



**Comments of the Alliance for Regenerative Medicine
NIH-FDA Joint Leadership Council Stakeholders Meeting
June 2, 2010
Response to Docket No. FDA-2010-N-0233**

The Alliance for Regenerative Medicine (ARM) is pleased to submit written comments to the US Food and Drug Administration (FDA) in response to the notice entitled "The National Institutes of Health and the Food and Drug Administration Joint Leadership Council: Stakeholders Meeting; Request for Comments", Docket No. FDA-2010-N-0233, published in the Federal Register on May 10, 2010.

The ARM is a non-profit multi-stakeholder organization based in Washington, DC whose mission is to advocate for policies that will promote research and commercial development of regenerative medicine products. Members of the ARM include patient advocacy groups, non-profit research organizations, life sciences companies, universities, and investors.

ARM is pleased that the National Institutes of Health (NIH) and the FDA are looking to more effectively collaborate to advance translation of research discoveries into therapies. ARM supports the creation of the NIH-FDA Leadership Council to provide a forum for the leadership of both agencies to work together and coordinate efforts.

The need for new products for patients has never been greater. For example, according to the US Centers for Disease Control, more than 23 million Americans have diabetes at a cost of over \$170 billion each year, while more than 26 million Americans have heart disease which costs over \$400 billion each year.

While the Leadership Council has a broad mission, ARM urges it to focus on regenerative medicine to take steps to facilitate research translation and product development in that area.

Regenerative medicine is an ideal technology for coordinated agency action. Regenerative medicine is an interdisciplinary field that translates fundamental knowledge in biology, chemistry and physics into materials, devices, systems and therapeutic strategies which augment, repair, replace or regenerate organs and tissues in the body. As a cross-cutting technology, it will support all the major therapeutic approaches including small molecule drugs, complex biologicals, devices, and diagnostics.

In addition, NIH-FDA activities to spur research and development in this area are likely to pay huge dividends for patients. Regenerative medicine products have already demonstrated their ability to successfully treat several conditions including wounds, cartilage defects, and diabetic foot ulcers, while products addressing many more conditions are advancing in clinical trials.

Successes to date are just the "tip of the iceberg". Regenerative medicine holds enormous promise to meet currently unmet medical needs. Studies have indicated that regenerative medicine may lead to treatments or cures for diseases and disabilities such as diabetes, spinal cord injury, critical limb ischemia, heart disease, various types of cancer, and other conditions. A US Department of Health and Human Services report from 2006 said "Virtually any disease that results from malfunctioning, damaged, or failing tissues may be potentially cured through regenerative medicine therapies."¹

However, truly reaping the benefits of this technology and advancing development of innovative therapies requires federal policy changes and agency action. We need new translational research programs that support academic-industry collaboration as well as a clear and predictable regulatory pathway that enables speedy approval of safe and effective products.

ARM recommends that the Council develop policies and initiatives to spur regenerative medicine research and product development. One specific approach could be the creation of a specific Council subcommittee on regenerative medicine. The subcommittee should develop translational research and regulatory policies to facilitate development of regenerative medicine products. Council members – including the FDA Commissioner and NIH Director – should serve on the subcommittee and it should be staffed by agency personnel with expertise in the technology. There should be opportunities for the RM community – industry, patient groups, non-profit research organizations/universities, and researchers – to serve on the subcommittee or participate in other ways in the deliberations and policy development activities of the subcommittee.

We would be pleased to discuss this idea or other ways the Council can support translational research and new ideas to support regulatory approval of safe and effective regenerative medicine products.

Our specific comments addressing three of the questions posed in the Federal Register notice follow.²

What steps should be taken to enhance the translation of biomedical research discoveries into new and approved preventatives, diagnostics, therapies, or devices for clinical use?

ARM proposes two ideas that will enhance translation of research discoveries into new therapies. These ideas are modeled on successful state programs.

1. ARM encourages NIH to fund researchers in universities or non-profit organizations collaborating with companies on basic and translational research in regenerative medicine. Basic and pre-clinical research projects would be eligible for federal funding. However, the projects would have had to receive support from a commercial entity. Public funding would be in the amount to match private/company financial support. This public-private partnership thus would

¹ "2020 – A New Vision – A Future for Regenerative Medicine", US Department of Health and Human Services, March 28, 2006.

² We propose these ideas for regenerative medicine, but the models are applicable to other technologies.

provide increased funding to researchers with projects that have demonstrated some commercial potential.

