Investing in Innovation to Change the Trajectory of Human Health

Around the world, patients suffering from difficult-to-treat diseases wait every day for innovations in healthcare that can truly make a difference in their lives. At Johnson & Johnson, everything we do is grounded in our company’s 75-year-old Credo of discovering and developing products and solutions that can benefit patients and consumers. At JJDC, we are constantly in search of innovative companies developing cutting-edge pharmaceuticals and state-of-the-art medical devices, products and technologies for patients and consumers that we can invest in and help grow.

While I’m new to JJDC, I’m no stranger to J&J. I joined the company nearly 25 years ago and since then, I’ve held a variety of leadership positions – in Research & Development, our Global Baby Franchise and North America Consumer division, to name a few. I could not be more excited about being appointed President of JJDC and sharing my knowledge and experience with my team as we move forward into 2020. In turn, I look forward to learning from and being inspired by everyone working across JJDC. Before I stepped into this role last October, JJDC had been expertly led by Tom Heyman, who was instrumental in guiding JJDC to become the #1 Healthcare Corporate Venture Capital investor for healthcare investments for two consecutive years. Last year, JJDC deployed more than $500 million to pharmaceutical, consumer and medical device companies in the U.S. and abroad.

In this newsletter you can learn about the strategic investments the JJDC team made last year, in partnership with our co-investors and innovation leaders across different sectors, and how these investments are foundational to our unwavering commitment to innovation in healthcare.

As we look ahead into 2020, I am focused on continuing to build on JJDC’s success over the last 46 years – accomplishments that stem from our relationships with entrepreneurs, scientists and other investors across the industry; the unparalleled science, technology, scale and reach of J&J; and our ability to identify emerging trends and putting strategies in place to enable future growth.

I’m excited to work with the many brilliant entrepreneurs in our network and beyond who are developing innovative healthcare solutions, and look for opportunities where we can serve as strategic partners. For the companies we invest in, I will be making sure we understand their vision and that we leverage all of the capabilities and expertise uniquely available to us to help move their science forward.

I would like to recognize the entire JJDC team and our growing portfolio of companies, which are dedicated to creating and delivering innovative solutions that truly meet the needs of patients and consumers in a meaningful way, helping them live longer, healthier lives. Together, we are working tirelessly to impact healthcare and transform human health by living and breathing J&J’s Credo of putting the needs and well-being of the people we serve first.

Regards,

Chris Picariello

PitchBook search of CVC investors’ disclosed healthcare deals from November 1, 2018 - October 31, 2019.
JJDC By The Numbers — 2019

#1 Healthcare CVC
for Healthcare Venture Investments*

>$500 Million Capital Deployed
By 13 investors around the globe

40+ Investments
New and follow-on

>130 Active Portfolio Companies
In 3 sectors (Pharm, Consumer, Device)

46 Year Legacy

3 Onboardings

4 Exits (M&A, IPO)

*According to PitchBook Search of CVC Investors Disclosed Healthcare Deals from Nov 1, 2018 - Oct 31, 2019
Lung cancer is the deadliest form of the disease worldwide, because by the time it is typically detected, it is often too late to treat effectively. As a result, approximately 80 percent of people diagnosed with lung cancer will not survive beyond five years. This stark figure is one reason why Johnson & Johnson’s Medical Devices Companies first became interested in Auris Health. The company’s technology combines flexible robotics, live video and micro-instruments to take a less invasive approach to detecting, diagnosing and treating patients, potentially allowing physicians to discover lung cancer earlier, and save lives.

Auris innovated in an area that hadn’t seen much change in half a century – the flexible bronchoscope. First invented in 1966, the device maneuvers miniature tools and cameras into the body through natural openings to directly visualize the lung. Getting deep into the lungs can be difficult, given the 1,500 miles of progressively smaller airways they contain. Doing so without damaging healthy tissue can also be an issue. Auris’ Monarch™ Platform improved the bronchoscope to go even further into the lung, while adding live video, precise movements with a video-game-like controller, and the ability to biopsy tissue, as well as the potential ability to treat lung tumors in the future.

