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INTERVIEW
Dr Samir Vyas
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INTERVIEW

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Country General Manager, India, Agilent

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EDITION: MAY 2023

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At Agilent, we believe that sustainability, productivity and efficiency can co-exist in a lab without compromising on ROI

Dr Samir Vyas, Country General Manager, India, Agilent shares insights about the importance of sustainability, challenges that hinders sustainability initiatives and endeavours taken by Agilent towards sustainability, in an exclusive interview with Viveka Roychowdhury

What are the top three to five sustainability challenges in today’s pharma labs?

Several sustainability challenges must be addressed in today’s pharma laboratories to minimise environmental impacts and support a more sustainable future. One of the most difficult challenges in pharma labs today is that they generate a significant amount of waste, which includes both hazardous and non-hazardous materials, which can have serious environmental consequences. Aside from this, improperly disposed of unused medications by consumers can contribute to environmental contamination and potentially harm wildlife. Whereas proper disposal of unused medications, as well as initiatives to reduce packaging waste, chemical waste, and improve recycling programmes, will aid in proactively addressing this challenge.

Like many other industries, pharma labs contribute to greenhouse gas emissions and carbon footprints through their energy use, transportation, and waste management practices. The day-to-day operation of these laboratories requires a substantial amount of energy and water, and many still rely on fossil fuels for energy. Overall, pharma labs must reduce their consumption of water and transition from fossil fuel-derived to renewable energy sources to mitigate significant environmental impacts.

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What are the quick ways to diagnose/find and address these sustainability issues? Especially those related to excessive water and energy consumption, waste generation by biopharma labs etc.?

To meet sustainability objectives and comply with regulations, biopharma laboratories can adopt sustainable practices such as waste reduction, energy-efficient processes, and environmentally friendly operations. The laboratories can utilise equipment and instruments designed to be environmentally friendly. This can include equipment with low energy consumption, energy-efficient HVAC systems, and eco-friendly materials. By monitoring these practices, they can identify areas for improvement and make timely adjustments.

In addition, these laboratories can create active pharma ingredients (APIs) and finished products that are designed to be more sustainable and environmentally friendly. This may involve the use of eco-friendly raw materials, green manufacturing processes, and eco-friendly packaging. Furthermore, they can reduce the pollution caused by their products and processes by maximising the use of raw materials and minimising waste production.

What outcomes of Agilent’s commitment to sustainable lab practices? What did it cost to achieve these outcomes?

At Agilent, sustainability is a top priority for our product development and manufacturing processes. In 2020, we began partnering with My Green Lab to advance our sustainability efforts. This partnership started with select Agilent instruments being independently audited for the organisation’s Accountability, Consistency, and Transparency (ACT) Environmental Impact Factor Label. Since then, our collaboration has expanded to include participation in the My Green Lab Certification programme, and we are proud to have achieved the highest level of sponsorship, known as the “Angel” level. Our commitment to sustainability through collaboration with My Green Lab demonstrates our dedication to promoting environmentally responsible practices in the scientific community.

Can you give details about Agilent’s partnership with My Green Lab and ACT and the objectives?

Agilent is committed to promoting environmental sustainability and as a key example, has formed a partnership with My Green Lab to help accomplish this...
objective. Initially, we began by partnering with My Green Lab on the organisation’s ACT Environmental Impact Factor Label programme. The ACT label provides information about the environmental impact of manufacturing, using, and disposing of a product and its packaging, enabling purchasers to make better informed, sustainable choices.

In 2021, we became a proud sponsor of the My Green Lab Certification programme, the gold standard for best practices in laboratory sustainability. Our sites in Waldbronn, Germany, Cheadle, United Kingdom, and Santa Clara, California, have achieved the highest level of certification – ‘green’. This certification demonstrates our dedication to enhancing the environmental sustainability of our global internal laboratory operations.

What are some of the basic sustainable practices that can be adopted at pharma manufacturing plants?

Energy efficiency: Improving energy efficiency by using energy-saving equipment, optimising processes, and utilising renewable energy sources, such as solar power, can reduce carbon emissions and help lower energy costs.

Water conservation: Implementing water-efficient equipment and processes, and recycling and reusing water can help conserve water resources, reduce wastewater discharge, and lower water costs.

Waste reduction: Adopting a zero-waste approach by reducing, reusing, and recycling waste, and properly disposing of hazardous waste can significantly reduce the environmental impact of pharmaceutical manufacturing.

Sustainable sourcing: Choosing sustainable and environmentally friendly materials, ingredients, and suppliers can help promote sustainable practices and reduce the environmental impact of pharmaceutical manufacturing.

Green chemistry: Using green chemistry principles, which focus on reducing or eliminating the use and generation of hazardous substances, can help promote sustainable manufacturing practices.

Life cycle analysis: Conducting life cycle analyses to identify the environmental impact of a product throughout its life cycle can help pharma companies make informed decisions and promote sustainable practices.

Adopting sustainable practices at labs or manufacturing plants comes at a cost. How can pharma companies justify these costs as investments with ROI beyond it being the right thing to do for future generations on this planet? Multiple reports suggest that research laboratories consume up to 10x more energy and 4x more water than office spaces, which can impact not only the efficiency but also the productivity of the laboratory.

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At Agilent, we believe that sustainability...

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Life sciences companies have their own sustainability goals in motion. At Agilent, we believe that sustainability, productivity, and efficiency can co-exist in a lab without compromising on ROI.

In addition to basic cost-saving measures such as turning off lights and machinery when not in use, lab spaces can benefit from new energy and waste reduction methods and systems that are already available. Although adoption of these technologies can be slow in regulated industries such as pharmaceuticals, it is crucial for companies to transition as soon as possible to reduce the industry’s overall environmental impact.

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One way for companies to address sustainability concerns is by conducting independent audits through external organisations, such as My Green Lab, to track and manage the environmental footprint of their labs. Such audits will encourage other labs to adopt more sustainable practices and promote the industry’s collective commitment to reducing its environmental impact.

Pharma companies can also choose to purchase more environmentally friendly instrumentation, which have been assessed for their environmental impact and do not compromise on quality results. Also, they can gain a better understanding of the utilisation of their instrument fleet with digital tools like asset management, advanced automation, and internet of things (IoT) technology in order to maximise efficiency without necessarily purchasing more instruments, reducing both cost and carbon footprint.

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