

## **Frontiers in Space Technology: Applications to Medicine**

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NASA's Office of Life and Microgravity Sciences and Applications (OLMSA) leads the nation's efforts in life and microgravity sciences, related technology development, and applications using the attributes of the space environment to advance knowledge, to improve the quality of life on Earth, and to strengthen the foundations for continuing the exploration and utilization of space. This presentation will review three major themes presently being pursued by NASA and will emphasize terrestrial applications with specific focus on developing countries. The three major technological themes presented to the International Symposium on Healthcare Horizons will be: (1) Telemedicine, (2) Satellite Monitoring of Vector Borne Diseases, and (3) Medical Microelectronics.

Telemedicine is based on the technology for the storage and communication of digitized medical information. Telematic links (coupled with the use of microprocessor cards to access the networks and transfer the essential elements of medical records) connect patients, general practitioners, specialists, laboratories and/or hospitals.

Advances in visible and infrared satellite imagery allows for the global monitoring of habitats of vector borne diseases. Data on Malaria and Lyme disease will be presented.

Stringent mass, volume and power constraints in space have guided unique sensor systems for the measurement of atmospheric constituents. Recent advances in microsensors will be presented with special emphasis for terrestrial applications.