Operating today with the standards of tomorrow – the Metron Nutraceuticals state-of-the-art example

Nikolaos Tsirikos-Karapanos
Metron Nutraceuticals, Cleveland, United States

Background: The global dietary supplements market has seen remarkable growth within the last 20 years. Valued approximately at USD 203 billion in 2025, further strong growth for it is projected to USD 400 billion by 2034. Despite its growth, the dietary supplements market suffers from over and under regulation in various segments, the presence of bad players, the dominance of marketing over science, and the resulting exposure of the public to dietary supplements of questionable quality and value. For these reasons the dietary supplements market is -to a certain degree- reasonably seen as the "wild west" by many health care professionals and various regulating organizations, and legislators. Entering into this market with the ambition to provide to the public innovative dietary supplements of excellent quality and value can be challenging, and financially risky.
Methods: Metron Nutraceuticals, a science-based R&D and manufacturing company entered the dietary supplements market with its own-developed and patented formulations in 2015. Since day one, the path followed by Metron was simple: R&D first, followed by extensive testing to confirm safety and efficacy, and finally marketing directed to the highest segment of the market – the licensed health care professionals. Metron's commitment to quality guided every Metron's decision related to production and testing. Just abiding to cGMP standards as set by the FDA for dietary supplements was never Metron's goal; it was only seen as a starting point. A plethora of non-FDA demanded tests were early adopted to ensure safety, including extensive testing for sixty-nine elements for Elemental Impurities testing (in contrast with the FDA-demanded testing for only four metals), additional microbiological testing in more production steps than the FDA-demanded, along with a long list of specific analytical chemistry tests tailored towards precision and accuracy in testing for Identity Composition, Purity, and Strength. After safety was sufficiently documented according to Metron's standards, efficacy was confirmed by the conduction -to the best of our knowledge for the first time in the dietary supplements industry- of complex, in-vitro pharmacokinetics studies, along with careful, detailed post-market follow up with licensed healthcare professionals and the with the conduction of the appropriate Clinical Studies in Academia.
Results: Six major inspections by the FDA and the Ohio Department of Agriculture (ODA) within the last eleven years have been completed with excellent outcomes. Successful completion of Academia-conducted bench and Clinical Studies has documented Metron's effort towards establishing its own, high-quality standards within the dietary supplements industry.
Conclusion: Operating above the FDA cGMP standards for dietary supplements, and for some aspects of production and testing above the FDA standards for pharmaceutical formulations is a path not frequently followed within the dietary supplements industry but provides the best security for longevity to the dietary supplements company that is committed to quality and understands the difference between spending and investing. With a portfolio of sixteen US and International patents, and the experience gained within the last eleven years Metron is looking forward to providing more high-quality, high-value dietary supplements to the global marker to substantially support wellness and healthy aging.