

## FOURTH QUARTER 2023 CONFERENCE CALL

### Jess Jankowski, President & CEO

Thanks for that introduction, Carmen. Good morning to all of those listening live, and welcome to those who choose to listen later online. Thanks for joining us today for a discussion of our full year 2023 results, and, more importantly, an update on the state of the business, and our outlook for 2024. We have seen many changes over the past year, and we believe we're beginning to see some of them pay off. Kevin Cureton, our Chief Operating Officer, is joining me on the call today. We have prepared comments, then Kevin and I will be available for some Q&A afterward.

Today, we plan on covering:

- 2023 Results
- Ongoing litigation between Nanophase and BASF, and critically,
- How we've positioned ourselves to turn the corner to sustainability, and profitability, going forward.

We'll spend the bulk of our time today talking about the future, as it reflects why we are all here. In discussing this, we'll also share some of the major efforts we've made to measure and manage to our 2024 Plan through KPIs, and a high degree of focus on critical areas that have presented chronic problems in the past. In Q4, we added an experienced Purchasing Manager, followed by an experienced buyer in Q1 of this year. We've seen the impact of our new VP of Operations, supported further by our Purchasing adds, yield a higher degree of control and greater efficiencies in our operations. We've also just concluded an additional financing, which will give us some "breathing room," in terms of supporting the rapidly expanded working capital demands that our incredible growth has placed on our Companies. We expect the degree to which this will help to enhance our operations this year to become obvious to everybody in the coming months.

Before we continue, let's walk through the numbers. Unless identified otherwise, all numbers will be stated in approximate terms. Performance in Q42023 was similar to Q42022, both falling short of our Plan, and our expectations. We saw \$8M in 2023's fourth quarter v. \$8.3M in revenue for the same period in 2022, and losses of \$2.1M and \$2M, respectively. A marked difference between the two periods was that Q4 of 2023 represented a period of conscious investment in restructuring the business for greater efficiency. We were also able to lock down our inventory for 2023, which had historically been difficult.

We invested a great deal of time in working through raw material shortages, helped substantially by the addition of our new Purchasing resources.

This hurt us in Q4, but we believe we now have it under control, and have adopted a systematic approach to our supply chain management, backed by experienced professionals that have already paid for themselves.

Looking at the full year comparable numbers, we had \$37.3M in revenue for both full years, 2023 and 2022. In terms of revenue mix, Solésence revenue was up 9% to \$25.2M in 2023, while Personal Care Ingredients and Advanced materials were down by 17% and 9%, respectively.

Some of our struggles with working capital and materials shortages kept our Solésence growth lower than it should have been, and lower than it will be in 2024. We were unable to satisfy all of the demand that we've had for Solésence finished products, and demand continues to grow. We see the light at the end of the tunnel here and expect these shortfalls to be much more rare as we get further into 2024. This Solésence growth was largely offset by the 17% reduction in year-over-year BASF revenue I mentioned, amounting to \$1.8M. While we expect BASF revenue, which, as you may recall relates to sunscreen active ingredients, to stabilize, it is something over which we have less control than in the finished products business we've built through Solésence. Analyzing the dynamics in each market, ingredients v. finished products, it's easy for us to draw the conclusion that our development of Solésence was the right strategy to maximize the value of our companies.

For the full year of 2023, we had a net loss of \$4.4M, versus a net loss of \$2.6M for the same period in 2022. This trend was certainly a disturbing one, and one that we believe we are addressing effectively for 2024. I'll cover operating expenses first, then discuss our vision for improving gross margins and throughput materially in 2024. R&D expenses, which include Engineering, were up by about 26% year-over-year. This was due to increases in staffing, product testing and intellectual property development. These things are necessary to allow us to remain in front of the prestige cosmetics market, as well as to support new technologies which we expect will keep us on the rapid growth curve we've enjoyed with Solésence to this point. We expect to see these expenses flatten in 2024. In terms of SG&A expenses, they appeared to be relatively flat year-over-year, but they included some items that we don't expect to repeat. The greatest one of these are legal fees relating to the BASF litigation. They amounted to \$1.3M in 2023, v. \$0.4M in 2022. Almost 90% of the \$1.3M in fees were incurred during the first nine months of 2023. Related fees for Q42023 amounted to \$130,000, or 10% of the total, showing a marked decline.

