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# Zacks Small-Cap Research

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## Quoin Pharmaceuticals (QNRX-NASDAQ)

### QNRX: FDA Clearance To Move QRX003 Clinical Testing Forward; Positive Implications

Quoin Pharmaceuticals is an emerging specialty pharmaceutical company focused on developing and commercializing therapeutic products for the treatment of rare and orphan diseases that have few or no currently approved therapies.

| | |
|---|---|
| Current Price (04/22/22) | $1.05 |
| **Valuation** | **$4.65** |

### OUTLOOK

Quoin announced today that it has been granted FDA clearance to initiate clinical testing for its Investigational New Drug (IND) application for QRX003. Quoin had submitted a pre-IND meeting request to the FDA regarding the proposed development of QRX003 as a potential treatment for Netherton Syndrome (NS) on November 29, 2019. NS is a rare disease that currently has no approved treatment or cure. With this FDA clearance, the company expects to begin clinical testing in patients with NS in 1H22. Quoin targets receiving regulatory approval in the U.S. and EU in 2024 and is currently laying the foundation for a subsequent commercial launch of QRX003, pending approval.

### SUMMARY DATA

| | |
|---|---|
| **52-Week High** | **$35.52** |
| **52-Week Low** | **$0.93** |
| **One-Year Return (%)** | **-89.15** |
| **Beta** | **N/A** |
| **Average Daily Volume (sh)** | **230,613** |
| **Shares Outstanding (mil)*** | **4** |
| **Market Capitalization ($mil)** | **N/A** |
| **Short Interest Ratio (days)** | **N/A** |
| **Institutional Ownership (%)** | **N/A** |
| **Insider Ownership (%)** | **N/A** |
| **Annual Cash Dividend** | **$0.00** |
| **Dividend Yield (%)** | **0.00** |
| **5-Yr. Historical Growth Rates** | |
| **Sales (%)** | **N/A** |
| **Earnings Per Share (%)** | **N/A** |
| **Dividend (%)** | **N/A** |
| **P/E using TTM EPS** | **N/A** |
| **P/E using 2022 Estimate** | **N/A** |
| **P/E using 2023 Estimate** | **N/A** |

***ADSs**

| | |
|---|---|
| **Risk Level** | **High,** |
| **Type of Stock** | **N/A** |
| **Industry** | **Med-Drugs** |

### ZACKS ESTIMATES

**Revenue**
(in millions of $)

| | Q1 (Mar) | Q2 (Jun) | Q3 (Sep) | Q4 (Dec) | Year (Dec) |
|---|---|---|---|---|---|
| 2020 | | | | | 0 A |
| 2021 | | | | | 0 A |
| 2022 | 0 E | 0 E | 0 E | 0 E | 0 E |

**Loss per share / EPS**

| | Q1 (Mar) | Q2 (Jun) | Q3 (Sep) | Q4 (Dec) | Year (Dec) |
|---|---|---|---|---|---|
| 2020 | | | | | |
| 2021 | | | | | -$5.42 A |
| 2022 | | | | | -$4.45 E |

Disclosures on page 15.

## KEY POINTS

- **FDA clearance …** Quoin Pharmaceuticals announced today that it has been granted FDA clearance to initiate clinical testing for its Investigational New Drug (IND) application for QRX003.

- Quoin had submitted a pre-IND meeting request to the FDA regarding the proposed development of QRX003 as a potential treatment for NS on November 29, 2019. QRX003 is Quoin's investigational product, initially for Netherton Syndrome (NS), a rare disease that currently has no approved treatment or cure.

- With this FDA clearance, the company expects to begin clinical testing in patients with NS in 1H22. The company targets receiving regulatory approval in the U.S. and EU in 2024 and is currently laying the foundation for a subsequent commercial launch.

- **NS patient population** Quoin estimates that there are about 6,000-7,000 patients in the U.S. and EU suffering with Netherton syndrome. Data is not readily available and these estimates are within the range of other published estimates. The National Organization for Rare Disorders (NORD) indicates that the actual number of people suffering from NS might exceed the number of reported cases because it is often undiagnosed.

- QRX003 is one of three lead products Quoin has in development and it is the most advanced (for treatment of NS). Quoin's goal is to address the unmet medical need of patients suffering from certain rare and orphan diseases, beginning with dermatological indications. Skin is the body's largest organ and first point of contact for microbes and toxins. Demand for products and therapies to treat dermatological disorders has climbed in recent years.

- Like other products in Quoin's pipeline, QRX003 and the company's assets are generally being designed to treat multiple indications. Thus, QRX003 is planned to target NS initially; Quoin also intends to expand its use to other patient populations, such as those suffering from peeling skin syndrome and other conditions. In turn, this strategy is expected to broaden QRX003's target patient populations and commercial prospects, create operating and cost efficiencies and scale and enhance the commercial opportunities of QRX003 and other drugs in the product pipeline. According to NORD, at least 154 orphan products were approved initially to treat a single rare disease and ultimately earned approval to treat one or more additional orphan indications.

- In addition to pursuing FDA approval, Quoin intends to pursue approvals from other international regulatory agencies for QRX003.

