## Liquid Polymers for Drug Delivery and Regenerative Medicine

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Injectable materials often have shortcomings in mechanical and drug-eluting properties that are attributable to their high water contents. For example, tissue adhesives such as cross-linked hydrogels adhere very weakly to tissues while polymersomes are often impermeable to many small organic molecules and as a result show a limited or slow release rate. These drawbacks are related in part to the high molecular weight of currently used biomaterials, that are solid in their basic form and therefore require a high solvent content in order to be administrated. In this presentation I will discuss new strategies for designing neat (without solvent) biomaterials for medicine and biotechnology as well as new concepts in drug delivery and tissue reconstruction. These biomaterials possess the following advantages: (a) they are liquid at room temperature and, therefore, can be applied without the need of solvent; (b) although they have low viscosity at room temperature, they can rapidly harden when crosslinked; (c) they possess a higher number of potentially reactive end groups per molecule compared to high molecular weight polymers of similar molecular weight; and (d) they have low immunogenicity and toxicity.



## References

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