to process both chemically modified *B. mori* silk solution (Suntivich et al. 2014) and recombinant spider silks (Schacht et al. 2015). The spider silks were used as aqueous solutions to encapsulate cells and were then allowed to undergo gelation. This mixture was subsequently extruded by application of pressure through an electromagnetically controlled valve. The resulting 3D constructs could be readily manufactured to a 500 μm resolution, and they supported cell viability.

Summary and Outlook

This chapter summarises recent developments in the production and use of silk-based hydrogels for cell and drug delivery. We have primarily focused on silk hydrogels, but have used other silk formats for reference purposes, as a substantial body of work is available regarding silk particles, films and scaffolds for drug and cell delivery (Kasoju and Bora 2012; Seib and Kaplan 2013; Yucel et al. 2014; Zhao et al. 2015). This chapter has also omitted the development of silk "alloys" (e.g., recombinantly engineered silk elastins, reviewed in (Rnjak-Kovacina and Kaplan 2013; Price et al. 2014)) due to space constraints. Overall, silk is a truly remarkable biopolymer that will continue to amaze us. Clearly, at the time of this writing, silk is poised to change the way we deliver cells and drugs in the clinical setting.

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