Cellular senescence is determined by the senescence-associated β-galactosidase (SA-β-Gal) assay. Human WI-38 fibroblasts at a proliferating state (young, A) and at senescence (old, B) are subjected to SA-β-Gal staining and photographed. Blue staining cells are SA-β-Gal-positive or senescent cells. Magnification, ×100.

Normal human fibroblasts

- Normal glucose level medium
- Glucose restriction medium (CR)
- PDs calculation
- SA-β assay
- Analyze age-related oxidative stress and DNA damage
- Compare age- and CR-related differential gene expression

Schematic representation of the procedure for aging biomarker analyses in the CR in vitro model.

Cell Senescence Culture Facility (CSCF)

Director: Trygve Tollefsbol, Ph.D., D.O.
Comprehensive Center for Healthy Aging; Department of Biology

The mission of the CSCF is to facilitate understanding of the basis of aging and to encourage the study of age-related diseases using in vitro model senescent cell lines. The purpose of the CSCF is to provide various types of aging cells to investigators interested in the aging process. A prime goal of the CSCF is to develop a research focus that impinges on the understanding of the basic phenotypic changes in senescent cells as well as the prevention of senescent pathways.

One of a few such facilities in the country, the CSCF is designed not only to facilitate studies of aging, but also to participate in new investigations in the mechanism of cellular aging and age-related diseases such as cancer. The CSCF is available to UAB investigators who are actively involved in studies of cellular aging as well as those who are considering aging studies. In addition to basic scientists, clinical faculty with ongoing studies related to the aging process are invited as collaborators.

SERVICES OFFERED

- Culture cells of any type to a designated age (cells must be provided by PI or obtained through collaborative efforts)
- Cell storage in liquid nitrogen with thawing and plating services
- DNA purification
- Population monitoring by cell counts; p-galactosidase staining
- Detection of telomerase activity
- Detection of hTERT expression
- Digital photomicroscopy
- On-site cell culture instruction/workshops

Contact information: Dr. Trygve O. Tollefsbol, Email: trygwe@uab.edu Phone: (205) 934-4587

We grow the cells so you can do the research.