

## PRECONDITIONING SERVICES

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Due to space, time, and labor limitations, it is often beneficial for researchers to outsource animal studies in order to help manage their resource allocation. Charles River Laboratories offers its Preconditioning Services to help meet these needs.

Simply put, preconditioned models are animals that are held and fed a special diet and/or supplement or allowed to grow to a certain age before being shipped to the customer. During the preconditioning period, various phenotypic parameters can be measured and recorded on an “as needed” basis. These include, but are not limited to, whole body fat and lean tissue analysis, body weights, food and water consumption, urine and fecal output, plus laboratory determinations such as rat and mouse multi-analyte profiles, as well as blood glucose, insulin, cholesterol, triglyceride and general clinical chemistry values. In addition, surgical manipulations can be performed on the animals as part of the preconditioning process.

Each room used for holding preconditioned models is a self-contained, dedicated barrier located at one of our AAALAC-accredited production facilities. All animals are housed in static micro-isolator cages. Our husbandry procedures utilize strict biosecurity guidelines developed under the direction of our professional staff. Biosecurity practices dictate that the animals available for preconditioning services are limited to those produced by Charles River at the facility where the service will be performed.

### Feeding Studies

With the increased demand to find new drugs for use in the study of obesity, diabetes, nutrition, hypertension, and stroke, many researchers now need animals that have been pre-fed enriched diets. With preconditioning services, you can purchase your animals ready to use and save valuable laboratory space for your actual study.

### Obesity Program

Charles River offers both rat and mouse models for obesity studies. These models can be sent to your facility directly from the production barriers, or the animals can be sent to our Preconditioning Service room to be fed a special diet as directed by you to induce obesity before being shipped. Typical models used to study obesity include:

- C57BL/6 Mice
- CD Rats
- DIO Rats

Charles River has over 55 years of experience in the production and care of laboratory animals. We also provide contract management of animal facilities and have been instrumental in the development of technology and procedures utilized worldwide for the production, holding, transportation, biosecurity, as well as health and genetic monitoring of rodent models.



### Specialty Models Program

Some models need to be fed a special diet to accelerate the development of a characteristic trait or condition, such as hypertension or diabetes. We can now precondition these models and feed them the special diets necessary for maximum expression of the phenotype of interest. These models include:

- **Dahl/Salt Sensitive Rat** - develops hypertension when fed a specific salt diet
- **SHR/SP Stroke Prone Rat** - develops hypertensive cerebrovascular disease (*Note: Although the disease will develop spontaneously in the SHR/SP rat, a much more consistent and higher incidence of stroke will develop when this model is fed a Stroke-Prone diet.*)
- **Female ZDF Rat** - becomes diabetic in approximately one month when fed a diabetogenic diet

### Aging Services for the Development of Disease Conditions

In some models, the disease condition develops only as the animal ages. Such models need to be held and aged prior to being placed on study. Charles River can hold and care for these the animals and deliver them to you at the point in time that you determine.

The **SHHF rat** is a model of congestive heart failure in which all genotypes and sexes are hypertensive and develop heart failure. The obese male will develop heart failure by 13 months of age, the lean male and obese female by 18 months of age, and the lean female after 23 months of age.

The **JCR rat** is a model of vascular and myocardial disease. Myocardial and atherosclerotic lesions occur in this model after 9 months of age. Although early atherosclerotic changes are evident in obese males at 12 weeks of age and increase in severity with age, it is not until 9 months of age when essentially all of the obese males have advanced intimal lesions of the aortic arch.

**For additional information on these and other models available for Preconditioning Services, please call us at 1-800-LAB-RATS.**

With state-of-the-art animal facilities, professional animal care, and the most extensive line of animal models to use for your studies, Charles River now brings you the best in Preconditioning Services.