Legal fees have gone down as we continue to work with BASF toward a mutually beneficial solution, focusing on business issues more than legal issues. While it's not over until it's over, we're optimistic that we'll resolve this litigation soon, and be able to focus all of our attention and energy on building the value of the business. Not reflected in any of our 2023 SG&A numbers is the reduction in force and rationalization of operating expenses we implemented during mid- Q4. We expect to see people-related expenses go down, which will contribute further to what we expect will be a reduction in overall SG&A for 2024.

We also had an additional \$0.5M in interest expense due to increases in interest rates, and our need to finance our expanded working capital demand, mainly through debt. Our recent financing will help us to reduce our dependence on debt in this regard, along with expected interest expenses. In addition to manufacturing efficiencies, which we'll touch on in a minute, all of the things we just discussed will contribute materially to 2024 profitability.

Now, I'd like to address the changes we're implementing in manufacturing that we expect to show material improvement. A function of having to wrestle with our working capital needs to such a great extent in 2023, was that we were forced to delay a series of relatively modest capital equipment

enhancements that have payback periods ranging from 15 to 30 months in terms of hard cash. Not to mention the advantages of higher throughput in helping us to capture growing demand.

I have three projects in mind that, given our recent financing and the stability it has added, we are currently completing:

The first is the installation of a lab that will allow us to complete more of our microbial testing in-house. Every run of Solésence products that we produce currently gets sampled and sent to an outside for microbial testing. This is a time-consuming and expensive process. Our QC costs have climbed as we have grown, and more and more batches, a good thing, have resulted in higher and higher testing costs, as well as the associated delays with sending samples to outside labs. We are required to run tests that take more than a week and must be completed in final packaging. We've had our microbiologist working to build our own lab, beginning in 2022. We started the equipment investment in 2023, then had to hold off due to cash pressures. This was a double-edged sword, costing more money in outside testing, a direct hit to gross margin, as volumes increased causing more tests, and we were unable to capitalize on our investment to that point. We will invest less than \$400K in 2024 to finish this project, it will have a hard-dollar payback of less than two years, saving approximately \$300K/year at current volumes, and it will take a week or more out of our cash cycle. This will also lead to happier customers.

The second project involves the transition of our wet processing lines to our Bolingbrook facility. When we found extra time in Q4, as production was held up, we invested some of that time in beginning to transition our wet processing to our Bolingbrook facility. Given that we now do 100% of our filling and assembly in Bolingbrook, this is the logical next step. This project has a 2 & ½ year payback, and we expect it to yield more than \$400K/year in hard cash savings, or even more as volume increases.

The third project involves the further expansion and automation of our filling and assembly processes in Bolingbrook. We have five clean rooms running, or runnable, in Bolingbrook, two of which are fully utilizing a high degree of automation. For a relatively small investment, we'll add automated capacity to two of the remaining three rooms, which will increase throughput while reducing costs per unit.

As our business volume and product suite has expanded, we've found that it's much more efficient to have different rooms dedicated to different types of filling and assembly, be it for tubes, bottles, sticks, bottles, or whatever configuration the market desires. Some equipment is currently serving double duty and needs to be reconfigured as we switch between product types more often than it makes sense, given our growing volumes. We expect this project to have a roughly fifteen-month payback period.

These three projects, in total, will cost just over \$2M dollars, with some of this total expenditure having already been made in 2023. We expect payback for the combined projects to be less than two years. We also expect that these three projects will allow us to produce up to \$100M in Solésence finished products. This additional capacity will become available by late summer.

While we're not nearly satisfied with our 2023 results, we are doing the things we must to capitalize on the fantastic products we continue to develop and sell.

