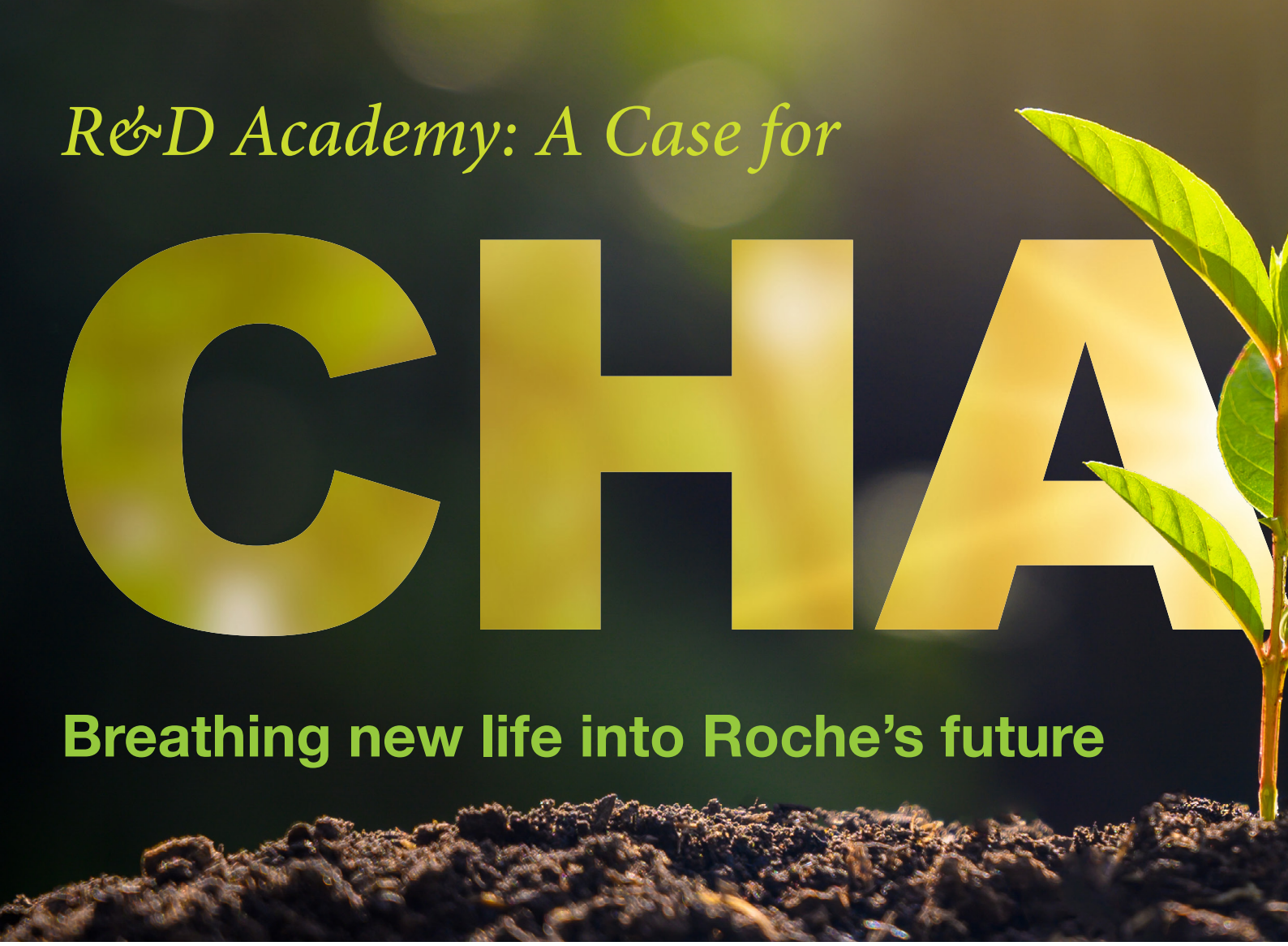
Breathing new life into Roche's future



Innovation and scientific excellence have been the founding principles of Roche, from its very beginnings, principles still alive and well today, inspiring the development of Roche's R&D Academy. Founder Fritz Hoffmann-La Roche was one of the most outstanding entrepreneurs of his time, driven by optimism and an unwavering vision. His belief that manufacturing medicines on a commercial scale would rapidly progress medicine's fight against disease has become one of the greatest innovations of pharmaceutical history.