## QRX003 FDA CLEARANCE

### Moving QRX003 forward for potential treatment of NS

Quoin Pharmaceuticals (QNRX-NASDAQ) announced today that it has been granted FDA clearance to initiate clinical testing for its Investigational New Drug (IND) application for QRX003, one of the company's lead products in development. Quoin submitted a pre-IND meeting request to the FDA regarding the proposed development of QRX003 as a potential treatment for NS on November 29, 2019. QRX003 is Quoin's investigational product for Netherton Syndrome (NS), a rare disease that currently has no approved treatment or cure (see below).

With this FDA clearance, the company expects to begin clinical testing in patients with NS in 1H22. The company targets receiving regulatory approval in the U.S. and EU in 2024 and is currently laying the foundation for a subsequent commercial launch.

### NS patient population

Quoin estimates that there are about 6,000-7,000 patients in the U.S. and EU suffering with Netherton syndrome. Data is not readily available and these estimates are within the range of other published estimates. The National Organization for Rare Disorders (NORD) indicates that the actual number of people suffering from Netherton syndrome might exceed the number of reported cases because it is often undiagnosed.

### QRX003 - one of three lead products in development & most advanced

Quoin is an emerging specialty pharmaceutical company focused on developing and commercializing therapeutic products for the treatment of rare and orphan diseases that currently have few or no approved therapies. Quoin has three lead products in development; QRX003 for Netherton Syndrome (NS) is the most advanced. As noted, QXR003 is being developed to treat NS and other disorders for which there currently are no approved treatments. Quoin's goal is to address the unmet medical need of patients suffering from certain rare and orphan diseases, beginning with dermatological indications. Skin is the body's largest organ and first point of contact for microbes and toxins. Demand for products and therapies to treat dermatological disorders has climbed in recent years, driven in part by the aging of the population, and increased awareness of ways to treat and manage symptoms.

### Broaden market, spread development, distribution & marketing costs over expanded base

**The products in Quoin's pipeline generally are being designed to treat multiple indications.** Thus, QRX003 is planned to target NS initially, as noted, and Quoin also intends to expand its use to other patient populations. In turn, this strategy is expected to broaden QRX003's target patient populations and commercial prospects, create operating and cost efficiencies and scale and enhance the commercial opportunities of QRX003 and other drugs in the product pipeline. This strategy is also consistent with recent trends in treatments for orphan drug disorders. According to NORD, at least 154 orphan products were approved initially to treat a single rare disease and ultimately earned approval to treat one or more additional orphan indications.

The three lead products in QNRX's development pipeline target a broad number of rare and orphan diseases, focusing on the following illnesses, which we discuss in greater detail below:

**Quoin Near-Term Focus**

- Netherton Syndrome
- Peeling Skin Syndrome
- Palmoplantar Keratoderma
- Epidermolysis Bullosa

Source: Company reports

### *QRX003: Treating Netherton syndrome and other conditions*

Quoin intends to pursue FDA approval and approvals from other international regulatory agencies for QRX003, which is being developed as a treatment for NS, as noted, and other conditions. If Quoin obtains Orphan Drug status and Pediatric Rare Disease Designation for QRX003 sometime this year, it would be expected to accelerate approval. The potential for an expedited regulatory pathway is supported by the significant increase in approvals of products to treat rare and orphan diseases in recent years. For example, according to NORD, at January 1, 2020, 564 orphan products were FDA-approved

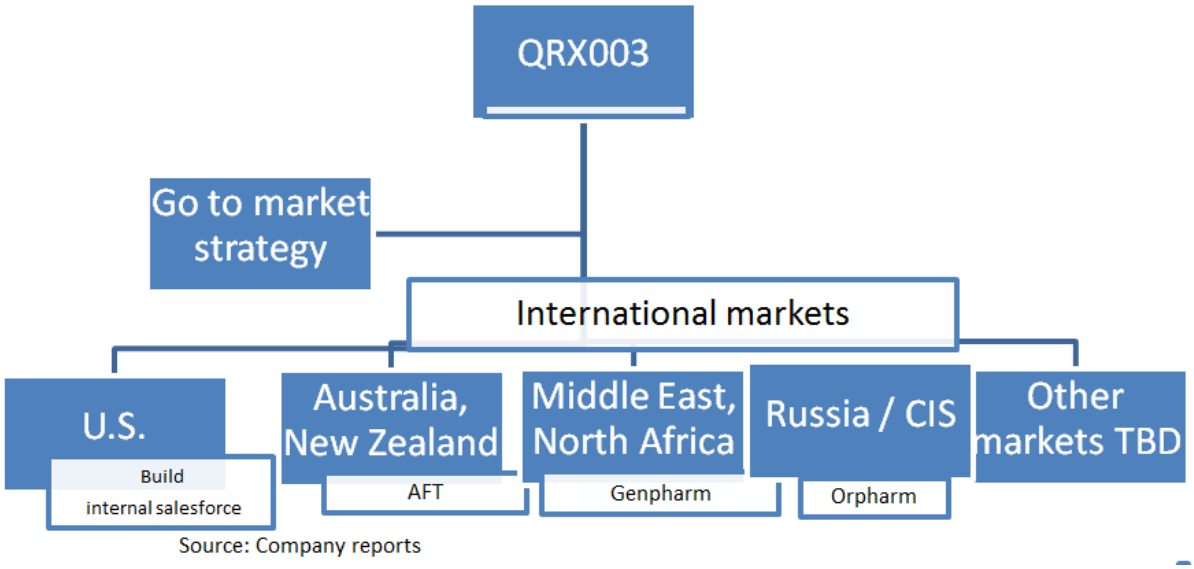
to treat 838 rare diseases, of which some 30% received approval in the three years prior. Quoin expects that initial clinical testing of QXR003 to treat NS will begin in 2022 and the company is optimistic that, if successful, QXR003 for NS could be approved in the U.S. and EU by 2024-2026.

