

Request for Materials for Life Sciences Galleries

The Science Museum of Virginia is nearing the end of the conceptual design phase of developing its new Life Sciences Exhibition Galleries in Molecular Biology/Genetics, Human Biology/Health Sciences, and Environmental Biology. The Museum's Life Sciences development team and its design firm, West Office Exhibition Design in Oakland, California, have created a list of specific artifacts and images (i.e. slides, prints, and video) that will enhance the visitor's experiences in the new galleries.

Please consider joining other community members with your in-kind donation of any of the items listed below. We seek original materials from researchers that are free of copyright, and with permission to use them in exhibits.

To facilitate the incorporation of your materials in the exhibit design vehicles and graphics, please number and label each image (e.g. slide, micrograph, x-ray, video) according to a written description of their contents; the specific donor(s), and their title(s), mailing addresses, phone numbers, and email addresses.

We thank you in advance for your continued support in making the Science Museum of Virginia a world class museum with materials from your research.

Please feel free to contact me.

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Your contributions will be acknowledged in the exhibition galleries, and in publications of the Museum. **Please note that all materials should be received at the Science Museum by June 30, 1998.**

In-Kind Donation List for Life Sciences Exhibitions

| Exhibit # | ITEM |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A 1 | taxidermy and slides/photographs/video - lamprey, shark, bony fish, amphibian, turtle, alligator, snake, bird, primate |
| A 3 | Scanning Electron Microscope (e.g. Hitachi 2300 Series SEM) SEM and TEM micrographs (any subject) |
| A 4 | Misc. Equipment 10 dissecting zoom microscopes 5 compound microscopes |
| B 10 | Antique microscope and modern microscope; and color photographs, color slides, and TEM and SEM micrographs - epithelial, nerve, muscle (cardiac, striated, smooth), connective tissues (bone, cartilage, fibrous, loose, adipose, erythrocytes, leukocytes, plant cell, bacteria cell, yeast, protista, viral cells) |

- B 12 video of sarcomere contraction, phagocytosis, vacuole filling/emptying, cilia (ciliated columnar cell action), movement of *Paramecium*, flagella, sperm motility, and *Euglena* movement
- C3 video footage/color slides/photographs and micrographs for each of the following body tissues/systems:
- Tissues -**
epithelial (squamous, cuboidal, and columnar, ciliated pseudostratified columnar epithelium in respiratory system, and ciliated epithelium of oviduct)
nervous - nerve, ganglia, synapse
muscle - smooth, striated, cardiac
connective - bone, loose connective tissue, adipose, dense connective tissue, hyaline, elastin, and fibro cartilage, erythrocytes, leukocytes, platelets
- Systems -**
- Integumentary - SEM micrograph of skin, hair, microridge pattern of cells
 Hematoxylin & eosin slides of x-sec of skin
 normal and abnormal skin (e.g. melanoma)
- Digestive - SEM micrograph of tongue, stomach, intestine
 normal tooth, plaque, caries (fluorine), cheliosis, pellagra (niacin), dermatitis (biotin), scurvy (vitamin C), osteoporosis (calcium)
 video of swallowing bolus, peristalsis, endoscopy (normal vs polyps)
 x-ray of gall stones
- Nervous - PET scans of brain activity (hearing words, see words, speaking words, generating words)
 video of brain surgery, corneal transplant
 color slides/photographs/SEM micrographs/and/or video of neuron, ganglia, olfactory epithelial tissue (nasal mucosa), olfactory bulb, whole retina, rods and cones, normal and glaucoma, otoliths, utricle, saccule, tympanic membrane, with and without tubes, normal and infected ear, ossicles, auditory nerve, taste papilli and taste buds
- Endocrine - slides/photographs of charts of sources and targets of hormones,
 pituitary (anterior & posterior lobes), thyroid, parathyroid, adrenal, pancreas, pineal, thymus, ovary, testis
 e.g. normal and anomalies
 gigantism, dwarfism, acromegaly (GH)
 goiter (thyroid)
 rickets (parathyroid and calcium metabolism)
- Skeletal - x-ray of whole skeleton, joints, vertebrae, etc. (normal and arthritic), osteoporosis, tuberous sclerosis, etc., fetal skull at birth and 2 days after, and infant skull fontanel (relate to dehydration)
 video of movement of limbs, bones and joints during activities (e.g. walking, breathing, chewing, writing)
 normal bone, fractured bone, and healed fracture
 orthoscopic surgery
 Orthoscopic surgery tools

- Muscular - color slides/photographs of smooth, skeletal(striated), and cardiac (intercaliary discs)
 video of sarcomere contraction, muscle contraction
- Immune - Color slides/photographs/video of barriers at body surface (skin, tears)
 Color slides/photographs/video of **nonspecific responses** (neutrophils, eosinophils, basophils, macrophages, blood clotting proteins), phagocytosis, SEM micrograph of macrophage with cytoplasmic extension on bacteria. Color slides/photographs/video of **immune response** (T cells and B cells - T cell attack by HIV)
- Circulatory - video of blood flow through capillary, video of heart contraction
 video of EKG, video of opening and closing of bicuspid and tricuspid valves, video of artificial valve action, video of heart transplant, video of dye in coronary system, blockage, catheterization, blockage, balloon angioplasty, stent implantation, video of pacemaker and defibrillator implantations, x-ray of implanted artificial pacemaker, video of diagram of natural pacemaker action, color slide/photograph and SEM of erythrocytes (normal & sickle), **Artificial Heart, LVAD**
- Respiratory - video of x-ray during breathing
 SEM micrograph of mucous secreting cells in bronchus
 color slide/photograph of alveoli of normal and smoker's lung
 color slide/photograph of alveoli of normal and pneumonia
 vibration of vocal cords during talking
- Excretory - video of kidney transplant
 video, x-ray of kidney stones, and removal
 slides/photographs of nephron, tubules
- Kidney Dialysis Machine
- Reproductive - color slides/photographs and/or SEM micrographs of egg in oviduct, fertilization, egg swarmed by sperm, fetal development weeks 1-40 video of ultrasound of fetus, fetal movement, heartbeat, blood flow, etc.
 video animation of cleavage, gastrulation, cell differentiation, morphogenesis, organogenesis. Contraceptive Devices
- C 4 three plastic human skeletons
 prosthetic devices (artificial limbs and joints)
- C 7 heart lung machine
- C 8 plastic human fetal development series
- C 9 1st kidney transport machine
- C 10 eye chart
 ophthalmology equipment
 artificial cornea
 hearing testing booth
- C 16 electronic sphygmomanometer
- C 17 thermograph camera
- D 7 vertebrates representative of classes, shells, butterflies, beetles, anthropoid skulls

D 9 **Environmental Tools of the Trade** - trawl nets and boards, seine, benthic dredge, water bottle samplers, temperature recorders (for El Niño), binocular night viewing device