That foresight has propelled Roche forward through numerous challenges across many decades, making it one of the world's leading companies in global healthcare.

Roche's reputation for excellence has attracted some of the world's greatest minds, with a collective knowledge base of staggering depth, wisdom, and experience across its global footprint. However, within this, its greatest asset also lies its most significant challenge – how to best utilise the full breadth of this immense knowledge to solve humanity's healthcare problems.

Connecting the best and brightest

Paulo Fontoura is Senior Vice President and Global Head of Neuroscience and Rare Diseases Clinical Development at Roche and one of the great minds who started the Academy. "When I first joined the company, I remember someone telling me how lucky I was to work at a company that's like the 'Harvard of drug development,' because the field's best and brightest people were here," explained Paulo. "But then I noticed there were few opportunities to collaborate across the organisation, and we often had to go outside of the company, to get trained in things I knew we were really knowledgeable about internally." It was in asking the question around how to connect, and how best to utilise the collective knowledge, that the idea of the Academy began to emerge.

"These are times of such unprecedented acceleration in scientific knowledge," explained Fontoura. "It's no longer true that you train in medicine or biology, and basically, you're done. I think scientists and the changemakers of the future are going to have to be proficient in so many different disciplines: in combinations that we actually don't know yet."

Initially, the idea for the Academy took shape in the form of a whitepaper written by Fontoura. Then the thing that would become the Academy's foundation became instrumental in its development – an incredibly talented pool of people. Along with Fontoura, Roche's Global Head of Personalised Healthcare in Product Development, Mark Lee, and Executive Vice President, Chief Medical Officer and Head of Global Product Development, Levi Garraway engaged with various people and aspects of the

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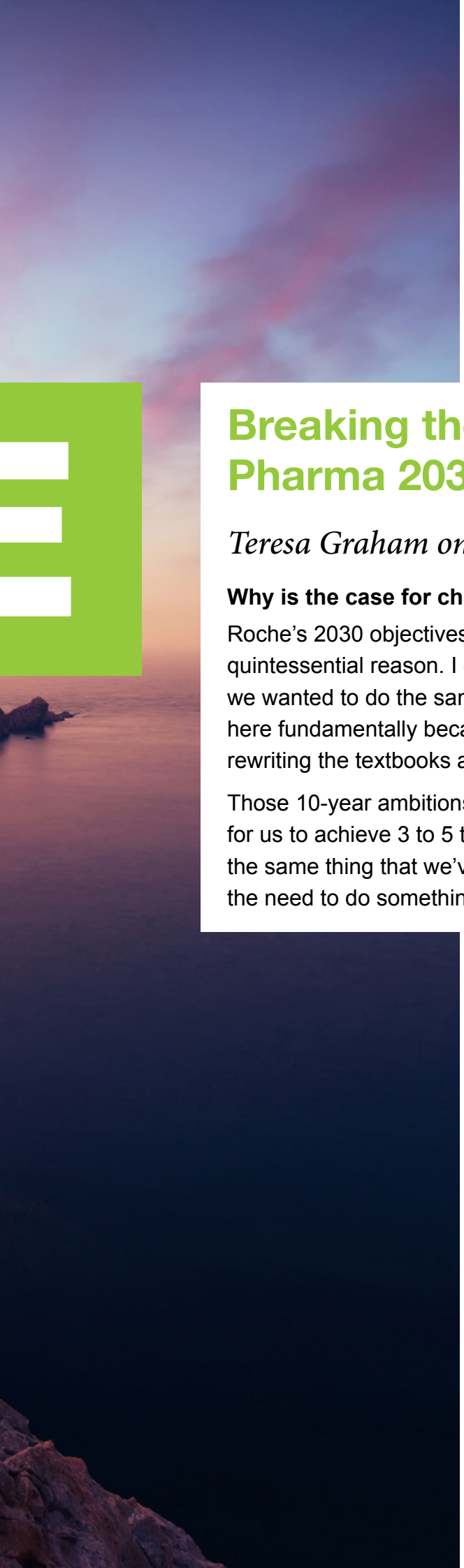
Inspiring scientists to be changemakers of the future