### *Establishing sales infrastructure for U.S. & EU; Partnerships for other markets*

Quoin is developing an internal sales / distribution infrastructure to cover the U.S. and Europe and has entered into partnerships, as noted, for international markets, with partnerships to-date to cover Australia, New Zealand, Middle East, Russia, and CIS. Quoin has additional discussions underway to cover other parts of the world and extend the commercial applicability of QRX003 and potentially other products.

To commercialize QRX003 in the U.S. and Europe, Quoin intends to develop an internal sales infrastructure. Given that its current focus is on rare and orphan dermatological conditions, the company believes that it can attain scale quickly and in an economically efficient way by developing outreach to treating physicians and also working with foundations that focus on these diseases.

For other international markets, the company's strategy is to enter into distribution partnerships in territories including Canada, Australia, the Middle East and Asia. Towards this goal, Quoin recently forged revenue sharing deals with AFT Pharmaceuticals Ltd. and Genpharm Services for exclusive rights to commercialize QRX003 in Australia and New Zealand (AFT) and the Middle East and North Africa region (Genpharm). Prior to the current geopolitical situation, the company signed an agreement with Orpharm LLC for Orpharm to commercialize QRX003 in Russia and CIS.



Source: Company reports

The company's current focus is on rare and orphan diseases in the dermatological space. However, the company plans to expand its existing product portfolio by adding additional assets that address unmet medical needs. Quoin is actively looking to bring in additional rare & orphan assets and also expand beyond skin conditions. The company plans to seek partnerships, licensing opportunities and / or M&A transactions to expand its drug-development pipeline and capabilities. To further this objective and obtain public shares to help finance potential transaction, the company recently became public via a reverse merger (into publically traded Cellect Biotechnology Ltd.).

## QUOIN PIPELINE AND STRATEGIES TO EXPAND PRODUCT PORTFOLIO

### *Leveraging technology exclusive to Quoin*

The company is developing three proprietary lead products using patented Invisicare® delivery technology, which we discuss below. Quoin's strategy is to subsequently add new products to its portfolio that expand beyond the skincare space, as noted.

### Quoin Pharmaceuticals Product Pipeline

| Product Candidate | Target Indication | Status |
|---|---|---|
| QRX003» | Netherton Syndrome | Clinical/Pre-IND |
| | Peeling Skin Syndrome | Preclinical |
| | SAM Syndrome | Preclinical |
| | Palmoplantar Keratoderma | Preclinical |
| QRX004» | Epidermolysis Bullosa | Clinical/Pre-IND |
| QRX006» | Undisclosed Rare Skin Disease | Preclinical |

Source: https://quoinpharma.com/pipeline/

### QRX003

QRX003 is a topical lotion that is intended to be applied once daily and, in the case of Netherton Syndrome, to the whole body for the remainder of the patient's life. Quoin is targeting initiating the clinical development of QRX003 in 1H22. Quoin also plans to pursue QRX003 development for treatment of other rare dermatological indications, including Peeling Skin Syndrome, SAM Syndrome, and Palmoplantar Keratoderma, among others.

QRX003 contains a broad-spectrum serine protease inhibitor (SPI), which penetrates into the skin and regulates the hyperactivity of certain skin kallikreins that are responsible for the excessive skin shedding that NS patients suffer from and which leads to the highly porous skin that is indicative of the disease. The SPI also acts as a strong anti-inflammatory and antioxidant. QRX003 is formulated with the patented Invisicare® delivery technology, which Quoin licenses from Skinvisible Pharmaceuticals, Inc.

Invisicare enables users to apply the product once daily and the treatment remains active on the skin all day without needing to be reapplied. Quoin has the exclusive right to use the Invisicare technology for all orphan dermatology applications, including QRX0003, according to management. QRX003's goal is to reduce the patient's skin shedding and help enhance the protective barrier over the skin.

Quoin anticipates obtaining Orphan Drug status and Pediatric Rare Disease Designation for QRX003 in 2022, as noted. Given regulatory actions to facilitate and expedite approval of drugs to treat orphan and rare diseases (see below), we expect the company's timeline thereafter will be relatively short compared to development timelines of drugs to treat more widespread diseases. QRX003 formulation is fully

developed and has been manufactured at commercial scale. The company is working closely with supporting foundations and will have access to patient registries, according to management.

The company expects clinical testing to begin in 1H 2022, as noted. Based on feedback from the pre-IND submission, Quoin expects that a single pivotal study of about 20 participants could be sufficient for subsequently obtaining approval. The FDA recommended assessing five different endpoints and agreed to lower the criteria for a successful clinical outcome.

