

cal Drug Testing of the Japanese Rheumatism Association. Effectiveness was demonstrated in cases with grades I and II of rheumatoid arthritis. It was found that 90 percent DMSO applied topically was better than 50 percent, with both concentrations significantly superior to propylene glycol controls, using measurements of strength of grip, range of joint motion, and freedom from pain on pressure. Local skin irritation was greater with the higher concentration of DMSO. However, J. Zuckner and J. Uddin (St. Louis University Medical School) found only 30 percent improvement in 32 patients with rheumatoid arthritis followed for 1 month on topical DMSO, and with no suppression of immunological processes. M. Lockie (New York State University at Buffalo) described pain relief following topical DMSO in 23 of 27 patients with varying extent of rheumatoid arthritis. In various arthritic conditions, P. I. Day (University of Texas, San Antonio) confirmed patient benefit with topical DMSO in some 1000 patients, and noted fewer side-effects than with conventional therapy. A. Steinberg (Philadelphia) also confirmed patient benefit in various joint conditions, emphasizing the anti-inflammatory effect of DMSO and its value in steroid transport.

In a careful clinical study, using double blind methods, J. H. Brown (Seattle) found 10 percent DMSO applied locally in acute musculoskeletal injuries could serve as a placebo, whereas 60 percent to 90 percent DMSO gave significant improvement in 75 percent of the patients. R. Turner (University of California, Los Angeles) stressed the value of locally applied DMSO in speeding recovery from athletic bruises.

In reference to the penetrant properties of DMSO, V. Breckner and associates (University of California, Los Angeles) noted that 5 percent tetracaine base in undiluted DMSO achieves deep and lasting anesthesia of intact human skin. Intriguing was the indication by E. Ramirez and S. Luza (University of Peru Medical School, Lima) that DMSO may pass the blood-brain barrier, in showing that 5 ml of 80 percent DMSO intramuscularly thrice daily for 3 days may induce preconvulsive states as indicated by EEG, and will alert deeply depressed patients to helpful psychotherapy.

In concluding the 3-day session, in which 79 reports were opened for discussion, I ventured the remark that

the well-known legal principle of *res ipsa loquitur* might well apply to the situation involving DMSO, and that rarely has a new drug come so quickly to the judgment of the members of the health professions with so much verifiable data from so many parts of the world, both experimentally and clinically, as to safety and efficacy.

CHAUNCEY D. LEAKE  
San Francisco Medical Center,  
University of California,  
San Francisco

## Forthcoming Events

### July

5-8. **Lens Design** with Large Computers, intern. conf., Rochester, N.Y. (Inst. of Optics, Univ. of Rochester, Rochester 14627)

5-9. **Technical and Industrial Communications**, 9th annual inst., Colorado State Univ., Fort Collins. (B. K. McKee, Inst. in Technical and Industrial Communications, Rm. 322 Liberal Arts, Colorado State Univ., Fort Collins 80521)

5-9. American Soc. of **Pharmacognosy**, 7th annual mtg., Univ. of Minnesota, Minneapolis. (L. C. Schramm, College of Pharmacy, Univ. of Minnesota, Minneapolis 55455)

6-7. **Space Flight Mechanics**, specialist conf., Denver, Colo. (R. S. Novosad, Martin-Marietta Corp., Mail No. A127, Denver 80201)

6-8. **Space and Ballistic Missile Technology**, 11th symp., U.S. Air Force Academy, Colo. (C. T. Morrow, Aerospace Corp., P.O. Box 95083, Los Angeles, Calif. 90045)

6-9. National Soc. of **Professional Engineers**, annual mtg., Minneapolis, Minn. (The Society, 2029 K St., NW, Washington, D.C. 20006)

9-15. **Medical Women's** Intern. Assoc., 10th congr., Rochester, N.Y., and Niagara Falls, Ont. (The Association, 1790 Broadway, New York 10019)

10-15. **Power**, mtg., Inst. of Electrical and Electronics Engineers, New Orleans, La. (E. C. Day, IEEE, 345 E. 47 St., New York 10017)