To truly inspire the scientists of the future, Roche must transform the way it approaches scientific research, collaboration, and knowledge sharing across its global network. The recognition of this simple but powerful reality is behind the evolution of Roche's R&D Academy.

The Academy represents a huge shift from how things have been done previously but has been identified as an important one. If Roche is to lead the way in research and development, the organisation is fundamentally dependant on growing a new breed of scientists, fully equipped for the R&D needs of the future.

Roche's Senior Vice President and Global Head of Neuroscience and Rare Diseases Clinical Development, Paulo Fontoura is one of the Academy's masterminds. "The traditional university model, where things are hierarchical, originated in the original Greek setting - it was a place people went to ask questions, to talk to the wisest people and find new things to take on, to develop and build." This concept of continuous evolution is the path to discovery that Fontoura and the team aspire to bring to Roche through the R&D Academy. "Organisations that want to stay cutting edge and as innovative as ours," he says, "need to keep reinventing themselves."


Change... the catalyst to
INSPIRE



Breaking the mould to realise Roche's Pharma 2030 vision

Teresa Graham on change as the catalyst for innovation

Why is the case for change so relevant for us as an organisation?

Roche's 2030 objectives are incredibly motivating and inspiring for one quintessential reason. I don't think any of us came to Roche Genentech because we wanted to do the same old thing - the same old science. I think we all came here fundamentally because we want to continue the legacy that we've had of rewriting the textbooks and creating exponential patient benefit.

Those 10-year ambitions really challenge us to do that; it's simply not possible for us to achieve 3 to 5 times more benefit at 50% the cost to society by doing the same thing that we've always done. I love the gauntlet it throws down, about the need to do something inherently different.

What do you think we need to be doing differently to help realise that ambition?

The urgency it provides pushes us to look at how we bring molecules to patients and understand what brings the most value to healthcare systems and patients around the world. I think often, we're focused just on clinical value, which is so critically important. Going forward, the need to consider that clinical value in the context of the system in which it's going to be delivered will be increasingly important.

And I think that's where the power of the combination of, you know, gRED, pRED, PD, GPS, and the affiliates really comes in. Our understanding of that mutual continuum and the journey that patients are on will be critical to us to meet the very ambitious vision that we have.

We see increasing examples of how we're working across the Roche group to live that OneRoche vision, something that probably never could have happened with the kind of speed that it did, without COVID-19.

How do we break down silos between the R&D teams and commercial teams?

In some ways, the size of Roche and Genentech should be our biggest competitive advantage, but very often, it's our Achilles heel. Because we allow the organisation's weight almost to drag us down, we become internally focused far too easily. Breaking down the silos is just about getting people to prioritise lifting their heads and acknowledging that what's a lot more important is what's happening in the world I'm going to launch my drug into. We need to ask ourselves, am I making the connections that helps me do that in the most successful way possible?

What do you think some of the real and imagined barriers might be, that are preventing the R&D teams and commercial teams from collaborating as much as we'd like?

I think probably the greatest barrier is time. The fact is that in our organisation, there aren't a whole lot of people who are operating at just 50% capacity. Most people would argue that they're operating at 150% capacity, most of the time. As we get sucked into the demands of our day to day role, usually within our silos, it becomes tough to think about something that isn't absolutely on our To-Do list.

I also think sometimes there's a perception that the commercial people may be creating all sorts of barriers to you getting your project to advance. I would just really encourage people to think differently. There are very few things we say no to, for example, because of epidemiology. If we're never engaging in the conversations, and we're not creating those relationships and networks, it becomes increasingly difficult. We're all here for the same outcome and to make the same thing happen – to bring incredible science to patients. The more we can think of each other as partners in that process, the better off we are.