### QRX004

QRX004 is a topical lotion that is also utilizes the Invisicare® delivery technology. QRX004 contains two active ingredients and is initially being developed as a potential treatment for RDEB (see below). The primary ingredient in QRX004 helps create robust and sustained type VII collagen that improves wound closure, reduces blistering and generally strengthens the skin.

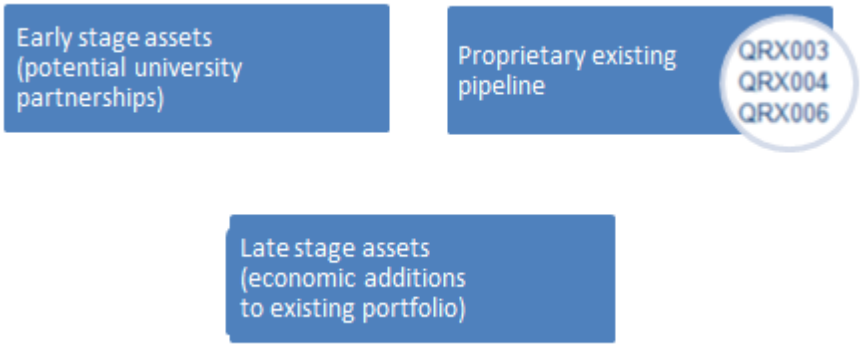
### QRX006

QRX006 is a topical lotion that Quoin is developing to treat a rare disease that the company has not disclosed yet. The existing standard-of-care for this disease generally requires both oral and IV infusion over a prolonged period and many patients have had side effects, according to the company. Quoin believes QRX006 could be a much better treatment alternative that could reduce the side effects and also obviate the need for daily visits to a medical facility for IV infusions. Quoin applied for a patent for QRX006 in mid-2021. We expect the company to provide more color on QRX0006 in the near-term.

### Strategies to expand product portfolio

In addition to the three leading candidates noted above, Quoin seeks to expand its pipeline of products designed to treat rare and orphan diseases. By leveraging relationships with universities and other sources, as well as the M&A market, the company seeks both early-stage and late-stage assets that could enhance its overall portfolio, as noted.

**Quoin Pharmaceutical - Strategy Regarding Product Portfolio**




Source: Company reports

## RARE & ORPHAN DISASES IMPACT LARGE NUMBERS IN THE AGGREGATE

As noted, the FDA defines an orphan disease as one that affects fewer than 200,000 people nationwide. Nevertheless, in the aggregate, many people suffer from various diseases that are categorized as rare and / or orphan. Orphan diseases impact about 25 million people in the U.S. in the aggregate, according to National Institutes of Health (NIH) data. In 1983, Congress passed the Orphan Drug Act, which

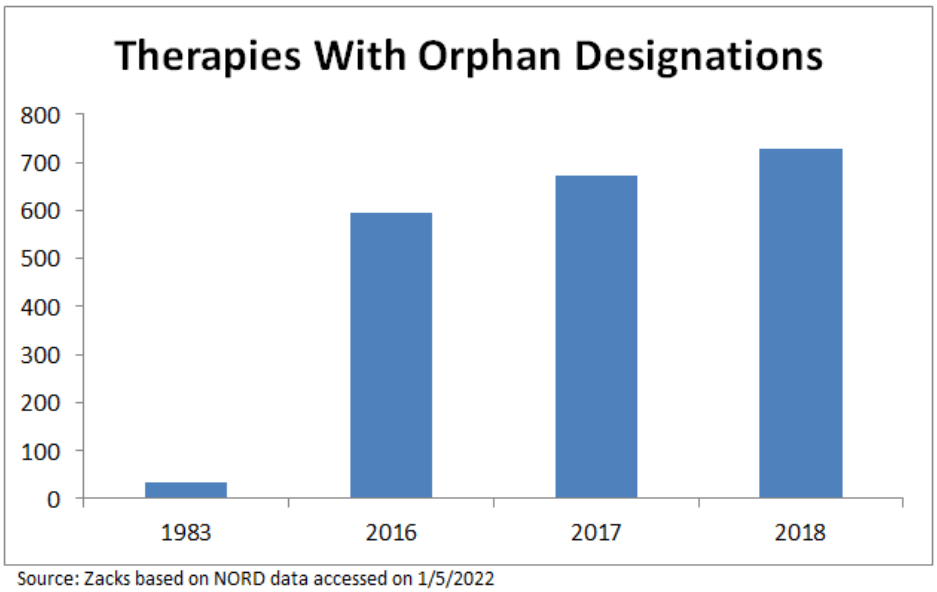
provided incentives for biotech and pharma companies to develop new drugs and therapeutic treatments to help people suffering from rare and orphan diseases that Big Pharma might not find meets the level of economic return to warrant development. According to the U.S. FDA, sometime in "the late 1970s it became increasingly clear that many citizens were being left out of … [ongoing medical and scientific] advances. One of the key reasons for this neglect was the small size of some patient populations. The relatively limited prevalence of a particular disease acted as a barrier for commercial investment in the research and development required to show evidence of the safety and efficacy of treatments. Ironically, by the early 1980s, these "rare diseases" affected 20-25 million patients who, together, suffered from approximately 5000 rare diseases…"

Regarding rare and orphan diseases:

