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Francis S. Collins, M.D., Ph.D.
NIH Director
National Institutes of Health (NIH)

Dear Dr. Collins,

I have heard about the current proposal by the Scientific Management Review Board (SMRB) to transfer the Clinical Translational Science Award (CTSA) program from the National Center for Research Resources (NCRR) and award it to a new institute. My collaborators and I are very concerned implementing such a proposal will negatively affect the NCRR and more specifically impact the important work being overseen by the Division of Comparative Medicine (DCM).

I am using small fish, such as zebrafish and medaka as animals models to identify the molecular mechanisms of cardiovascular system development and the developmental abnormalities caused by the dysfunction of cytoskeletal genes as human disease model.

Information from my basic research using these animals may help us develop procedures and techniques that will alleviate or prevent ovarian cancer, congenital heart disease, and other related maladies. Without funding, the potential to combat these often deadly conditions will become seriously endangered.

It has become frightening for us and for many within the community of scientists who utilize aquatic research models the think that NIH might remove its focus from comparative medicine research by separating the NCRR and/or DCM. We wonder if the fragmentation of the function of the DCM may result in loss of many important animal research resources and aquatic models.

Such a situation will decrease our national capability to tackle future biomedical problems that simply cannot be accomplished by using only the three or four mammalian systems represented within the portfolios of standing NIH institutes. The DCM support for aquatic models research has been the single critical avenue that has ensured that these valuable models continue to develop and offer new insight into biomedical problems.

The reduction or elimination of funding would also have a disastrous effect upon the numerous groups of scientists and there teams that are presently engaged in ongoing research. Research groups are not merely a collection of individuals; they composed of people with diverse talents who have learned to work together over time as a functioning group. Everyone has benefitted from the experience of this long term association within the various groups. I also strongly believe that this is not the time to break up scientific teams thereby

fragmenting the DCM expertise along with its resulting consequences for the organisms of comparative medicine as a independent organisms which need to be maintained under individual administrative oversight.

If the support were to be lost or reduced, it means we would also be unable to support those who are involved in our medical research projects. In our communities, many students who are presently working hard and are highly motivated in their pursuit of medical research may be forced to find employment elsewhere; it may take a considerable amount of time to recover the loss of this human potential.

If our students are unable to continue with their research, we risk losing not only their present participation, we risk losing them completely to other endeavors. If this happens, we may lose not only a generation of young researchers; the consequence of their loss may extend far into the future.

Once we have lost quality people and therefore, our competitive power in international medical research may take decades to rebuild. We must continue to support technical and scientific advancements as well as continue to meet the needs of the educational aspects of scientific research. This is not the time for the NIH to turn away from its commitment to comparative medicine.

The newly developed “next generation” sequencing technologies have made it possible for large genomes and complex transcripts to be completely sequenced and assembled much faster and at a lower cost. These pioneering advancements have allowed scientists to use aquatic experimental models making it easier to achieve research goals in the field of comparative genomics and transcriptomic analyses which is at the forefront of international biomedical research efforts. Comparative medical research has contributed to the understanding of the molecular mechanisms of diseases and abnormalities caused by genetic disorders. This research has supplied us with a further understanding of how each unique organism and cell has evolved by adapting to the environment to sustain its life.

Please consider this as you determine how best to proceed. The seeds of scientific discovery that incite biomedical research are often grown in alternative experimental models.

As one of the scientist using the aquatic animal models, I would like to request that NIH not to allow other issues to contribute to the eventual elimination of DCM, one of the better programs in the NIH.

Sincerely,

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