Are there examples that spring to mind where we've put the energy into fostering collaboration and nurturing relationships, and that's resulted in an outcome for the greater good?

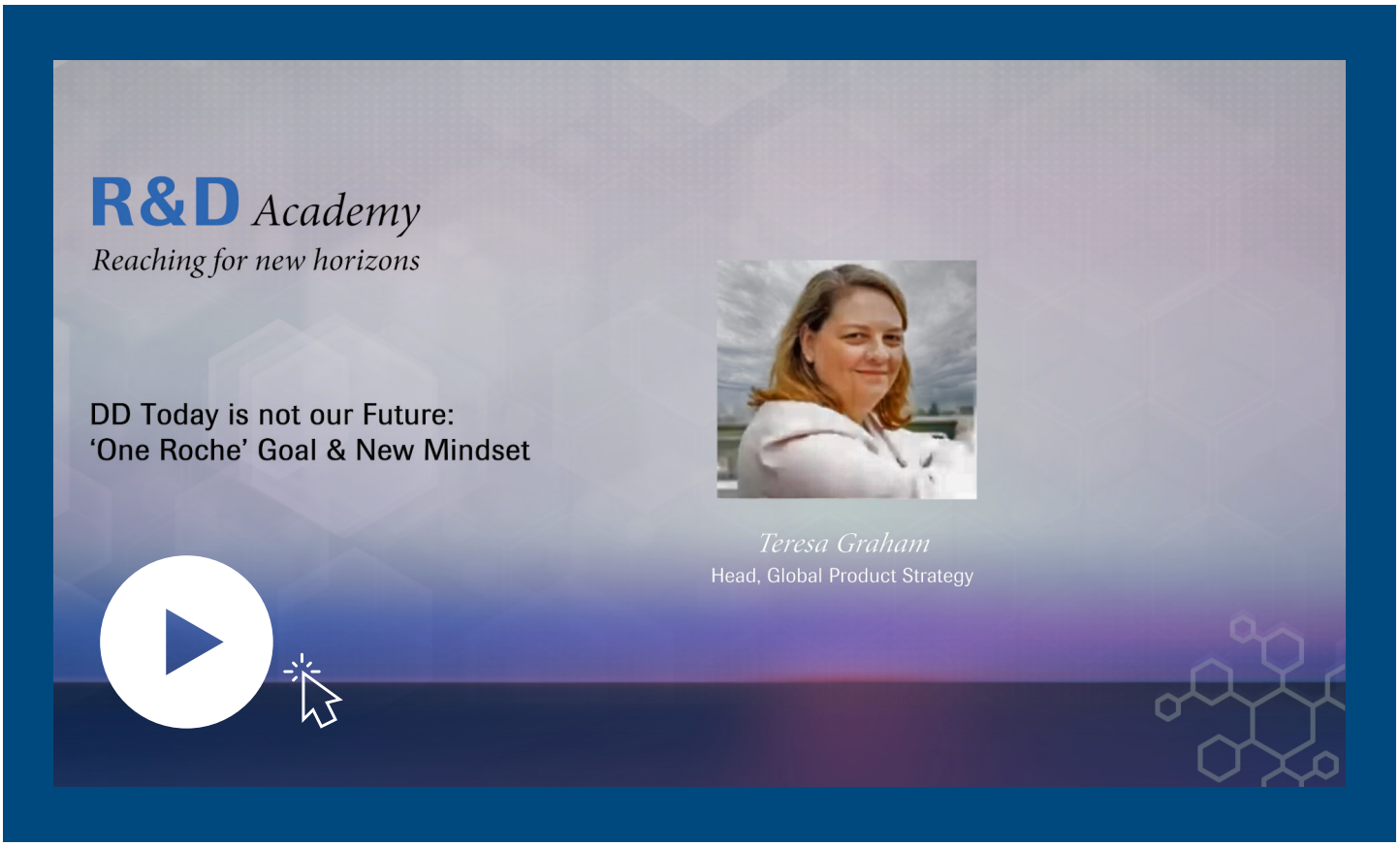
I see examples of this everywhere in the organisation. For example, how we're working across the Roche Group to live that OneRoche vision, something that probably never could have happened with the kind of speed that it did, without COVID-19.