- There are approximately 7,000-10,000 known rare diseases
- Aggregate U.S. patient population estimated at about 25-30 million
- Generally, they tend to be chronic, serious and frequently life-threatening
- Majority (about 80%) are genetic in origin
- More than 90% have no FDA-approved treatment

Source: NIH, NORD, Company reports

The Office of Orphan Products Development was created to encourage development of products to treat orphan diseases. The Orphan Drug Act was designed to stimulate innovation regarding treatment for rare and orphan diseases. The Orphan Drug Act of 1983 created financial incentives to develop therapies, including a seven-year exclusive period to market a drug approved to treat an orphan disease, even if it was not under patent, and tax credits for R&D and other expenses. The FDA notes that by 1990, it "had designated 370 products for orphan status, and of these 49 were approved for orphan indications. By 2002 the number of orphan designations grew to almost 1100, and approvals to 232, a number that provided treatment to an estimated 11 million patients."




Source: Zacks based on NORD data accessed on 1/5/2022

## Significantly Higher Cost of Orphan Drugs

The number of diseases designated as orphan diseases has increased geometrically and the number of drugs to treat many of those disorders has also increased as the FDA has sought to accelerate their approval. This gives us confidence of the company's ability to move QRX003 through the approval process domestically and internationally, given the need for novel treatment therapies for the diseases for which it is developing QRX003.

Costs of these treatments generally are significantly higher than costs of treatments for wider spread disorders. According to a study conducted by the National Institute of Health (NIH), "the cost per patient per year for a patient with a rare disease ranged from $8,812 to $140,044, compared to $5,862 for those without a rare disease." This estimate takes into account annual direct medical costs and indirect costs. The estimated direct costs of treating all patients afflicted with a rare or orphan disorder, including drug costs, hospitalizations and other expenses, aggregates to an estimated roughly $400 billion, which is comparable to major diseases such as cancer, heart failure or Alzheimer's.

Other estimates are in-line with NIH's. The United States Government Accountability Office (GAO) found that the "total cost in the United States for the estimated 15.5 million people with these 379 rare diseases was $966 billion. This amount reflects the combination of direct medical costs (estimated about $418 billion) and indirect costs associated with productivity losses ($437 billion), plus direct nonmedical costs.

The company cites estimates that orphan drug sales could reach $242 billion by 2024. In the aggregate, the market sizes and commercial opportunities of treatments that Quoin's products address could represent a sizable market if Quoin can commercialize its product portfolio in an efficient way, as management expects, and address multiple indications with most products. By developing and then launching products centered around dermatological disorders, with treatments that can effectively treat multiple disorders, the company expects to obtain economies of scale on development, distribution and go-to-market costs.

### Competition

Several other companies are also developing treatments for NS. Krystal Biotech, for example, has KB104 under development for the treatment of Netherton Syndrome. KB104 is a topical gel formulation designed to deliver two copies of the SPINK5 transgene. BridgeBio Pharma is developing BBP-561, a topical treatment therapy. Novartis had conducted clinical trials for BPR277, a topical treatment for atopic dermatitis and NS, and subsequently licensed the treatment to San Francisco-based LifeMax Laboratories.

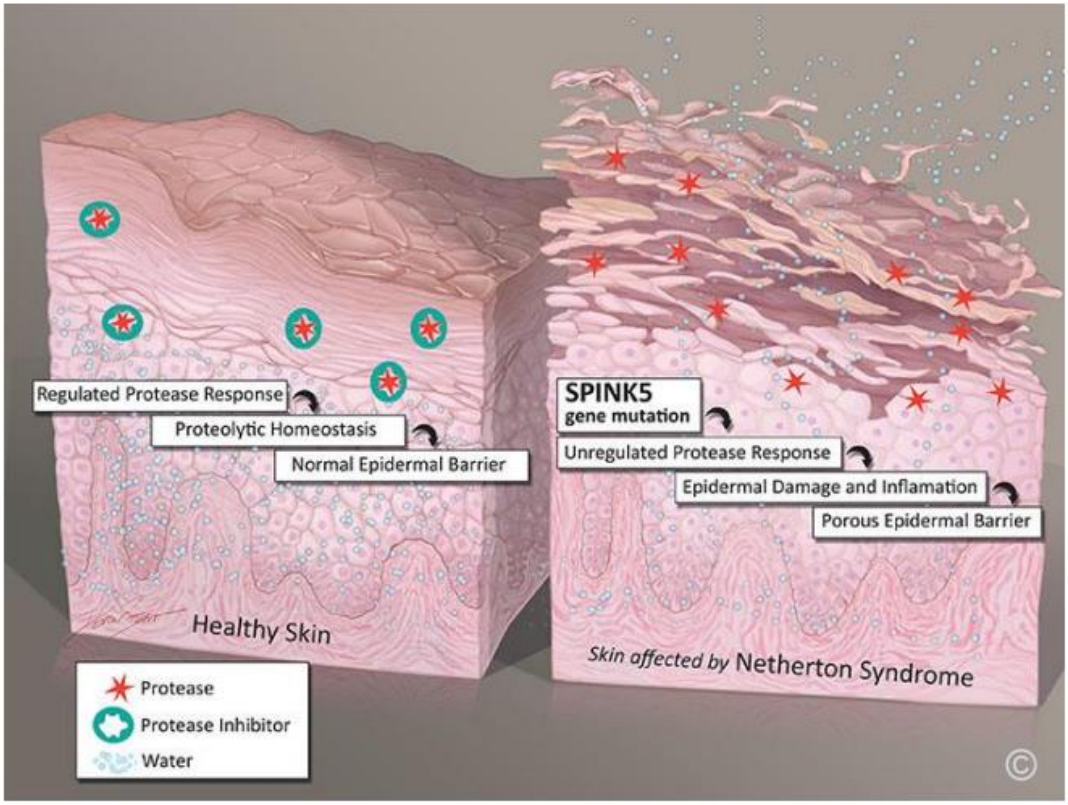
In 2020, Toronto Innovation Acceleration Partners (TIAP) and others invested in a drug development project focused on NS. Separately, privately-held Azitra received Rare Pediatric Disease Designation for ATR-12 for the treatment of Netherton syndrome. We would expect multiple products could achieve market if their clinical trials produce effective therapies.

