

# **Veterinary Transplant Services, Inc.**

The world's first animal tissue bank.



## Animal tissue grafts processed to your specifications.

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Veterinary Transplant Services, Inc. (VTS) is the world's first animal tissue bank. Since our formation in 1996, we have provided tens of thousands of allografts to veterinarians throughout the nation and beyond. As the world's first tissue bank specifically for animals, we take pride in expanding surgical options to veterinary orthopedic and periodontic surgeons. Our stringent Quality Assurance Program provides confidence and consistency in our products, and veterinary surgeons rely on us as they plan and perform their surgeries.

Because of our unique and highly specialized expertise in animal tissue banking and our long experience in human tissue banking, researchers and scientists in the nation's leading academic medical centers and research organizations, as well as those in the biotech and pharmaceutical sectors, have also come to rely on VTS as a source of quality animal tissue grafts customized to their specifications.

## Why outsource animal tissue procurement & processing?



Cortical rings, struts, cancellous blocks, long bone sections and whole bones.

### **Efficiency.**

There is a certain art and science to tissue procurement, processing, and packaging. Outsourcing to an experienced team provides a high quality, consistent product and can be the most time- and cost-efficient option.

### **Our experience puts you ahead of the learning curve.**

We draw upon more than 30 years of combined tissue banking experience within our team. Much of this is derived from years of experience in human tissue banking. The result is knowledgeable staff, efficient processes and fine-tuned SOPs for everything from donor screening, aseptic procurement techniques, and protein-preserving demineralization procedures to sterile packaging and preservation methodologies -- all specifically for animal tissue; all fine-tuned to your project requirements.

### **Predictability of time and cost.**

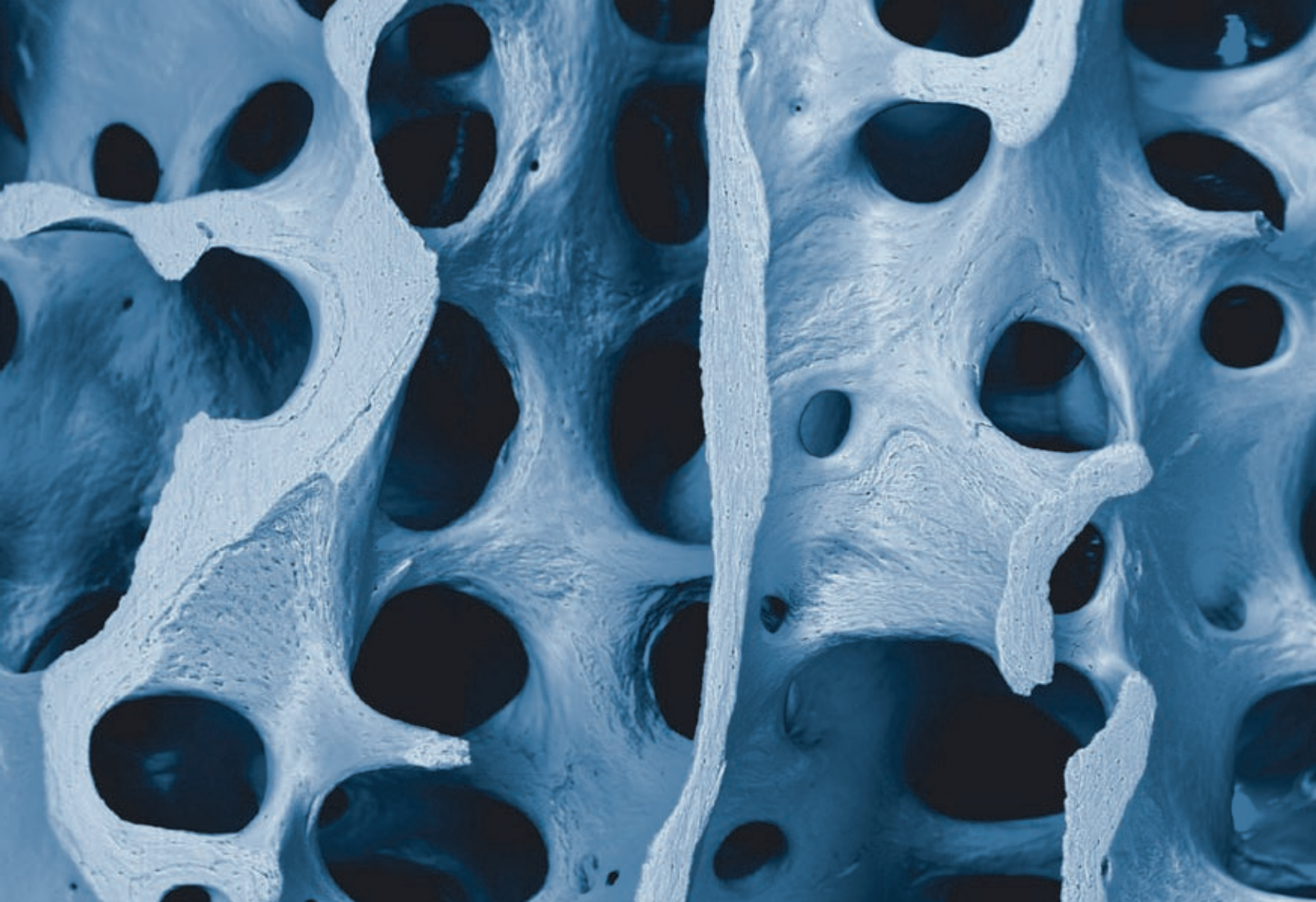
Estimating the time involved in procuring and processing tissue, assuring sterility, and developing the necessary documentation can be challenging. We provide a quote and a timeline you can count on.