What's going to be critical is that we don't fall back into old patterns and let the gains we've made slip away. My ask for everyone is to try talking to someone you wouldn't ordinarily speak to every day. Go and get an opinion from someone you wouldn't necessarily think of. And by the way, that's not just PD and commercial - talk to someone in a different therapeutic area, who maybe had a similar formulation challenge. Talk to someone on another rare disease who might have experienced something you're experiencing. If you've had great success in your program, go find someone to share that with! If you reach out a little every day, it starts feeling less scary, and you might be surprised how quickly you build your network.

The changemakers of the future

Utilising the full depth and breadth of the global knowledge base could seem like a task of staggering complexity, yet according to Graham, it comes down to a shared willingness to be a force of change. "When I think changemaker, I think of someone who's a catalyst for innovation. Someone who's not afraid to step into the unknown, to step into something very ambiguous, with a clear vision and a clear idea of how they want to make a change in the world; and they're willing to put all of their energy and effort behind making that happen." H

Click below to watch the entire interview.



Forging NEW PATH *for personal*

Lilyan Wright on the career choices that matter.

As Roche looks beyond 2020, the R&D Academy strives to find new and innovative ways to nurture their scientists. Preparing them for all aspects of drug development into the future requires tapping into the vast pool of talent and mixing things up! Knowledge sharing and collaboration is one way of doing that, but there is no more profound exchange of teaching and learning to be found than walking a mile in the shoes of others.

Lilyan Wright is a Senior Clinical Development Scientist at Genentech and has been with the company for more than a decade. In that time, her position has evolved from research scientist at gRed, to Senior Clinical Scientist in PD Oncology Clinical Development.

Wright was born, raised, and went to medical school in China before the whole family immigrated to the USA, where she did Ph.D. training in molecular immunology. “Genentech is the first and only company I’ve worked for, and I feel very, very fortunate to be a part of it. One of the major reasons I came to Genentech was

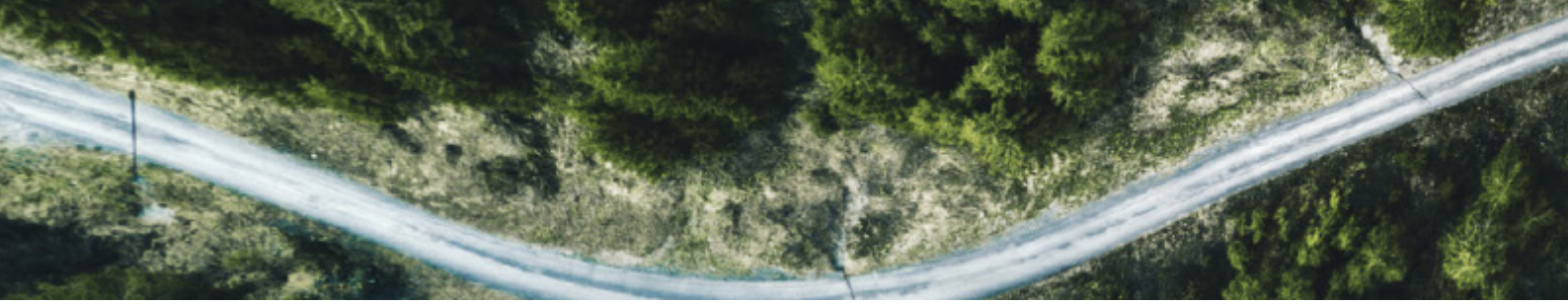
WAYS

and professional growth

because of the science, and I thought it offered the best of both worlds - combining academic and pharmaceutical science." Since then, her role has continued to evolve as she found new ways within the organisation to continue to learn and grow.