## RARE & ORPHAN DISASES QUOIN LEAD PRODUCTS TARGET

### Netherton Syndrome

Netherton Syndrome is a debilitating skin disorder caused by mutations in the Serine Protease Inhibitor Kazal-type 5 (SPINK5) gene, SPINK5 is crucial in regulating serine proteases that hydrolyze extracellular proteins that bind corneocytes. In other words, SPINK5 is critical to the skin's regular and necessary shedding and replenishing and moisture retention.

**Netherton Syndrome**




Source and copyright: Quoin Pharma

People suffering from Netherton syndrome do not have as many layers of outer skin (stratum corneum) as they need, which means that their skin does not perform its primary function as a protective barrier. In turn, this increases the risk of infections, warts, irritation and even skin cancer in some patients. Moreover, their skin tends to be prone to scaling and is accompanied by hair anomalies, along with increased susceptibility to atopic eczema and itching. Patients with NS can also experience trans-epidermal water loss (TEWL).

Patients can suffer with painful symptoms such as predisposition to allergies, asthma, and eczema, congenital ichthyosiform erythroderma, hair shaft defects and recurring infections, chronic skin inflammation, severe dehydration, and stunted growth, among others. Babies who are born with NS tend to develop slower than others and often gain weight slowly, as well, which can put them at high risk of infection and dehydration. In turn, this can be severe and ultimately life threatening. Severe NS In infants can be associated with failure to thrive, delayed growth, short stature, and recurrent infections. According to the NIH, NS symptoms – including red, scaly skin – generally present at birth. Symptoms could include outbreaks of red, circular scaly rashes, and as noted, thin, fragile hair (bamboo hair), and immune reactions such as hay fever, asthma, itchy skin, and eczema.

The NIH notes that "[t]here is no specific treatment" for Netherton syndrome. Current standard of care seeks to manage the associated symptoms and complications. Standard therapies currently include regular use of lotions and emollients. However, because the patient's skin protective barrier is compromised, certain topical ingredients could cause adverse reactions. Because skin inflammation/infection/allergy and skin barrier defect are mutually causal, using one therapeutic strategy generally is not an optimal solution.

### Epidermolysis Bullosa

Epidermolysis Bullosa (EB) is a group of rare and genetic skin disorders. A person with EB generally has skin that is so fragile that even minor trauma can result in serious and severe pain, or even blistering, scarring, infections, chronic wounds. If severe enough, the disease could ultimately lead to the patient's immobility, disfigurement, disability and even early death. Recessive Dystrophic (RDEB), a form of EB, is characterized by progressive and increasingly painful blistering. It is diagnosed at infancy and results in a high mortality rate. Some 76% of patients diagnosed with RDEB do not reach the age of about 40. There is no cure or approved treatments.

### Peeling Skin Syndrome

The NIH defines Peeling skin syndrome (PSS) **as** "a group of conditions that causes skin to peel and tear easily" and is caused by genetic variants in several genes. In some people with PSS, the skin peeling is limited to the hands and feet. In addition to continuous peeling of the skin, some people who suffer with PSS experience itching, redness, and scarring. Symptoms generally occur by childhood, but can appear anytime from birth to adulthood.

### Palmoplantar Keratoderma

The NIH defines Palmoplantar keratoderma (PPK) as "a group of skin conditions characterized by thickening of the skin on the palms of the hands and soles of the feet." In some rare cases, PPK can also affect organs other than the skin.

## RECENT RESULTS

Quoin is pre-revenue at this early stage, while concurrently the company continues to build the internal infrastructure to advance the products in its existing product pipeline through clinical trials, obtain regulatory approvals and launch them commercially. The company's R&D in 2021 was $1.6 million compared to $244,155 in 2020, primary reflecting higher costs on Quoin's development programs.

General and administrative (G&A) expenses were approximately $4.5 million and $1.4 million, respectively, primarily related to professional fees associated with the reverse merger with Cellect. G&A expenses are also expected to rise to support the company's development and growth strategy.

At December 31, 2021, the company had $7.5 million of cash to advance its strategy. Quoin believes that reflecting cash on the balance sheet and expected warrant exercise, it has sufficient liquidity to execute its development / growth strategy through at least 1Q 2023. The company is also engaged in negotiating a bank line of credit to enhance its liquidity and access to funds.