2. ARM proposes that NIH create a program based on an existing California Institute for Regenerative Medicine (CIRM) grant program. Under this approach, NIH grants will support multidisciplinary teams engaged in milestone-driven translational research. The mission of these teams will be to conduct the necessary research and regulatory activities to prepare and file a complete, well supported Investigational New Drug Application (IND) with the Food and Drug Administration (FDA) to enable Phase I clinical testing within 4 years. Projects will support the preclinical research and development activities necessary to achieve a development candidate and file an IND. Project activities may include but are not limited to: preclinical pharmacology; pharmacokinetic, toxicology, or other studies; candidate production including process optimization, source material verification, and scale up; and regulatory and clinical strategy tasks to meet FDA guidelines for IND filing.

Potential grantees would submit an overall plan for therapy development on a clearly stated project timeline that outlines project activities and includes all key milestones. Milestones should describe precise, quantifiable study outcomes for key project activities, not simply work to be conducted. FDA interactions are included in the milestones.

2. What are the priority scientific issues that currently need to be addressed (e.g., clinical trial design, endpoint selection and qualification, bioinformatics needs) in order to inform regulatory assessments and analyses of new products?

FDA Commissioner Hamburg has said that a key obstacle for regulatory approval of regenerative medicine products is the lack of scientific expertise within the agency. That's why the ARM supports funding for the agency to perform regulatory research to better equip the FDA with scientific expertise needed to regulate new products in regenerative medicine and to define the regulatory pathway. Regulatory research is defined as "development, evaluation and availability of new or improved tools, method, standards and applied science that support a better understanding and improved evaluation of product safety, quality, effectiveness, and manufacturing throughout the product life cycle."

This research should not only be done at FDA but should also occur through public-private partnerships, such as consortia of industry, academia, and others. The regenerative medicine community – industry, patient advocacy groups, non-profit research organizations and universities, and researchers – should participate in the setting of regulatory research priorities. NIH should participate as well and help fund these research efforts. Since regenerative medicine research is occurring throughout the world, efforts should also be made to ensure coordination among various government bodies.

In addition, regulatory approval of regenerative medicine products is impeded by the lack of consensus standards surrounding important scientific issues related to the regulatory process for regenerative medicine products. These include: cell characterization; quality control; animal models; and other topics that would allow the agency to answer common questions across

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products and technologies. The lack of standards makes comparability across studies (and products) difficult and slows the regulatory process.

Development of standards, then, especially on pre-clinical topics such as those listed above is critical to inform regulatory assessments and analyses of new products. ARM has put together an expert working group of scientists from industry and non-profit organizations/universities to begin work on these issues for regenerative medicine. We look forward to working with FDA in the days ahead on standards development. NIH can play an important complementary role by funding researchers examining the scientific issues related to development of these standards.

3. How could we enhance the exchange of scientific information across all sectors in order to better identify and prioritize scientific areas for emphasis in regulatory research?

ARM believes that the best way to exchange information is by having ongoing opportunities for stakeholders to participate in the deliberations of the Leadership Council or its subcommittees (as well as FDA and NIH individually). We appreciate that the Council is holding this stakeholder meeting to get public input, but believe that ongoing participation from the community is essential.

A specific mechanism to achieve that objective is to ensure that members of the scientific community participate in the Council's work. For example, above we recommended creation of a subcommittee to focus on regenerative medicine. The Council should allow representatives from the regenerative medicine community to participate on that subcommittee. At the least, the Council should create an advisory board for the subcommittee comprised of representatives from industry, patient advocacy groups, and non-profit research organizations/universities that has ongoing interaction with the subcommittee and Council. This model could be replicated for other subcommittees or technologies addressed by the Council.

Creating an "institutionalized" mechanism for input will ensure that information is shared across sectors and that policies developed by the agencies are guided by the experience and expertise of people working in the relevant fields.

Conclusion

ARM supports efforts by NIH and FDA to work together to advance efforts to translate research into approved therapies, devices, and diagnostics. The NIH-FDA Joint Leadership Council has the opportunity to support development of products that will meet unmet medical needs and thereby help tens of millions of people in this country and around the world. Regenerative medicine provides an ideal opportunity for agency collaboration that will achieve that objective. We look forward to working with you in the days ahead.

If you have any questions about ARM's recommendations, please feel free to contact Michael Werner, ARM Executive Director, at michael.werner@alliancerm.org or 202.419.2515.

Thank you for the opportunity to comment on this important matters.