Lilyan was the first scientist at Genentech to take on a job rotation between Research and Commercial, and her experience offers great learnings as to how flexibility and the willingness to 'stray' from a traditional career path can be transformative.

Lilyan's evolution into product development was primarily due to her work with the Etrolizumab molecule. In her early years at Genentech, Lilyan was part of the team working on what at the time was 'the new' Etrolizumab molecule for Inflammatory Bowel Disease (IBD). "We did the observational trial, to figure out what the endpoint was and how heterogenous the disease was, even though we give it this big name of IBD as a cover-all. Then we ran the first Phase I, and Phase II, and then we lipped the molecule. We were very excited, we got to LIP the molecule we'd been working on for 6 years."



Having a molecule lipped is, of course, a blessing, but it can come with some internal conflict. Moving the molecule from Phase II to Phase III meant saying goodbye. “At that point, I told my manager I wanted to follow my baby, and she was very supportive.” Luckily for Lilyan, there was a PD safety science position available, enabling her to join and support Etrolizumab. This didn’t eventuate, however, as other large studies were recruiting well. During her 5 ½ years in PD Safety Science, Lilyan’s opportunities have extended to work with Lebrikizumab (for asthma), Hemlibra (for Hemophilia A), Gazyva (for Lupus nephritis), and Xofluza (for Influenza). Lilyan is currently Medical Monitor for Crovalimab (PNH in rare blood disorders).

In a recent interview, we chatted with Lilyan about how her experience in Commercial has impacted her personally and professionally and what it meant to step out of her comfort zone.

What was one of the most important learnings you’ve had in Commercial?

One of the key learnings is the people there are very patient-centric; they know patients, and they want to do the best they can for them. They want to be a part of the whole process of bringing the medicine to the patient. There’s lots of patient research there that’s really mapped out. I still vividly remember this giant map they had for the patient journey. It was for hemophilia, a genetic disorder that mostly happens in boys, and it literally mapped what kinds of things a patient actually had to go through from the day the baby was born.

So rather than the very misinformed image I had of them - that they just want to sell something to people that they don’t need, I learned that they really understood the patient journey and wanted to be a part of it.

How have you seen the drug development process evolve during your time here at Genentech and Roche?

I can speak from my personal experience in terms of how my thinking has evolved about drug development. When I was a scientist in gRED, and we were doing studies, I wanted every single sample under the sun because I thought it was important for the science. I was actually making the study bigger, with so many endpoints and zillions of bar markers! The impact on the study was that without thinking, I was slowing down the process of bringing this transformative medicine to patients.

One of the things I actually think is really important is to truly understand the needs of our customers; and I say ‘customer’ here, meaning it’s about more than just the patient. Of course, the patient is our North star, but it doesn’t matter

“Ultimately, I think all of us have the same North star - to serve the patients and to serve our customers in the best way,” explains Wright. “Our motivation should always be to question how we bring our medicine to the patients in the best way we possibly can”

how great the product is if the patient can't get access to it. It's something I never really paid attention to when I was a researcher.