## VALUATION

We are optimistic about the chances of QRX003 receiving FDA and other approvals and the subsequent commercial demand, beginning with NS treatment and potentially for multiple indications. The absence of alternative effective therapies that have the limited side effects, combined with relatively high related healthcare costs of the target patient populations could translate, we believe, into solid demand for QRX003 following clinical studies of its efficacy for a range of indications.

Quoin estimates the NS patient population in the U.S. and EU at about 6,000 to 7,000. It is not difficult to see how revenue for QRX003 could build, depending on the market share the product captures, annual

treatment cost and Quoin's retention after revenue sharing with distribution partners and/ or sales commissions. The scenarios presented below represent the potential commercial opportunity for QRX003 for NS alone. Aggregate demand from patients suffering with peeling skin disease and potentially other indications could translate into revenue upside, in our view.

**Potential Annual Net Revenue Scenarios Post QRX003 Commercialization ($M)**

| **Annual price of treatmer** | $20,000 | $40,000 | $50,000 | $75,000 | $95,000 | $105,000 | $115,000 | $125,000 |
|---|---|---|---|---|---|---|---|---|
| Patient population 7000 | | | | | | | | |
| % treated with QRX003 | | | | | | | | |
| 10% | 6 | 11 | 14 | 21 | 27 | 29 | 32 | 35 |
| 20% | 11 | 22 | 28 | 42 | 53 | 59 | 64 | 70 |
| 30% | 17 | 34 | 42 | 63 | 80 | 88 | 97 | 105 |
| 40% | 22 | 45 | 56 | 84 | 106 | 118 | 129 | 140 |
| 50% | 28 | 56 | 70 | 105 | 133 | 147 | 161 | 175 |
| 60% | 34 | 67 | 84 | 126 | 160 | 176 | 193 | 210 |
| 70% | 39 | 78 | 98 | 147 | 186 | 206 | 225 | 245 |
| 80% | 45 | 90 | 112 | 168 | 213 | 235 | 258 | 280 |
| 90% | 50 | 101 | 126 | 189 | 239 | 265 | 290 | 315 |
| 100% | 56 | 112 | 140 | 210 | 266 | 294 | 322 | 350 |

Source: Zacks estimates Incorporates 40% net retention to Quoin after revenue sharing / sales commissions & incentives

While it is difficult to know the revenue arc for QRX003 at this early stage, it is reasonable to expect that Quoin could attain product revenue of $14 million to $20 million by 2027-28, given the company's expected launch timeline and depending on the factors noted above. We base this range on the patient population, potential for QRX003 to achieve 15% or greater market share and expected treatment costs. In terms of market share, although there are competing products under development, Quoin believes the combination of QRX003 and Invisicare technology present a strong treatment option. Moreover, it would seem likely that the market demand can support multiple products, in our view. In addition, Quoin anticipates receiving strong KOL support from leading experts in NS that it believes will help with the launch of QRX003.

In our view, there are no direct publically traded peers. Krystal Biotech (KRYS – not covered) and BridgeBIo Pharma (BBIO-not covered) are also developing therapies to treat rare diseases (including Krystal's efforts regarding NS, as noted), but their focuses differ from Quoin's. Moreover, neither has generated revenue from product sales. Nevertheless, various other companies that are engaged in introducing new therapies and are at slightly more advanced stage of development have a wide range of price-to-revenue multiples on forward estimates, as their shares incorporate potential revenue expansion and growth scenarios.

Applying a 5x multiple (the low end of the above-noted range) to the $14 million to $20 million revenue possibility and discounting back to the present at 4%/year results in a present value of nearly $58 million to $82 million, or about $4.65 to about $7 per share, assuming further dilution.

As the company hits certain milestones, we believe QNRX shares will increasingly begin to reflect the commercial prospects. Moreover, as Quoin also advances QRX004 and QRX006 and further expands the number of assets in its portfolio, our forecast and valuation analysis could change.

Any delay or failure in clinical development or regulatory approval could cause the share price to decline and represent a potential risk to our valuation but we believe the risk / reward ratio could be attractive for investors who have a higher than average risk tolerance and longer time horizon.

## RISKS

Risks to Quoin achieving its objectives, and to our valuation, include the following, among others.

- Quoin might need to raise additional capital earlier than expected.
- COVID-19 might delay the company's clinical and commercialization timelines.
- The company might not find distribution partners in additional markets to help advance and commercialize its assets.
- Clinical results might not meet the company's expectations.
- The company might not obtain regulatory approvals in the time expected or at all.
- Competition for QRX003 and other assets could be steeper than anticipated and could also increase.
- Quoin faces going concern risks.

## RECENT NEWS

- Quoin announced FDA clearance of IND for QRX003, for NS on April 25, 2022.
- Quoin filed its 20-F on April 14, 2022.
- Quoin signed an exclusive license and distribution agreement for QRX003 with Orpharm LLC on December 15, 2021.
- Quoin Pharmaceuticals and Genpharm Services signed an exclusive license and distribution agreement for QRX003 **on** November 11, 2021.
- Quoin signed an exclusive licensing and distribution agreement for QRX003 with AFT Pharmaceuticals on November 08, 2021.
- On November 04, 2021, the company named Gordon Dunn as CFO.
- Quoin signed an exclusive license with Queensland University of Technology, Australia, on November 02, 2021.
- Quoin Pharmaceuticals completed its reverse merger and began trading on Nasdaq on October 28, 2021.
- On September 27, 2021, Cellect Biotechnology shareholders approved the Quoin reverse merger.