Now I'd like to ask Kevin Cureton, our Chief Operating Officer, to share his comments, and his enthusiasm, around the progress we're making and the approach we're taking through 2024. Kevin?

Kevin Cureton, Chief Operating Officer

Thanks Jess.

To our investors, thank you for your continued commitment and to our teammates, thank you for your tireless efforts in helping us achieve our mission. Today, my role is to provide more details about how we are evolving our management practices to enable our company to translate revenue into sustainable, profitable growth. While I am sure some of our shareholders would prefer that we “just do it”, we also realize that several of our investors would like the reassurance that we understand the sources of the issues we have faced and therefore also understand how to and moreover can fix them. To begin, in part because there has been discussion on the message boards to the contrary, I want to be sure that our investors understand the connection between our ability to bring the world’s most innovative spf infused skin care, complexion, and color cosmetics products to market and our ability to manufacture the novel aspects of these products. The characteristics of the zinc oxide and dispersions that we produce to build our formulations are at the core of what drives our market differentiation. These methods are at a minimum novel and in some cases one of a kind in terms of how they are practiced in our industry. This makes us unique as a vertically integrated manufacturer, still the only manufacturer of this type that we are aware of in our industry. This integrated structure means that we manufacture over 30% of all the materials that we use to make the products that our brand partners take to market. It also adds a level of complexity to our business that our competitors don’t have – which also gives us a competitive advantage that they have a challenge to match. Our investment in IP further buttresses this critical point of difference. While in fact there are some elements that we could outsource, we also would take a risk of “teaching” the market more about what we do and how we do it. As those of you are familiar may know – rendering patented know-how into physical products typically will include trade secrets that make all the difference in terms of achieving the performance attributes and aesthetics that we seek. It’s vital to our future and ultimately our profitability that those secrets remain so, and therefore we continue to make the unique materials internally.

Obviously, these elements of the business add to the complexity of how we manage and scale our company. The good news is that we have at long last built a strong operating team – the strongest we believe since the inception of NANOPHASE – which has the unique ability to both build the processes we need to improve internal controls and execution and the capability to operate the company as we grow to a nine-figure organization over the years to come.

An important part of the change in our operating model is the implementation of key performance indicators or more commonly referred to as KPIs. The KPIs we have established are how we measure both our company’s performance and the performance of our teammates. The three KPIs I will talk about today, and we will discuss on a continuing basis are measures that most significantly impact

profitability and customer satisfaction – these are inventory accuracy, throughput, and on-time in full. I'll discuss what each of these are and their implications for our company. We'll start with inventory accuracy. This KPI measures whether we have both the quantities of materials we need to make our products and if we have them at the time they are needed to make our products and fill orders. Failure in this area was the overwhelming contributor to our poor performance in the second half of 2023 and the outsized inventory write-offs that we experienced in Q4. In order to achieve any of the other KPI's requires us to be at 90% or greater for inventory accuracy. During Q4, this number never exceeded 80%, being as low as 50% at the beginning of Q4. At the beginning of Q3 and in mid Q4, we made some changes to our supply chain team, including bringing in an experienced purchasing leader and bringing this group under the responsibilities of our VP of Operations. In Q1, we further augmented our buying team which will help us bring this KPI in compliance with our goals by the end of Q1, 2024. The next KPI, throughput, fundamentally measures how we are performing relative to leveraging our assets and meeting our cost targets as related to labor efficiency. This measure is used at each of the process levels – at making the zinc oxide, making the bulk lotions, and finally making the finished goods. As you can imagine because of the poor results related to inventory accuracy, we had poor throughput in both Q3 and Q4. Because of the high percentage of our material requirements being produced internally, our performance related to throughput, can be a vicious cycle if we under perform on internal production or a virtuous cycle if we are meeting our performance metrics. During Q4, we were less than 80% of our target for the entire period, though the performance steadily improved through the quarter. The final KPI we will discuss is our on-time in full KPI, which is commonly referred to as O.T.I.F. or OTIF. We reference this as a customer satisfaction measure as it is one of the two key requirements for retail brands to succeed. Meeting this measure means that brands have the products they need to sell, at the amounts they need, at the time they need them. As this measure is an outgrowth of the prior two, it will be no surprise that we underperformed with OTIF well under 70%. Note that top organizations seek to be greater than 95%. This is also our standard for 2024.

