

## GENERAL SCIENCE

# Top Scholarship Winners

Karl Muench, 17-year-old from Evanston, Ill., won the \$2,800 award. Robert Braden of Princeton, N. J., won \$2,000 scholarship.

## See Front Cover

► THE MOST outstanding scientist among the nation's high school seniors is Karl H. Muench, a 17-year-old from Evanston, Ill. He was awarded the \$2800 Westinghouse Grand Science Scholarship at the banquet in Washington that climaxed the Eleventh Annual Science Talent Search.

Dr. Harlow Shapley, director of the Harvard College Observatory, Cambridge, Mass., and president of SCIENCE SERVICE, presented the awards to the 40 top winners during the banquet ceremonies.

Second highest honor, \$2,000 scholarship, went to Robert T. Braden, 18, a senior at Princeton (N. J.) High School. Winner of one of the eight \$400 scholarships and alternate for the \$2,000 scholarship was Louise Schmir, 16, a senior and tops in her class at Taft High School, New York.

Mr. Muench's project, an excerpt from which is printed on p. 175, was a study on what happened to hamsters when they were fed meat from roosters that had been chemi-

cally sterilized with diethylstilbestrol. He is a senior at Evanston (Ill.) Township High School.

Mr. Braden's winning project was entitled, "Constructing Logical Truth Tables with Punched Card Machinery," and his report discussed the application of computing machines to the problems of logic. A portion of his paper is printed on p. 175.

The two top winners are shown on the cover of this week's SCIENCE NEWS LETTER, Karl Muench on the left and Robert Braden on the right.

Miss Schmir's project involved basic concepts of geometry and was titled, "A Study of the Assumptions Underlying Euclidean and Non-Euclidean Geometry."

Seven other \$400 scholarships and 30 \$100 scholarships were also awarded. The 40 young scientists heard an address by Walter G. Whitman, Chairman of the Research and Development Board of the Department of Defense. (See SNL, March 8, p. 154).

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**SCIENCE TALENT INSTITUTE SCENES**—Top left, ten top winners with W. G. Whitman, Dr. Shapley, and A. C. Monteith of Westinghouse Electric Corporation; top right, the two top winners being congratulated by Watson Davis and Mr. Whitman; 3, Dr. Horace Isbell of the National Bureau of Standards shows samples of "hot" sugars to two of the winners; 4, some of the 40 discuss the natural sciences with Drs. Remington Kellogg, Herbert Friedmann and Edward Chapin of the National Museum; 5, Dr. Dean Cowie shows a group of the winners the Carnegie Institution atom smasher; 6, Mr. and Mrs. Richard Milburn, STS winners in 1945, discuss their experiences since that time with three of this year's 40 young scientists; 7, Mary Ann Dawson blows out the candles on her birthday cake when she celebrated her 18th birthday at the Science Talent Institute on March 2; 8, two of the group examine an early German model of the basic V-2 rocket, while the test procedures are explained by Dr. Hermann H. Kurzweg of the Naval Ordnance Laboratory; 9, Paul Richards talks with his Congressman, The Honorable John Phillips (R., Calif.) at the Congressional Dinner.



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# Winners of Scholarships

**GRAND SCHOLARSHIP OF \$2,800**  
Muench, Karl Hugo, Evanston, Ill.

**\$2,000 SCHOLARSHIP AND ALTERNATE FOR \$2,800**  
Braden, Robert Taylor, Princeton, N. J.

**ALTERNATE FOR \$2,000**  
Schmir, Louise, New York, N. Y.

**SCHOLARSHIPS OF \$400**  
Armstrong, John Allan, Schenectady, N. Y.  
Bideaux, Richard August, Tucson, Ariz.  
Dolen, Richard, New York, N. Y.  
Griswold, Ralph Edward, Atlanta, Ga.  
Mitchell, Dana D., New Rochelle, N. Y.  
Raudsep, Ilmar, New York, N. Y.  
Schmir, Louise, New York, N. Y.  
Shimansky, Judith Martha, Brooklyn, N. Y.

**ALTERNATES**  
1st alt. Papadakis, Emmanuel Philippos, Omaha, Nebr.  
2nd alt. Epstein, Eugene Ethan, Los Angeles, Calif.  
3rd alt. Hobbie, Russell Klyver, Springfield, Mass.

**SCHOLARSHIPS OF \$100**  
Allen, Patricia Joan, Livingston, Mont.  
Beck, Alice Eve, Mount Vernon, N. Y.  
Berne, Joel Edward, Brooklyn, N. Y.

Boat, Mary Barbara, Poughkeepsie, N. Y.  
Blanchard, Byron Elbert, Omaha, Nebr.  
Colman, Robert Wolf, Far Rockaway, N. Y.  
Dawson, Mary Ann, Connersville, Ind.  
Dietrich, Charles William, Edwardsville, Ill.  
Eddings, Charlotte Ann, Phoenix, Ariz.  
Epstein, Eugene Ethan, Los Angeles, Calif.  
Finch, Hardy Rundell, III, Greenwich, Conn.  
Forman, Paul Frederick, New Rochelle, N. Y.  
Goldstein, David Arthur, Rochester, N. Y.  
Harrell, Ruth Flinn, Norfolk, Va.  
Hartmann, Harry Rodney, New Brunswick, N. J.  
Hobbie, Russell Klyver, Springfield, Mass.  
Hooker, William Weston, Washington, D. C.  
Klevay, Leslie Michael, Jr., Skokie, Ill.  
Laufer, Wilma Phyllis, Forest Hills, N. Y.  
Lieberman, Philip, Brooklyn, N. Y.  
Luhmann, George William, Jr., Andover, Mass.  
McLeod, Donald Wingrove, Rochester, N. Y.  
Messinger, Paul Hilton, Los Angeles, Calif.  
Noyes, Russell, Jr., Bloomington, Ind.  
Papadakis, Emmanuel Philippos, Omaha, Nebr.  
Potthoff, Robert Edward, Urbana, Ill.  
Richards, Paul Linford, Riverside, Calif.  
Seaman, John Robert, Oceanside, N. Y.  
Smith, David Young, Schenectady, N. Y.  
Weiss, Bernard, Forest Hills, N. Y.

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## BIOCHEMISTRY

## A-Bomb Radiation Releases Dangerous Protein into Blood

► RECENT ATOMIC bomb tests have added further proof to a discovery that ferritin, an iron-bearing protein associated with the iron transport system in the blood, must be dealt with in the treatment of radiation injury.

Early in 1951 Drs. Thomas J. Haley and Richard F. Riley of the University of California at Los Angeles performed experiments on rats and discovered that exposure to X-rays liberated appreciable quantities of ferritin into the blood from the liver. This causes a paralysis of the peripheral vascular blood circulation and upsets the normal balance in the blood stream.

Dogs exposed to radiation in atomic bomb explosions showed identical effects of ferritin in the blood stream to those effects found in rats in the laboratories.

"When the greatest amount of ferritin is present in the blood stream, the irradiated animals are experiencing internal hemorrhaging," explained Dr. Haley, chief of the pharmacology and toxicology division in the U.C.L.A. Atomic Energy Project.

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