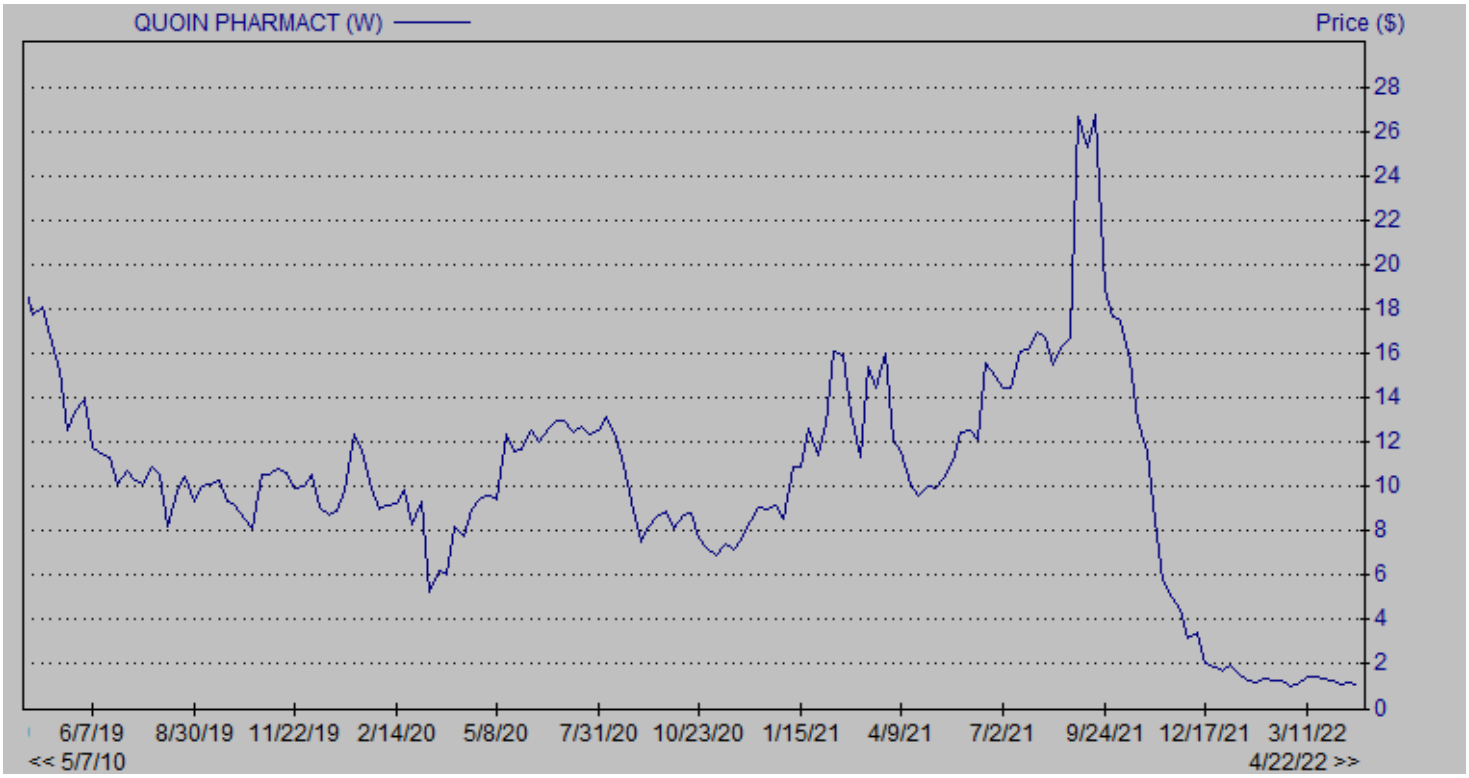
## PROJECTED FINANCIALS

### Quoin Pharmaceuticals Income Statement & Projections (US $000)

| | PF 2020 | 1H21 | 9-mos-21 | 2021A | 2022E |
|---|---|---|---|---|---|
| Revenue | - | - | - | - | - |
| Total operating expenses | 1,670 | 1,278 | 3,081 | 6,063 | 9,531 |
| Operating income / (loss) | (1,670) | (1,278) | (3,081) | (6,063) | (7,410) |
| Total other expenses | (425) | (6,463) | (6,564) | (15,400) | (14,080) |
| Net loss before income taxes | (2,095) | (7,741) | (9,646) | (21,463) | (20,311) |
| Provision for income taxes | - | - | - | - | - |
| Net loss | (2,095) | (7,741) | (9,646) | (21,463) | (20,311) |
| Loss per share | ($0.70) | ($1.95) | ($2.43) | ($5.42) | ($4.45) |
| Weighted avg ADSs outstanding (PF) | 3,004 | 3,962 | 3,962 | 3,962 | 4,562 |

Source: Company reports & Zacks One ADS = 400 shares

## HISTORICAL STOCK PRICE



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