

## Get UNITRON'S FREE

### Observer's Guide and Catalog

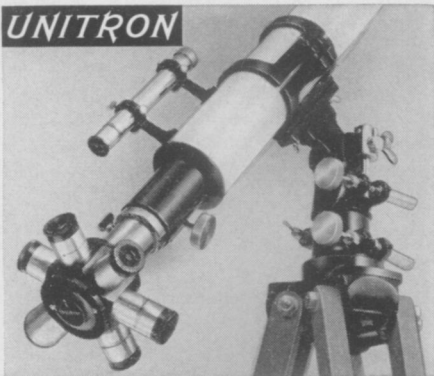
### on Astronomical Telescopes.

This valuable 38-page book  
is yours for the asking!

With the artificial satellite and space travel almost a reality, astronomy has become today's fastest growing hobby. UNITRON'S new handbook contains full-page illustrated articles on astronomy, observing, telescopes and accessories. Of interest to beginner and advanced amateurs alike.

Here is a typical UNITRON Value

## UNITRON



UNITRON 2.4" Altazimuth Refractor

COMPLETE with eyepieces for 100X, 72X, 50X, 35X; altazimuth mounting, tripod, slow motion controls, choice of rotary eyepiece selector (illustrated) or prism system for terrestrial observation and star diagonal, viewfinder, sunglass, cabinets, etc. Higher and lower powers available at extra cost.

Only  
**\$125**

### OTHER UNITRON REFRACTORS

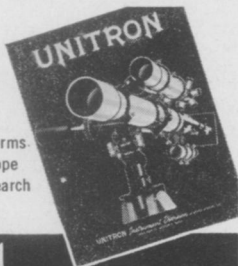
1.6 INCH ALTAZIMUTH .....	\$75
2.4 INCH EQUATORIAL .....	\$225
3 INCH ALTAZIMUTH .....	\$265
3 INCH EQUATORIAL .....	\$435
4 INCH ALTAZIMUTH .....	\$465
4 INCH EQUATORIAL .....	\$785
4 INCH PHOTO-EQUATORIAL with clock drive, astro-camera, guide scope. ....	\$1175

All instruments fully guaranteed. Send check or money order or 20% deposit with balance C.O.D. Shipped express collect. Time payment plan available.

### Send for free OBSERVER'S GUIDE

#### Contents include —

- Observing the sun, moon, planets and wonders of the sky
- Constellation map
- Hints for observers
- Glossary of telescope terms
- How to choose a telescope
- Amateur clubs and research programs



## UNITRON

Instrument Division  
of UNITED SCIENTIFIC CO.

204-6 MILK STREET • BOSTON 9, MASS.

Please rush to me, free of charge, UNITRON'S new  
Observer's Guide and Telescope Catalog.

Name.....

Street.....

City.....State.....

SN—November 30

## BIOCHEMISTRY

# Find Hormones Related

Two hormones, animal hormone serotonin and plant hormone indoleacetic acid, have been found to have similar effects on cells, an important discovery for basic research.

➤ **SEROTONIN**, the brain stimulating chemical that is being tested as a treatment for mental illness, corresponds to the growth hormone of plants, indoleacetic acid.

This possibility was reported by Dr. D. W. Woolley, Rockefeller Institute for Medical Research, New York, to the National Academy of Sciences meeting in New York.

Indoleacetic acid has been found in all plants and is considered to be the growth hormone. A cheaply produced synthetic form of it, called 2,4-D (2,4-dichlorophenoxyacetic acid), is widely used as a weed killer, since it causes the weed to grow so fast that it kills itself. Indoleacetic acid itself is not used because it is too difficult and expensive to prepare.

Serotonin, the animal hormone, is found in the brain, intestines and blood platelets and is believed to play some part in mental illness. An experimentally caused loss of brain serotonin can bring on psychotic-like reactions in normal people.

Dr. Woolley and associates have been testing the effects of increased brain serotonin in schizophrenic mental patients and have previously reported "encouraging" results.

One of the similarities between the plant and animal hormones is their effect on tissue cells. Indoleacetic acid changes the permeability of plant cells, causing them to take up more water and therefore grow longer. Serotonin appears to act the same way when it causes muscles to contract. This contracting action is now believed to come from a change in the permeability of the muscle cell to calcium.

## Acid Coats Bacteria

➤ **THE FIRST** discovery that bacteria are coated with a special acid called colominic acid was reported by Dr. Guy T. Barry, Rockefeller Institute for Medical Research, to the meeting.

The acid is one of a family of acids named the sialic acids, and it forms a protective covering around *Escherichia coli*. These bacteria are found in great numbers in man's intestinal tract.

Although the bacteria can be killed by available antibiotics, the human body is unable to fight them off by itself, possibly due to the presence of a coating of colominic acid.

It appears that the acid covering may protect the bacteria from being clumped together or agglutinated, and then destroyed.

The particular acid is known as poly N-acetylneuraminic acid and forms one of approximately 80 serologically different coatings that surround the bacteria.

It has been found before in sheep but only in combination with many other complex sugar molecules. In bacteria it exists alone in its pure form.

Other types of the acid have been isolated from horses, cows and pigs, and are known as equine, bovine or porcine sialic acid, respectively, Dr. Barry said.

Science News Letter, November 30, 1957

## SCIENCE NEWS LETTER

VOL. 72 NOVEMBER 30, 1957 NO. 22

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N. St., N.W., Washington 6, D. C., North 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright © 1957 by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicated services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283) authorized February 28, 1950. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index.



### SCIENCE SERVICE

Member Audit Bureau of Circulation. Advertising Manager: Fred A. Moulton, 1719 N. St., N. W., Washington 6, D. C., ME. 8-2562.

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Karl Lark-Horowitz, Purdue University; William W. Rubey, U. S. Geological Survey; Wallace R. Brode, National Bureau of Standards. Nominated by the National Academy of Sciences: George W. Corner, Rockefeller Institute for Medical Research; Edward U. Condon, Washington University; Harlow Shapley, Harvard College Observatory. Nominated by the National Research Council: Jerome C. Hunsaker, Massachusetts Institute of Technology; I. I. Rabi, Columbia University; Leonard Carmichael, Smithsonian Institution. Nominated by the Journalistic Profession: Neil H. Swanson, Garrison, Md.; O. W. Riegel, Washington and Lee University; Michael A. Gorman, Flint Journal. Nominated by the Scripps Estate: Charles E. Scripps, Cincinnati, Ohio; Edward J. Meeman, Memphis Press-Scimitar; Frank Ford, Washington, D. C.

Officers — President: Leonard Carmichael; Vice President and Chairman of Executive Committee: Charles E. Scripps; Treasurer: Wallace R. Brode; Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Marjorie Van de Water, Ann Ewing, Howard Simons, Dorothy Schriver, John W. Robinson. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Production: Priscilla Howe, Marcia Nelson. Sales: Hallie Jenkins. Interlingua Division in New York: Alexander Gode, 80 E. 11th St., GRamercy 3-5410.