



Agrochemical R&D Trends and JRF Vision for Future

Editor's note: In an interview with AgroPages, Dr. Sameer G. Navalgund, Director-Global at JRF Global, a leading Indian CRO company, talked about the changes and development trends in the global agrochemical industry and the opportunities and challenges facing CRO companies in the stage of industry reform. Navalgund described how JRF are thinking about the future and adjusting developing strategies, while adhering to the "customer first" tenet and offering consistent high quality services.

Navalgund has a wide-ranging scientific background. He has more than two decades of experience in multiple fields related to pharmaceuticals. He has held diverse roles with incremental responsibilities across multi-disciplinary functions and possesses the skill-sets, experience and knowledge to lead business units and organizations. His expertise also includes project, program and operations management for NCEs, Chemicals, Specialty Chemicals, Drug Substances, Excipients, Pharmaceutical Formulation Intermediates, Drug Products, and Dietary Supplements. His key experience areas include Research and Development, Quality Control, Stability testing and bio-equivalence. Earlier in his career, he served in key leadership positions at International Specialty Products and United States Pharmacopeia for their India business units. Navalgund earned his PhD in Analytical Chemistry, MSc in Organic Chemistry, MBA in Human Resources Development from Mumbai University and also studied Strategic Management at the Indian Institute of Management, Calcutta.

Could you please briefly summarize the global development of JRF, especially in your core markets? Besides, please introduce your vision for the future?

JRF Global was founded almost four decades ago with a focus to serve its sponsors. It has been supporting the agrochemical industry since then. Due to its focus, dedication, scientific knowledge, and customer service, it has become a leading service provider that has carried out successful studies for agrochemicals, in multiple areas such as toxicology, ecotoxicology, physical chemistry, environmental fate metabolism, and residue chemistry.

At JRF Global, we observe current trends for all our core markets and understand fine undercurrents flowing

along with it. Last year, we realized a lot of merger and acquisition (M&A) activities had taken place and there was a trend towards consolidation in some of the industry segments. We had anticipated it would continue and we see the same trend in the current year as well. After the major M&A activities, the expectation is for the rationalization and organization of the new entities in terms of their huge product portfolios and associated markets. This brings in opportunities for JRF Global to support its sponsors in terms of required studies, associated data for the fulfilment of the requirements for various regulators through the globe.

At JRF Global, we are geared up to support our sponsors by expanding and consolidating our service portfolio. We are also actively validating a few new offerings and will continue to work on those parameters, as part of our vision

for the near-term future. JRF Global is doing it on a global scale at all its offices and laboratories. On the other hand, there have been some M&A activities in the CROs space, so JRF Global looks at it as an opportunity for inorganic growth. Our senior leadership team will examine and carry out due diligence for such a strategic fit, which would be able to augment our service offerings on a global platform for our sponsors.

JRF Global would like to be a SEND compliant service provider with state of the art infrastructure to support all its sponsor base with quality reports in a time-bound manner. We are investing to achieve this. We are adding infrastructure and developing the capacity to meet these newer global demands. As an organization, we will also be looking forward to investing in scientists to gain and retain the best available talent.

What do you think of the agrochemicals R&D trends in next 5-10 year, and the role of JRF in the trends?

Based on some of the latest reports, I believe that the agrochemicals market is estimated to reach US\$250 billion by 2020, globally. This fuels in a lot of opportunity for the research and development (R&D) in multiple segments of agrochemicals. As the demand for quality agricultural output is expected to increase, the crop protection solutions like pesticides are expected to rise. On the other hand, many molecules got off patents and some are on the verge of patent expiry. This has fuelled R&D efforts to look for newer and environmentally friendly solutions. Some of the key areas that have been under intense R&D are fertilizers, pesticides, and growth agents. The two main market segments of fertilizers and pesticides see a lot of efforts on R&D. Also, the sub-category of bio-pesticides has shown tremendous potential and growth as compared to others. The increasing R&D in the fields of bio-pesticides in order to compete with organic farming and integrated pest management (IPM) is one of the most recent trends in the global agrochemicals market. Farmers have renewed their focus in horticulture and floriculture and, therefore, that is a major R&D opportunity. These days there is an increased acceptance of genetically modified (GM) seeds by farmers which when coupled with initiatives towards IPM present newer area for the R&D in agrochemicals.