10-16. American **Library** Assoc., annual conf., New York, N.Y. (D. H. Clift, 50 E. Huron St., Chicago, Ill. 60611)

11-14. **Aerospace Systems**, conf., Seattle, Wash. (Inst. of Electrical and Electronics Engineers, 345 E. 47 St., New York 10017)

11-15. International Council for **Bird Preservation**, world conf., Cambridge, England. (The Council, c/o British Museum of Natural History, Cromwell Rd., London S.W.7)

11-15. Use of **Isotopes in Milk Technology**, seminar, Munich, West Germany. (Intern. Agency Liaison Branch, Office of the Director General, Food and Agriculture Org., Via delle Termi di Caracalla, Rome, Italy)

11-15. **Weights and Measures**, 51st natl. conf., Denver, Colo. (Executive Secy.

of the Conference, National Bureau of Standards, Washington, D.C. 20234)

11-16. **Graphic Design and Visual Communications Technology**, 2nd intern. congr., Bled Yugoslavia. (Intern. Council of Graphic Design Assoc., Herengracht 567, Amsterdam-C, Netherlands)

11-16. **Hydraulics** 2nd Latin American congr., Caracas, Venezuela. (M. Gonzalez, Colegio de Ingenieros de Venezuela, Apartado de Correos 2006, Caracas)

11-16. **Reaction Mechanisms of Inorganic Solids**, intern. symp., Aberdeen, Scotland. (General Secretary, Chemical Soc., Burlington House, London W.1, England)

11-16. **Statistical Mechanics and Thermodynamics**, intern. symp., Copenhagen, Denmark. (T. A. Bak, H. C. Ørsted Inst., Univ. of Copenhagen, Copenhagen)

12-14. **Failure Analysis**, William H. Eisenman conf., New York, N.Y. (J. V. Richard, American Soc. for Metals, Metals Park, Ohio 44073)

12-15. Use of **Radioisotopes and Radiation in Dairy Science** and Technology, seminar, Vienna, Austria. (P. Fent, Div. of Public Information, Intern. Atomic Energy Agency, A-1010, Kärntnerring 11, Vienna)

12-19. International Union of **Crystallography**, 7th general assembly and congr., Moscow, U.S.S.R. (J. Ibers, Chemistry Dept., Northwestern Univ., Evanston, Ill.)

14-16. **Listeriosis**, 3rd intern. symp., Bilthoven, Netherlands. (E. H. Kampelmacher, Natl. Inst. of Public Health, Sterrenbos 1, Utrecht)

14-16. Uses of **Plastics** in the Pacific Northwest, workshop, Richland, Wash. (R. A. V. Raff, College of Engineering, Washington State Univ., Pullman 99163)

15-19. **Tetanus**, intern. conf., Bern, Switzerland. (W. Mamie, Tiefenauospital der Stadt Bern, Bern)

17-21. Canadian **Veterinary Medical** Assoc., annual conv., Vancouver, B.C. (The Association, P.O. Box 416 C.P., Ottawa 2, Ont.)

17-22. **Control Procedures in Drug Production**, 2nd seminar, Hershey, Pa. (W. L. Blockstein, Extension Services in Pharmacy, Univ. of Wisconsin, Madison 53706)

17-22. American Soc. for **Pharmacology and Experimental Therapeutics**, mtg., Mexico City, Mexico. (E. B. Cook, The Society, 9650 Wisconsin Ave., NW, Washington, D.C. 20014)

17-23. **Animal Venoms**, intern. symp., São Paulo, Brazil. (Conference Secretary, Inst. Butantan, Caixa Postal 65, São Paulo)

18-20. American Inst. of **Aeronautics and Astronautics**, Interagency Chemical **Rocket Propulsion** Group, mtg., Washington, D.C. (Chemical Propulsion Information Agency, 8621 Georgia Ave., Silver Spring, Md.)

