Over 140 articles have been published on the use of Rotary Cell Culture Systems™. The following are landmark publications. A full list of all articles are found in the Bibliography at the company website, www.synthecon.com.


Synthecon can design and build systems ideal for growing and maintaining normal tissue explants. The Synthecon Rotary Cell Culture System (RCCS) is the premier device to user’s specifications. The RCCS is currently being used in a wide range of medical/cellular research projects where the production of high fidelity tissue models or the long term maintenance of tissue explants is required. These cultures mimic the structure and functions of their parental tissue.

**Research**
- Cancer - HIV - Tissue Modeling
- Genetics - Tissue Maintenance
- Virology - Virus-Host Cell Interactions
- Cell-Extracellular Matrix Interactions
- Signal Transduction - Protein Discovery

**Applications**

**Tissue Regeneration**
- Bone Marrow - Liver - Pancreas - Skin Heart - Nerve - Cartilage - Kidney Blood - Blood Vessels

**Production**
- Tissues - Pharmaceuticals
- Diagnostics - Vaccines
- High Density Cell Mass

**In Vitro Toxicology**
- Drug Screening
- Alternative to Animal Testing

**Long Term Tissue Explant Maintenance**
- Tissues maintain architectural integrity

**Cells and Tissues Grown in the RCCS**

**Primary Cells**
- Normal Human Keratinocytes
- Normal Small Intestine
- Epithelial & Fibroblasts
- Human Lymphocytes
- Skin Fibroblasts
- Melanocytes
- Human Embryonic Cells
- Rat Osteoblasts
- Normal Human Hepatocytes
- Mouse Bone Marrow Stem Cells
- Human Bone Marrow

**Established Cell Lines**
- Baby Hamster Kidney (BHK)
- Chinese Hamster Ovary (CHO)
- Transformed Insect

**Cancers**
- Human Neuroblastoma
- Human Breast Cancer
- Human Lung Cancer
- Human Melanoma
- Human Kidney Cancer
- Human Ovarian Cancer
- Human Adenocarcinoma

**Long Term Explant Tissues**
- Human Lymphoid (Tonsil)
- Human Liver
- Human Spleen
- Human Lymph Node
- Human Prostate
- Human Bronchi
- Human Skin
- Human Lung

**Virus**
- AIDS/HIV
- Ebola
- HHV8-Kaposi’s Sarcoma
- Influenza
- Epstine Barr Virus
- Monkey Pox
- Norwalk

---

**Reusable Batch Culture Systems**

The Batch Rotary Cell Culture System™ is a rugged bioreactor that accepts any Synthecon batch culture bioreactor vessel from 10ml to 500ml. It is a cost effective long term piece of laboratory equipment. These batch made systems are supplied with autoclavable vessels (described below) and variable speed motors with tachometer.

**RCCS-1**
- Consists of a single station Rotator Base, Power Supply, Ribbon Cable, Operation Manual and Reusable STL V or HARV Culture Vessel of your choice.*

**RCCS-4**
- Consists of a 4 station Rotator Base, Power Supply, Ribbon Cable, Operation Manual and 4 Reusable STL V or HARV Culture Vessels of your choice.*

**STLV & HARV Vessels**
- Non-toxic materials withstand repeated autoclavings.
- User friendly, minimal training required.

**STLV**

Oxygenated by a center core membrane oxygenator. They are intended for microcarrier cell culture and explant tissue cultures. Available in 55ml, 110ml, 280ml or 500ml sizes.

**HARV Vessels**

Incorporate a flat membrane oxygenator. The vessels are used to culture both suspension and anchorage dependent cells. Available in 50ml and 10ml sizes.

---

**Reusable Perfused Culture Systems**

Culture medium continuously flows through the rotating vessel and the external silicone oxygenator. Medium can be changed, sampled or modified without stopping the rotation.

**RCCS-4D / RCCS-4DQ**
- Consists of a Four Station Rotator Base, Power Supply with Tachometer, Ribbon Cable, Operation Manual and 4 Disposable Culture Vessels (your choice of 10ml or 50ml sizes).*

**DISPOSABLE BATCH CULTURE SYSTEMS**

Low cost, easy to use system which makes the technology available to most laboratories. The disposable vessel reduces technicians exposure to hazardous cultures.

Each vessel is individually packaged and gamma sterilized. Vessels are supplied 4 to a pack and are available in 10ml and 50ml sizes.

**RCCS-D**
- Consists of a Single Station Rotator Base, Power Supply, Ribbon Cable, Operation Manual and 4 Disposable Culture Vessels (your choice of 10ml or 50ml sizes).*

---

**STLV Vessels**

- Silicone rubber oxygenator in the external loop.
- Peristaltic pump recirculates the fluid.
- Simple pH and glucose adjustment.
- No complex electric valves.

---

**Cannot Accept Reusable Vessels.**