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FROM CHALLENGE TO SOLUTION:
The future of Eye Drug Delivery

PHARMACEUTICAL PACKAGING AND SUSTAINABILITY:
Can polymers be part of the solution?

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Interview

by Cindy H. Dubin

NEMERA

Séverine Duband,
STRATEGY & MARKETING DIRECTOR, OPHTHALMICS AND RESPIRATORY BUSINESS UNIT

"OUR APPROACH IS REALISTIC, BASED ON MARKET AVAILABILITY AND REGULATORY CONSTRAINTS"

A global leader in drug delivery devices for ophthalmic, nasal, and parenteral applications, Nemera is committed to reducing its carbon footprint. Séverine Duband, Strategy & Marketing Director for ophthalmics and nasal products, explains the solutions and approaches being explored in the search for alternatives to petroleum-based plastics.

Nemera confirmed its EcoVadis Gold Medal status in November 2025. What does this recognition mean to you?

SÉVERINE DUBAND: It's recognition of our commitment and the result of collective work carried out with determination by our teams, particularly under the leadership of Sandrine Coutarel, our group's Sustainability Director. This Gold Medal rewards our efforts across three fundamental pillars: ethics, human rights, and the environment. We're now in the top 5% of the best-ranked companies worldwide. This

assessment is particularly demanding because it scrutinizes all of our suppliers and practices. So it's external validation of our commitment, but also a driver to go even further.

What are your specific commitments regarding carbon footprint reduction?

S.D.: Our approach is based on four main objectives: reducing our carbon footprint, social responsibility, sustainable procurement, and eco-design coupled with product recyclability. Our commitments are part of the STBi (Science Based Targets initiative) framwork and focus on reducing emissions and improving energy efficiency. We've adopted a realistic approach, based on precise indicators that give us clear visibility on our progress. For Scopes 1 and 2, the results are already spectacular: we've already reduced our footprint by 96% compared to a 2019 baseline.

All our production sites—United States, Brazil, France, Germany, and Poland—use decarbonized energy, and except for the US, all our sites have switched to renewable energy. This was an absolute priority because our energy consumption weighs significantly on these two scopes. All our new buildings systematically incorporate low energy consumption standards and BREEAM certification.

What about Scope 3, often the most complex to manage?

S.D.: You're right, that's where our main challenge lies. 80% of our greenhouse gas emissions come from Scope 3, mainly related to the raw materials we purchase, particularly plastics. That's why we've focused our efforts on developing sustainable alternatives, especially with bio-based resins.

Can you elaborate on your approach for Novelia, one of your flagship products, and its bio-based version?

S.D.: Novelia is our multidose ophthalmic dropper for preservative-free formulations, an iconic product that represents a very significant sales volume. When we analyzed its carbon footprint, we discovered that 61% of it was linked to raw materials. So it was essential to offer an alternative. We developed a version using bio-based resin for the entire product, which allowed us to reduce its carbon footprint by 26%. This resin is derived from Crude Tall oil (mostly from wood residues), representing a second generation of biomaterials, less controversial than first-generation agricultural-origin resins. It's fully part of the circular economy since it comes from recycled materials.

How do you ensure that these new materials meet pharmaceutical regulatory requirements?

S.D.: That's precisely one of the most crucial points and one of our main arguments with our pharmaceutical laboratory customers. We worked for 18 months to develop this solution. We use a mass balance approach and purchase certificates, because the supply chains aren't yet fully stabilized to achieve 100% bio-based content.

The decisive point is that we

conducted extractables tests on a batch containing a percentage of bio-based resin, that demonstrated pharmaceutical-grade standards were perfectly met. Concretely, this means there's no regulatory change required. This is a major advantage for our customers: they can use this new bio-based version of Novelia for products already on the market, along with the ISCC+ certificate we provide, without having to file a new marketing authorization application.

So that's a powerful commercial argument...

S.D.: Absolutely. The reception of bio-based Novelia has been extremely positive from our customers. The argument that resonates most with them is precisely that: they don't have to do the regulatory work for the material change. We do it for them, which represents considerable time and cost savings. Admittedly, the price of bio-based Novelia is slightly higher than the initial version, but this increase remains reasonable and consistent. It's economically acceptable given the regulatory and development work we do on their behalf and especially given the positive environmental impact.

Why didn't you opt for recycled materials rather than bio-based ones?

S.D.: For now, recycled materials aren't feasible for primary packaging because they are in direct contact with the drug product and this would require a complete regulatory filing change. There would be a real risk that this change wouldn't be approved, which would block product commercialization. That's a risk laboratories simply cannot take. So, our current solution combines the best of what's currently available on the market in the current regulatory framework ie bio-based resin. There might be future opportunities to introduce recycled materials for for secondary packaging which we will also consider for other devices.

Beyond materials, what other approaches are you exploring to reduce your products' carbon footprint?

S.D.: Eco-design remains a preferred avenue. By using less material to manufacture the same product, we

reduce both the device's weight and its carbon footprint. It's a coordination effect that ripples through the entire value chain: less raw material to produce, less energy for transformation, less weight to transport...
We' already have received successful ISCC+ certification for our French production sites La Verpillière (Isère, France) and Le Tréport (Seine-Maritime, France). This certification guarantees traceability and sustainability throughout our supply chain. And of course we are working to get ISCC+ certification for our other sites in the near future.

How do you manage supply chain complexity?

S.D.: That's indeed a major challenge. We use Life Cycle Assessment (LCA) software to calculate our products' carbon footprint, but depending on the devices we market, we don't necessarily control all components. For example, for certain devices, the active ingredient can be packaged in different types of bottles—glass or plastic—which impacts the overall calculation. Our goal is to provide as much information as possible to our customers, but it's sometimes difficult to collect data from our suppliers or our customers' other suppliers. That's why we advocate for increased coordination across the entire pharmaceutical value chain on these issues.

What message would you like to convey to pharmaceutical industry stakeholders?

S.D.: The sustainability issue is important and urgent, but also extremely complex to address. We need to stay humble and realistic. Every industry player must undertake real effort now to have an impact. Coordination is essential: the effort must include the entire value chain, from suppliers to customers, including markets.
We also need to rethink sustainability from the earliest stages of product development to promote eco-design. And above all, we must offer realistic solutions that take into account all the pharmaceutical sector's constraints, particularly regulatory ones. That's what we strive to do at Nemera with solutions like bio-based Novelia.