18-20. **Aerospace Reliability and Maintainability**, 5th mtg., New York, N.Y. (American Inst. of Aeronautics and Astronautics, 1290 Sixth Ave., New York)

18-22. World Federation for **Mental Health**, 19th mtg., Prague, Czechoslovakia. (J. E. Purkyne Czechoslovak Medical Soc., Sokolska 31, Prague)

18-22. Nuclear and Space **Radiation Effects**, annual conf., Stanford Univ., Palo Alto, Calif. (V. A. J. van Lint, General Atomics, Special Nuclear Effects Labora-

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18-23. Society of the **Chemical Industry**, annual mtg., Dublin, Ireland. (The Society, 41 Belgrave Square, London S.W.1, England)

18-24. American Soc. for **Horticultural Science**, 14th Caribbean region mtg., El Salvador, San Salvador. (E. H. Casseres, Calle Londres 40, Mexico 6, D.F.)

19-21. **Alkali Metals**, intern. symp., Nottingham, England. (General Secretary, Chemical Soc., Burlington House, London W.1, England)

20-21. **Crystal Growth**, symp., Moscow, U.S.S.R. (N. V. Belov, Inst. of Crystallography, Academy of Sciences of the U.S.S.R., Lenin Prospekt 59, Moscow B-333)

21-24. **Data Processing**, intern. conf., Chicago, Ill. (Data Processing Management Assoc., 524 Busse Highway, Park Ridge, Ill. 60068)

23-28. **Anatomy**, 1st Pan American congr., Mexico, D.F. (Congress Secretariat, Apt. Postal 25279, Admon. de Correos 70, Mexico 20)

24-30. **Microbiology**, 9th intern. congr., Moscow, U.S.S.R. (N. E. Gibbons, Intern. Assoc. of Microbiological Soc., Div. of Applied Biology, Natl. Research Council, Ottawa 2, Ont., Canada)

24-30. **Ornithology**, 14th intern. congr., Oxford, England. (N. Tinbergen, Dept. of Zoology, Oxford Univ., Oxford)

24-30. **Pharmacology**, intern. congr., São Paulo, Brazil. (M. Roche e Silva, Dept. of Pharmacology, Faculty of Medicine, Univ. of São Paulo, Ribeirão Preto, São Paulo)

25-27. **Data Acquisition and Processing in Biology and Medicine**, conf., Univ. of Rochester, Rochester, N.Y. (Office of Technical Activities Board, Inst. of Electrical and Electronics Engineers, 345 E. 47 St., New York 10017)

25-29. **Interpretation and Therapy of Cardiac Arrhythmias**, conf., Hahnemann Medical College and Hospital, Philadelphia, Pa. (L. S. Dreifus, Hahnemann Medical College, 230 N. Broad St., Philadelphia)

25-30. **Animal Husbandry**, intern. conf., Göttingen, West Germany. (Intern. Agency Liaison Branch, Office of the Director General, Food and Agriculture Organization, Via delle Terme di Caracalla, Rome, Italy)

25-31. **Genetics**, intern. symp., São Paulo, Brazil. (G. Pavan, Dept. of Biology, Univ. of São Paulo, Caixa Postal 8105, São Paulo, Brazil)

26-28. American **Astronomical Soc.**, Cornell Univ., Ithaca, N.Y. (G. C. McVittie, Univ. of Illinois Observatory, Urbana)

26-30. **Clinical Chemistry**, 6th intern. congr., Munich, Germany. (O. Wieland, 11. Medizinische Universitätsklinik, Ziemssenstr. 1, 8 Munich)

27-30. **International Primatological Soc.** mtg., Frankfurt-am-Main, Germany. (D. Stark, Ludwig-Rehnstr. 14, Frankfurt)

28-31. **Psychosomatic Medicine in Obstetrics and Gynecology**, 3rd intern. congr., Vienna, Austria. (A. H. Palmrich, Vienna Acad. of Medicine, Alserstr. 4, Vienna 9)

29-30. **Linguistic Soc. of America**, Univ. of California, Los Angeles. (A. A. Hill, Box 8120 University Station, Austin, Tex.)

(See 3 June issue for comprehensive list)

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