Because of these innovations, as well as the company’s visionary founder Dr. Fred Moll, JJDC, invested in Auris in 2017, allowing for greater collaboration between the two entities. Two years later, Johnson & Johnson’s Ethicon, Inc. acquired Auris.

Auris’ Monarch Platform is FDA-cleared and on the market in the United States for diagnostic and therapeutic bronchoscopic procedures in patients with lung cancer. J&J’s commitment to combating lung cancer was strengthened in 2018 when the company launched its Lung Cancer Initiative.

This initiative, which crosses J&J’s Pharmaceutical, Medical Devices and Consumer Health sectors, is dedicated to catalyzing a new approach that pulls science, technology and services from across diverse areas of healthcare to deliver transformative solutions, including Auris’ robotic surgical platform.

JJDC’s initial investment in Auris Health followed by Ethicon’s acquisition amplified J&J’s digital surgery portfolio and is helping to deliver on its promise to improve lung cancer detection and diagnosis. Auris Health is now a centerpiece of J&J’s Medical Devices business, complementing other investments and partnerships in digital surgery and robotics. Ethicon is currently exploring potential applications and utility of the Monarch Platform beyond lung cancer in other categories with similar diagnostic and therapeutic challenges, such as urologic and gastrointestinal diseases and conditions.

“We’re aiming to simplify surgery, drive efficiency, reduce complications and improve outcomes for patients, ultimately making surgery safer,” said Ashley McEvoy, Executive Vice President, Worldwide Chairman, Medical Devices, Johnson & Johnson. “We believe the combination of best-in-class robotics, advanced instrumentation and unparalleled end-to-end connectivity will make a meaningful difference in patient outcomes.”
Many consumers are turning to digital platforms to help manage their chronic conditions, but successfully staying on top of your disease requires a blend of both digital and human engagement. JJDC saw the opportunity to invest in a solution that takes this approach with HiDoc Technologies, an early-stage company whose digital health platform, Cara Care, personalizes treatment recommendations for people living with acute and chronic digestive conditions. Not only does the app let users track their diet and symptoms, it also provides insights based on their own data as well as real-world data. Cara Care can also connect people via chat to discuss their concerns and questions with certified nutritionists.

In June 2019, JJDC co-led a $7 million Series A financing for HiDoc, making this strategic investment in collaboration with Johnson & Johnson's Innovation Center in London and J&J's Consumer Health's Self-Care franchise. JJDC also played a significant role in syndicating the investment and finding other investors who wanted to support the commercialization of Cara Care – a critical undertaking for a company at this stage.

“What hooked us about Cara Care was its interactive platform approach for consumers versus the more transactional experience that involves the search for a product or treatment at a pharmacy or online,” said Tamir Meiri, who led the investment from JJDC and joined the HiDoc Board of Directors.

Cara Care users enter information into the app about many different aspects of their day-to-day life and digestive condition – nutrition, fitness, lifestyle, mood and medication. The platform then analyzes these data sets, providing users with personalized information about potential treatments and interventions to improve their gastrointestinal health. The app’s ability to collect and analyze data at both the individual and population level helps it constantly evolve to provide the most useful and up-to-date information and guidance and recommend tailored interventions. This also enables users to discover correlations and triggers associated with their condition.

Cara Care will join approximately a dozen other companies in JJDC’s Consumer Health portfolio, which includes other digital health investments across J&J Consumer Health’s strategic areas of interest. One key area of focus in investing in digital health is targeting personalized end-to-end solutions that engage the user and deliver improved access, a better overall experience, and improved outcomes. “With our investment in HiDoc, we have the opportunity to learn more about new business models and new ways to speak to the customer beyond a product-focused or retail engagement,” said Meiri. “In addition to learning about customer purchasing behaviors, partnering with HiDoc could provide us with unique insights into the effect of digital therapeutic platforms on patients using pharmaceutical therapies for digestive health conditions.”