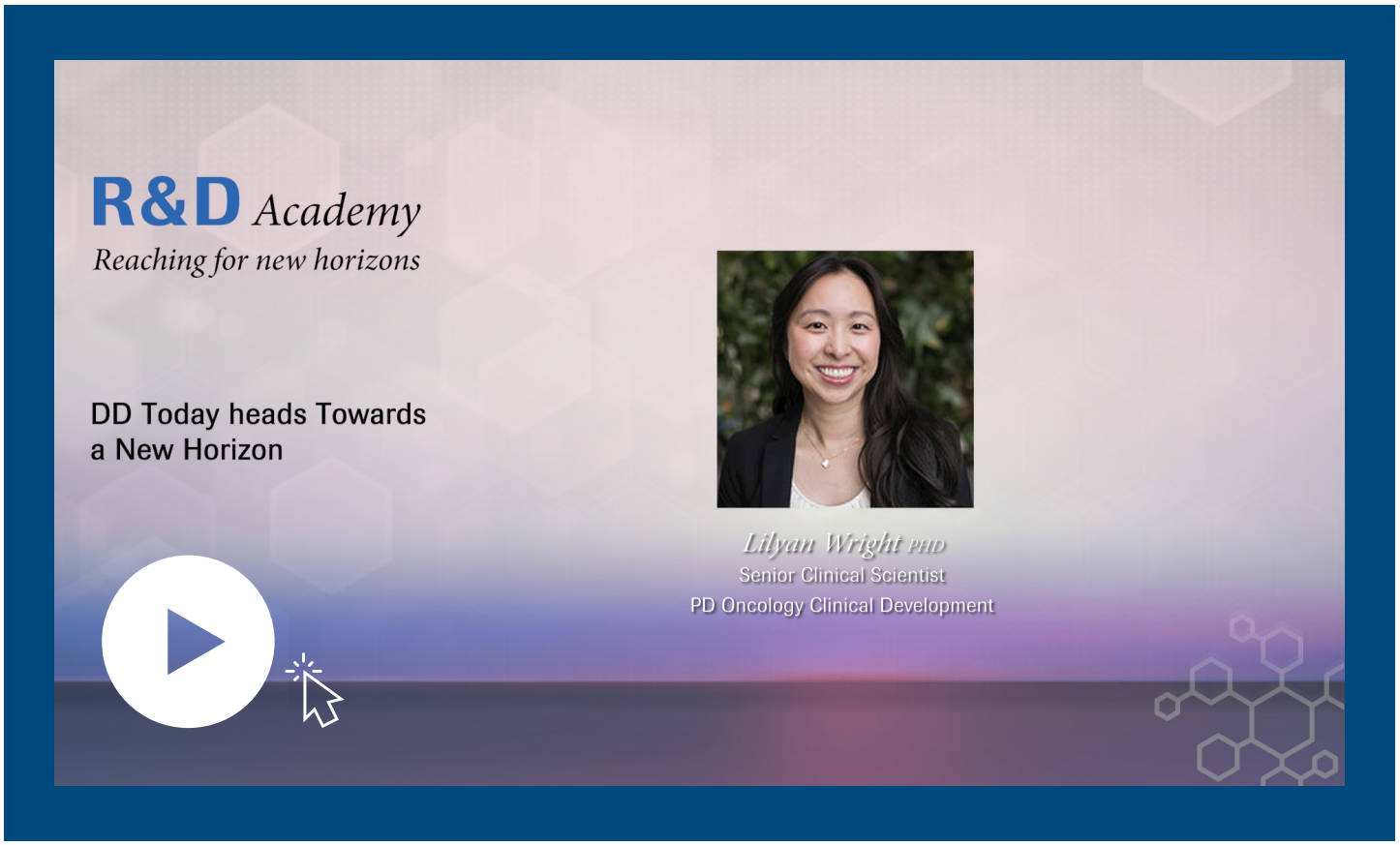
Do you think it's a benefit to have a scientific research background in a Commercial role?

I think there's a lot of benefits - many of the Commercial roles, they all have a business background, however many of them have some sort of a scientific background as an undergraduate too. So, they're quite fluent in terms of science, and they love to talk about science as well. I mean the Commercial people were joking with me that I was the first and the only scientist that did a rotation with them. It's not common, but I hope I'm not the last one and more people are wanting to go there. I know we have a couple of MDs now in LCL roles, which are Commercial. They're doing well, and they enjoy that they can bring the scientific aspects into the business. I think it's the best of both worlds.

Encouraging scientists to collaborate is one thing but enabling people from different disciplines and different departments to cross-collaborate is a game-changer. Making the shift from a siloed approach that keeps everyone's focus on their own individual goals, requires a collective about-face.

Creative thinking, such as rotations like Lilyan Wright's, where expertise is shared by working in areas outside of the traditional scope, takes the organisation as a whole to a new level. One that strives together to achieve the shared universal goal of meeting the unmet needs of the patients.

Click below to watch the entire interview.



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