### **Customization.**

We understand that every research or pre-clinical trial project is unique and VTS prides itself in its ability to customize tissue recovery, processing, and packaging methodologies precisely according to your research protocols and needs.



**We provide tissue procurement, processing and packaging services customized to meet your specific project needs.**





# Animal tissue processing services from VTS



## Tissue banking support:

### Full-service tissue bank


We are a full-service tissue bank with experience in musculoskeletal, cardiovascular, ocular, and skin grafts, as well as hematopoietic stem cell procurement, processing and preservation. We can assist you by providing veterinary versions of your new product development concepts that can be used in pre-clinical trial studies.



### Aseptic processing capabilities comparable to those in human tissue banks.

All VTS products are processed aseptically and meet USP guidelines for sterility. Our stringent Quality Assurance Program provides confidence and consistency in our products. We apply Good Manufacturing Practices (GMPs), Good Laboratory Practices (GLP's), and Good Tissue Practices (GTP's) through all stages of production.

### Clean room leasing.



Our clean room facility is available for lease on a daily or half-day basis, if you have specific procedures you would like to perform yourself on animal tissues in an aseptic environment. We provide sterilized supplies and technical support for your activity.

## Animal sourcing & facilities:

### Sourcing and work in multiple animal models

We support work in multiple animal models including mice, rats, rabbits, bird, canine, sheep, goat, non-human primate, and more. We work with a well-established network of USDA-licensed animal research model providers and our donor screening procedures ensure that your specifications are met. If preferred, we can also process researcher-supplied biomaterials.

### Dedicated processing facilities

We maintain a certified Class-1000, laminar air-flow clean room facility, specifically dedicated to animal tissue processing. All tissue procurement and processing is performed in a clean-room environment with sterile, HEPA filtered air (99.9% free of particles larger than 0.3 microns).

**Competent tissue banking support is critical  
to the success of your project.**



## Support for project development and finalization:

### **Expertise in tissue banking can help with your study design**

With over 30 years of combined tissue banking experience and very fine-tuned tissue processing SOPs in place, our team has what it takes to get it right. We have experienced researchers on staff that can consult and assist you with tissue bank-specific issues that impact your study design. We can use our standard processing protocols or, if you have pre-established requirements and research protocols, we will prepare and ship tissues according to your specifications.

