

# Development of pH-sensitive polymers as an inovative platform for protein delivery (Red Arrow Therapeutics, K.K.)



City	Year of Establishment	Founder
Tokyo	2021	Takuya Miyazaki Horacio Cabral Rika Tajima

Partner VC	Latest round of Fundraising	Valuation
University of Tokyo Edge Capital Partners	Seed Extension	-

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○ Business Plan

We are developing pH-sensitive polymers as protein delivery systems. Our polymers can stably encapsulate therapeutic proteins at physiological pH while they can release active proteins at pathological pH. Since we have obtained early in vivo PoC, we are working on R&D activities to synthesize building blocks including polymers, proteins and their conjugates. Thus, by showing both therapeutic data and manufacturing data to pharmaceuticals as our potential customers, we are aiming to collaborate with them to translate our technology into business practice.

○ Research Outline

Since our systems are comprising polymers, proteins and their conjugates, we would like to conduct R&D activities to synthesize all these building blocks as follows:

- 1. Development of synthesis method for polymers aiming to larger-scale manufacturing
- 2. Development of synthesis method for proteins aiming to larger-scale manufacturing
- 3. Development of synthesis method for conjugates aiming to larger-scale manufacturing

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Healthcare	STS 2024～2025FY	JPY 356 million	Europe

○International collaborative technology demonstration

- Relationship development with potential local partner  
By partnering with manufactures, we are going to develop synthesis method to construct our novel polymers and conjugates.