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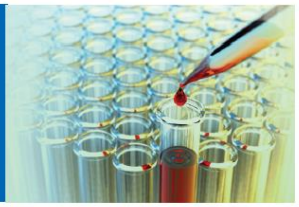

Tissue Banking

Chapter summary

- Diseases and injuries occasioning, or caused by, damaged tissues are a significant clinical and financial burden on the healthcare system.
- Allografts have a key role in treating these conditions, having attributes that cannot be replicated by prosthetic or other biological graft materials.

- Allografts can be donated by deceased or living donors. Appropriate and informed consent is a key legal requirement for donation to occur.
- Many different kinds of tissue may be banked, for example skin, heart valves, bone, tendons, and ligaments. The key difference between organ and tissue donation is that tissue grafts can be preserved for long periods.
- Allografts may be processed prior to being banked to make them safer and/or more clinically effective. Sometimes a compromise must be drawn between processes that improve safety, but may detract from clinical performance.
- They are different methods available for tissue preservation. The methodology chosen is informed by the need to preserve those qualities of the tissue important for clinical efficacy. Ultra-low temperature storage systems are required for storage of viable grafts.
- Tissue allografts can serve as excellent scaffolds for the generation of tissue engineered grafts that aim to regenerate and repair damaged tissue not just replace it.
- Various approaches are being adopted in clinical trials for using engineered tissue as a replacement for the use of directly transplanted organs/tissues.