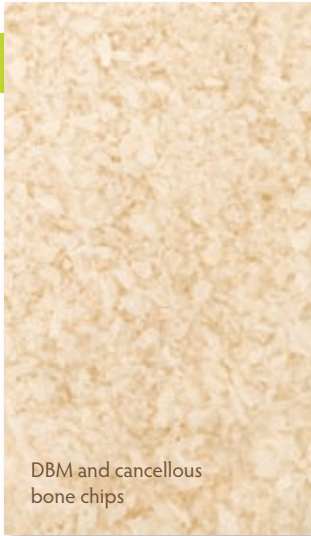
### **Documentation and traceability**

Two-way traceability of all tissues from donor to recipient is standard in the tissue banking industry. When receiving tissue products from VTS, you can rest assured that detailed information from our procurement and production records will be available to you. We can provide you with Certificates of Compliance and Production Summary documents that can be used in your product development files. We will also provide you with a Package Insert and Transplant Record for each final-packaged graft and Inventory Batch Cards with detailed information about the products received to facilitate ease of identification of the products produced.





# Customized options for processing services from VTS



## Production and Preservation Options

- ▶ Demineralization
- ▶ Guanidine-extracted controls
- ▶ Freeze-drying
- ▶ Specific particle size sieving
- ▶ Ultra-cold freezing
- ▶ Snap freezing
- ▶ Liquid nitrogen storage
- ▶ Irradiation
- ▶ Cryopreservation



## Assessment Options

- ▶ Residual moisture determination
- ▶ Residual calcium assay
- ▶ Viability (AO/PI fluorescence microscopy)
- ▶ Microbiologic assessment
- ▶ Osteoinductivity assessment

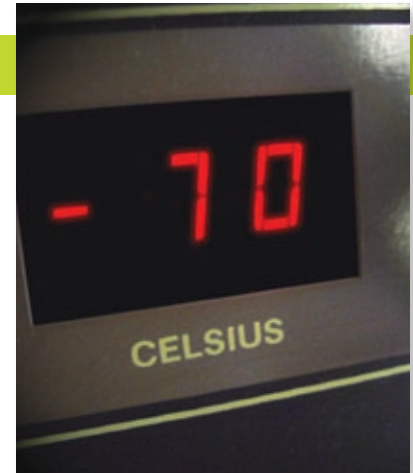
## Packaging Options

- ▶ Bulk packaging
- ▶ Individual unit dose packaging by weight or volume
- ▶ Capsules, vials, syringes, packets, pouches, etc.
- ▶ Triple peel packaging for aseptic delivery onto a sterile field



## Storage and Shipping

To fit your research schedule, we offer in-house storage in our monitored, ultra-cold ( $-70^{\circ}\text{C}$ ) freezers or liquid nitrogen storage tanks (colder than  $-100^{\circ}\text{C}$ ). For shipping, a liquid nitrogen dry shipper is available. It has been qualified for shipment of ultra-cold samples to anywhere in the world and will maintain frozen temperatures for up to 14 days.



# Why researchers choose VTS

## Experience and high quality.

VTS has a proven 10 year track record of successfully supplying quality tissue allografts for both clinical use and for customized product development and pre-clinical trail studies. We apply cGMP, cGLP, and cGTP protocols and can provide documentation of details of your procurement and production protocols.

## Specializing in animal tissue.

VTS is a veterinary tissue bank exclusively providing animal tissue specifically intended and designed for use in veterinary patients or in research projects involving animals.

## Customization.

We will apply standard processing protocols or use customized tissue procurement, processing, and preservation methods that are required by your specific project. We will prepare and ship animal tissues precisely according to your research protocols.

## Reliable and responsive.

Our streamlined animal sourcing and retrieval procedures and experience with regulations concerning animal care and use and the handling of biomaterials ensures rapid delivery of high-quality graft material. This is why outsourcing the tissue procurement process is the most time- and cost-efficient way to go for our clients.

## Call us to discuss how we can help with your next project.

Our clients range from start-up ventures to Fortune 500 companies and large research institutions; our projects vary from custom-packaging of our in-stock tissue to large-scale processing of project-specific animal tissues.





**VETERINARY TRANSPLANT SERVICES**

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