LETTERS
Alcohol or Humus?: H. Jenny; Mathematical "Invasion": J. Alperin and S. Mac Lane; Keeler's Gap: D. E. Osterbrock ........................................... 444

EDITORIAL
Regulation and the Universities: D. Kennedy ........................................ 449

ARTICLES
Water Revisited: F. H. Stillinger ................................................................. 451
The Phylogeny of Prokaryotes: G. E. Fox et al. ........................................... 457
Seabed Minerals and the Law of the Sea: V. E. McKelvey .......................... 464

NEWS AND COMMENT
Making the Multiuniversity More Multiethnic ........................................... 473
A Major Minority ......................................................................................... 474
NIH Shaken by Death of Research Volunteer ............................................. 475
Briefing: Industrial Productivity and the "Soft Sciences"; Reversals for Carter Energy Legislation; Harvard Nuclear Engineer to Chair the NRC ................................................................. 476
Behavioral Medicine: An Emergent Field .................................................... 479
Health Committee Investigates Farm Drugs ................................................ 481

RESEARCH NEWS
Changing Global Sea Levels as a Geologic Index ....................................... 483

BOOK REVIEWS
The Evolution of Culture in Animals, reviewed by R. H. Wiley; Vertebrate Ecology in the Northern Neotropics, B. K. McNab; Prehistoric Hunters of the High Andes, T. F. Lynch; Wave Instabilities in Space Plasmas, D. T. Farley; Books Received ......................................................................................... 487
REPORTS

Volcanic Contribution of Chlorine to the Stratosphere: More Significant to Ozone Than Previously Estimated? D. A. Johnston .............................. 491

N-Formylmethionyl Peptide Receptors on Equine Leukocytes Initiate Secretion but Not Chemotaxis: R. Snyderman and M. C. Pike .................. 493

Ion Pairing Techniques: Compatibility with On-Line Liquid Chromatography-Mass Spectrometry: D. P. Kirby, P. Vouros, B. L. Karger .......... 495

Human Hepatocellular Carcinoma Cell Lines Secrete the Major Plasma Proteins and Hepatitis B Surface Antigen: B. B. Knowles, C. C. Howe, D. P. Aden ...... 497

Cerebral Regional Oxygen Consumption and Supply in Anesthetized Cat: E. Buchweitz, A. K. Sinha, H. R. Weiss .................... 499

Multiple Mating-Type Specificities in the Flax Rust Melampsora lini: G. J. Lawrence .................................................. 501

Limitations of Metabolic Activation Systems Used with in vitro Tests for Carcinogens: C. A. H. Bigger et al. ......................... 503

Cell Variants Showing Differential Susceptibility to Ultraviolet Light-Induced Transformation: T. Kakunaga and J. D. Crow .......... 505

(−)Pentobarbital Opens Ion Channels of Long Duration in Cultured Mouse Spinal Neurons: D. A. Mathers and J. L. Barker ............... 507


Calcium Regulation During Stimulus-Secretion Coupling: Continuous Measurement of Intracellular Calcium Activities: J. O’Doherty et al. .......... 510

Initiation of Sulfate Activation: A Variation in C, Photosynthesis Plants: B. C. Gerwick, S. B. Ku, C. C. Black ..................... 513

Carcinogenic Activity of Particulate Nickel Compounds Is Proportional to Their Cellular Uptake: M. Costa and H. H. Mollenhauer ........ 515

Developmental Potential of Somatic Nuclei Transplanted into Meiotic Oocytes of Rana pipiens: N. J. Hoffner and M. A. DiBerardino .... 517

Biochemical Analysis of Human T Lymphocyte Differentiation Antigens T4 and T5: C. Terhorst et al. ............................... 520

Excitatory and Inhibitory Effects of Serotonin on Sensorimotor Reactivity Measured with Acoustic Startle: M. Davis, D. I. Astrachan, E. Kass .............................. 521

Female Mate Choice in a Neotropical Frog: M. J. Ryan ....................... 523

COVER

Augustine Volcano, Alaska. The chlorine output of some explosive volcanoes exceeds earlier estimates of volcanic impact on the stratosphere by 20 to 40 times or more. See page 491. [D. A. Johnston, U.S. Geological Survey, Menlo Park, California]