For JRF Global, all these are increased opportunities to serve the agrochemical industry and face newer science challenges. We eagerly look forward to some of these and would like to serve the agrochemical industry with innovative solutions to address these challenges.



Dr. Sameer G. Navalgund, Director-Global at JRF Global

Could you explain your major projects and the special advantage you have over your industry rivals? Besides, please introduce the development path of JRF.

Interesting question! I will answer it in two parts. First is our regular offering. As a part of routine services, JRF Global offers the complete solution for the registration of sponsors' products - be it an active ingredient and/or formulations. We conduct registration studies for our sponsors for different regulators throughout the globe. We provide a full range of analyses and research services, such as acute toxicology, eco-toxicology that includes honey bee studies, physical chemistry, residue chemistry and five batches. We also perform studies for the new chemicals, such as environmental impact studies using radiolabelled materials, long-term chronic and sub-chronic toxicological studies aiming at registration requirements of multiple regulators.

Secondly, at JRF Global, we have a program that we proudly call as Vision 2020. This was conceived a couple of years ago and currently is in active phase with respect to implementation and minor course corrections, as we move forward in time. The Vision 2020 program was

a collaborative effort, conceived by Dr. Abhay Deshpande and supported by the Leadership Team. It included elements of the current trends and how as a leading CRO, we will shape the service basket of JRF Global for immediate and long-term support to our sponsors. Some of the key trends indicated that we may need to develop new tests, new assays, validate them, and offer as new services. It could also involve ring validations with our peers and competitors in the CRO space. So rather than calling them as industry rivals, I would prefer the term potential collaborators and tough competitors. It is good to have this competition as it brings out the best for the industry and the sponsors. This helps us to remain on our toes and keeps our scientists happy as it is intellectually challenging for them.

Our special advantages or differentiators, as I would like to call it, are our core values, our ability to resolve the technical and scientific challenges for our sponsors and meeting the tough timelines. Performing quality work within the specified time has always been a challenge that JRF Global has successfully met and exceeded expectations of our valued Sponsors. Our scientific staff, coming from diverse background and experiences, pools in all their efforts to

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resolve some of the toughest toxicology, chemistry, and biology related challenges. It is one of my favorites as a differentiator for JRF Global. Infrastructure in terms of state of the art animal house, modern equipment, use of IT and automation wherever possible and also the modern IT related compliances are some of the other differentiators for us.

JRF Global believes in growth that is fuelled by our journey of the past few decades. This has been a growth path in both, the organic and the inorganic way. I would like to continue on that path and make minor course corrections depending on the changes in the external environment. I would like to see us on a development path that makes us modern, state of the art and customer-centric futuristic organization.

How does JRF Global support your strategic partners in promoting their business?

JRF Global colleagues believe in a continuous interaction with the sponsor from the initiation of the first discussion until the acceptance of a report by a regulator. This means that just sending the final report to the sponsor does not end our responsibility. Rather, part of the responsibility begins with the issue of the final report. The global regulatory authorities may seek additional inputs

on the reports, they may have queries which need an answer and in general, they would like to know more information about the product. Although almost all of our sponsors are very strong to work on these requests from the global regulators, they still seek our support and inputs. JRF Global colleagues are trained GLP professionals with experiences of working with multiple sponsors for various global regulators. All this pooled experience about regulatory queries helps us generate the appropriate response to the sponsor and regulator, in the given timeline. In addition, due to our GLP compliances and fantastic archives, we are able to provide amended reports on time. I thank our QAU colleagues for ensuring these adherences and practices. Also, there is a challenge with some of the compounds, for example, UVCBs (Unknown or Variable composition, Complex reaction products, and Biological materials). JRF colleagues provide the inputs and ideas to the sponsors about what and how things can be done, so in-a-way they act as an extended technical team of the sponsor. I believe that this will continue to evolve and a deeper understanding between the sponsor and JRF Global will help resolve the challenges. We work as success partners. These are a few examples of value-added support which we at JRF Global provide to our strategic partners to promote their business.

(Editing by Erwin Xue, project manager at AgroPages)



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