In closing I do want to mention one other item. I'm sure many of you are familiar with the phrase and philosophy coined by Kara Lawson – Handle Hard Better. This phrase and moreover what it embodies is an important “KPI” of sorts for us. “Handle Hard Better” is for those people and organizations striving to do great things – and is about changing your paradigm from expecting things will get easier over time to expecting that they will not. According to Coach Lawson's concept - what must happen for any person or organization who wants to achieve greatness – to do what others have not – is to learn to handle what is difficult better. Our company is regularly doing things no other company has done before in terms of the innovations we create, and the manufacturing techniques needed to bring them to fruition. We are seeking to do and be great, So, it is clear then that this is our challenge – to handle hard better. We are funded and most importantly have the right team to get this done. As my father would say to this statement – “Your actions speak so loudly I can barely hear what you have said” – so we will and do expect in fact to let our results in 2024 and beyond be our statement. We will look forward to discussing these items further in just a few weeks as we report Q1 2024 results. Thank you for your time and attention. Back to you Jess.

Jess Jankowski, President & CEO

Thanks, Kevin.

We left 2023, again, with demand we were unable to satisfy. The was due to production constraints, not demand issues. This small investment in capital represents an opportunity to increase throughput, shorten response time to customer demand, and more than double our current capacity for Solésence products. Our products speak for themselves, our customers love them, the industry rewards them, and we are going to be able to ship more of them than ever before.

I've probably worn out some of our investors with this thought, but it's important enough that it bears repeating. Solésence, a wholly owned subsidiary of Nanophase, is still an early-stage company. We founded Solésence based on new technology, technology that Nanophase uniquely had the strengths to develop. We then leveraged deep institutional knowledge of the personal care active pharmaceutical ingredients markets, and technical requirements. Developing products takes talent. We've done that well. Understanding markets, and, when necessary, developing markets, takes experience and grit. We've shown that we do that well too. The hard part is doing these two things in concert, in such a way that consumers love it, and demand more of it. We've done that remarkably well! We haven't scaled our internal processes, ranging from Supply Chain to volume manufacturing, as efficiently as we expected to. All of us, and many of you listening today, have suffered through this with us. We're turning that corner in 2024.

As we continue to grow, and do so much more efficiently and profitably, we intend to make this obvious to you, as well as the larger investment community. We talk every quarter, often without enough to share to make these calls meaningful. Our investors search for little kernels and tidbits of information in what we say, and often draw conclusions that are not representative of the opportunities we have before us. We're playing the long game here. We have built something that we believe will be sustainable and enduring. We're competing in an exciting industry that wants more from us, and we're positioning ourselves to deliver.

Why don't we get right to your questions? Although we know that most of our investors listen to the webcast, or review the transcript, after the live call, we'd like to invite those participating in today's call

to ask any questions you may have, or to share your feedback. Afterward, I'll offer a few closing comments.

Carmen, would you please begin the Q&A session?

Q&A Session Placeholder

Thank you, Carmen.

As we've said, Demand for our products is not slowing down. We're working hard to get them out the door faster, and to help more people be healthier, feel better, and look better with them. We're growing, we're winning award after award, and we're winning new brand partners and consumers. We have \$35M in shipped and confirmed P.O.s through this week, and we will be getting more in. We're positioned for sustainability in 2024, and we expect the improvements to start becoming evident in our results.

Thank you all for being with us today. We'll look forward to the next call, when we'll have more positive results, including KPIs, to discuss as we continue to improve the profitability and sustainability of our business.

Have a great day everybody!