“Digital health is an exciting area that has a lot of potential in terms of improving outcomes for consumers and patients,” said Stacy Feld, head, Johnson & Johnson Innovation, West North America, Australia & New Zealand, and leader of the Consumer Health portfolio on the JJDC team. “Investments in digital health and therapeutics aren’t solely about the technology, but about what the technology can enable for the consumer and patient experience.”
Too much stress is bad for your health – and the same principle applies to cancer cells, which are under stress for a variety of reasons. The activation of stress support pathways is a hallmark of many cancer cells. They use these pathways as a way to “stay calm” and avoid the dangers of a stress response, which can include self-destructing or alerting their presence to our immune system. Armed with that knowledge, scientists have been researching a way to turn off this protective measure as a new approach to combating cancer.

Ribon Therapeutics is working on a novel target class – monoPARPs, enzymes involved in regulating stress response – and has discovered one target in the family that regulates cellular stress responses and enables cancer cells to survive and evade detection by the immune system. The company’s lead experimental drug, RBN-2397, is a PARP7 inhibitor that is currently in Phase 1 clinical studies for various tumor types, including lung cancer, the leading cause of cancer deaths worldwide.

In January, JJDC participated in Ribon’s $65 million Series B financing. Ribon will use the proceeds to further clinical development of its lead program and build its growing pipeline of novel inhibitors of the enzymes involved in disease stress biology. Marian Nakada, Ph.D., Vice President of Venture Investments, who led the investment for JJDC, joined Ribon’s board shortly after the financing, and was later appointed chair, joining the ranks of the only 2 percent of women who chair the boards of private companies. Nakada is working closely with Ribon’s CEO, Victoria Richon, Ph.D., providing advice and insights based on her two decades of strategic and scientific experience.

“We jumped on the chance to invest in Ribon because it is pioneering a novel approach to cancer treatment and had very convincing early science,” said Nakada. “Ribon is addressing a target that no one else in the biopharma industry is working on, and we were impressed with its compelling biology and in vivo anti-tumor efficacy.”

Headquartered in the biotech hub of Cambridge, Massachusetts, close to J&J Boston Innovation Center, Ribon is led by Richon, a scientifically trained executive with decades of R&D and leadership experience and accomplishments at both small biotechnology companies as well as large pharma.

“Ribon’s innovative and promising science and initial focus on lung cancer closely aligns with J&J’s goal of supporting the development of solutions to prevent, intercept and cure this devastating disease,” said Nakada. “With JJDC’s strategic investment in Ribon, we look forward to continuing to support the company as a value-add investor by providing expertise, capabilities and venture connections to help it succeed in developing its novel anti-cancer medicines and bringing them to patients.”
JJDC Featured Transactions

**X-VAX.** Completed a $56 million Series A financing with participation from JJDC to advance a herpes vaccine that is taking a new approach to potentially defeat herpes by eliciting the killing of HSV-1 and HSV-2 infected cells rather than depending primarily on neutralization of the virus.

**FOUNDERS FACTORY.** Opened a new branch in New York, for which JJDC was an anchor investor to support and advance Self Care digital healthcare solutions for consumers. The company is a leading digital tech accelerator and incubator.

**HISTOSONICS** Completed a $54 million Series C financing with participation from JJDC to develop a non-invasive robotic platform and novel sonic beam therapy (histotripsy) that can be used to safely, precisely and effectively destroy tumors at sub-cellular levels.

**VOR BIOPHARMA** Completed a $42 million Series A financing with participation from JJDC to enable the company to advance its engineered hematopoietic stem cell platform for patients with acute myeloid leukemia.

**Adicet Bio** Completed an $80 million Series B financing with participation from JJDC to develop universal, off-the-shelf immune cell therapy for the treatment of cancer.