

**Testimony on HB 5042,  
"An Act Concerning the Regenerative Medicine Research Fund"  
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Thank you for this opportunity to address the Committee. I am grateful for the work Governor Malloy and his team put into HB 5024, and grateful for this Committee and the process you are engaged in to make this the strongest bill possible.

My name is Larry Rizzolo. I combine human stem cells with bioengineered scaffolds to make a tissue that can be transplanted into patients that suffer age-related macular degeneration (AMD) or similar eye degenerations. This engineered tissue can also test drugs that might cure AMD without surgery.

You might think this bill was perfect for me, and yet I'm concerned. You might also wonder why I use rodents and pigs, when clinical trials for stem cell transplants into the human eye are already in progress. The answers underscore my concern about the bill's apparent de-emphasis of basic stem cell research. 1) The basic science of transplantation is poorly understood. Grafts in animals slow degeneration, but only when transplanted before degeneration begins. Only a small subset of patients would be served. We need to understand why grafts succeed when they do and why they fail when they do not. 2) People are not experimental animals. Regardless of how the clinical trials end, we will not have learned how to improve the therapy. Despite advances in studying living eyes, animals need to be sacrificed to learn what is actually happening.

My personal story explains why a dedicated stem cell funding program is needed. My Ph.D. is in physical biochemistry. The transition from hard-core basic science to translational science was enabled by a Connecticut Stem Cell Fund grant. More importantly, it required the support you gave stem cell centers across this State. Without their facilities, without their expertise, without their community and collegiality, my transition would have been impossible. If the retinal surgeons on my team represent my arms reaching for the unreachable star of retinal therapy, the basic science community is the ground beneath my feet. Progress is made when adequate funding is given to all three tiers of research: basic science, translational research, and clinical development. The Yale Stem Cell community integrates all three.

My concern is the proposed Bill lacks programmatic balance. It dilutes out the basic stem cell research that I need to succeed. As currently written, the bill appears to favor those ready to reach for the stars, but cuts their connection to the ground. Ungrounded – as though you lost your connection to the voters that you serve.

Right now resources from my collaborators in New York (Sally Temple, Neural Stem Cell Institute) and the National Eye Institute (Sheldon Miller, Research Director) flow to me in Connecticut, because of the infrastructure I have here. If the ground were pulled out from under me, what choice would I have but to reverse this flow. In other words, were the basic science talent amassed here to leave Connecticut for states that protect

basic Stem Cell research, the unreachable star will still be reached. It just would not be reached from Connecticut.

I recommend you pursue the proposed administrative efficiencies between the Stem Cell Research Advisory Committee (SCRAC) and the Bioscience Innovation Advisory Committee, but the proposed two-tiered decision-making scheme adds harmful complication. The two committees have distinct missions. The SCRAC has demonstrated tremendous success in apportioning the funds assigned to it and I hope you will allow it to maintain its proven structure and follow its proven methodologies. I recommend the proposed 10 million dollars/year be allocated according to the SCRAC's current funding mechanism.