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Many animals are capable of whole-body regeneration, enabling the regrowth of missing structures to their original size and shape after major amputation. Most studies investigating this phenomenon have focused on the transcriptional control of differentiation from adult pluripotent stem cells. However, Dr. Allison Kann predicts that an important, yet underappreciated, aspect of regeneration is the role of cell adhesion. Regeneration from stem cells requires free progenitor cells to unite and integrate into multicellular tissues and organs. Dr. Kann will use *Hofstenia miamia*, a genetically tractable invertebrate model system to investigate the disassembly, formation, and remodeling of cellular junctions during regeneration. Kann will conduct these studies in [Dr. Mansi Srivastava's lab](#) at Harvard University. These studies will reveal new principles of regeneration and identify mechanisms that cells use to converge into multicellular structures.

As a graduate student in [Dr. Robert Krauss' lab](#) at Icahn School of Medicine at Mount Sinai, Kann investigated the activation of muscle stem cells. She identified that [cytoskeletal regulation is a key driver of muscle stem cell fate decisions and demonstrated how stem cells transduce injury signals into activation](#). With her background in adult stem cell biology, Dr. Kann is now ready to investigate how cellular interactions between progenitor cells regulate organismal regeneration.

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