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From the President

by Sid Gropius

There are several exciting things happening right now around the world. It is exciting to be part of the medical profession in an age of unprecedented discoveries. As President of SciTek, I am excited to share a few examples of such discoveries.

Scientists have discovered the fountain of youth - for worms. They've created a genetically altered worm that can live more than twice as long as a typical worm. Says Biochemist Steve Hafen of the University of Biochemistry, "It's cool." Whether or not this is relevant to human beings remains a question. However, worms have been fairly reliable samples in the past.

Scientists have also recently found a gene that may help in curing tongue cancer. Experts say the discovery will save thousands of lives and millions of dollars. The mutation is common: One in 200 people have it. Screening tests should be ready in one or two years. The cancer is curable if detected early.

Finally, couch potatoes shouldn't be frightened by recent studies linking heart attacks and heavy exercise. Doctors say sedentary lifestyle, combined with heavy exertion, is what raises heart attack risk. Out-of-shape people who gradually get into shape can actually lower that risk. "It is really low-level physical activity, done on a consistent basis, that helps prevent heart attacks," says Dr. Roger Gooddoctor of The Get Well Soon Medical Center.

It is our job to communicate these and other exciting discoveries to both the medical and general population. It is imperative that we report accurately and expeditiously. If we dedicate ourselves to this goal, The SciTek Report will continue to be the "pace setter" in scientific journalism.

R&D Report

by Rich Paine

$$T = \frac{1}{3} \sum_{i=1}^n m_i v_i^2$$

We shall consider in this section the application of Newton's law of motion to a system of particles, ie., to a large number of particles considered together. The results obtained will enable us to analyze the effect of streams of particles on vanes or ducts and will provide us with the basic principals underlying the theory of jet and rocket propulsion. Since a rigid body may be assumed to consist of a very large number of particles, the principals developed in this paper will also provide us with a basis for the study of kinetics of rigid bodies. In order to derive the equations of motion for a rigid system of n particles, we shall begin by writing Newton's second law for each individual particle of the system. The kinetic energy of particles is defined as the sum of the kinetic energies of the various particles of the system (Reference **Equation 1**). Assume the centroidal frame of

reference. It is often convenient, when computing the kinetic energy of a system comprising a large number of particles (as is the case in a rigid body), to consider separately the motion of mass center G of the system and the motion of the system relative to a moving frame of reference attached to G .

Conferences

by Spencer Armstrong

The conferences and seminars group has just completed a rather hectic 4th quarter and we are looking forward a busy 1st quarter of 1994. In addition to hosting 7 conferences on our own campus we had show booths at 14 medical technology seminars and shows around North America.