tive, there usually appear in the cysts of *E. coli* extensive shrinkage areas between the cytoplasm and the cyst membrane or there may be large extrusions or "buds," as in *E. histolytica*. These "buds" appear to have been produced explosively and lack a definite boundary at the outer periphery.

That different species of intestinal amoebae show divergent reactions to the same technique has been indicated in the preceding accounts. These differences probably represent chemical peculiarities in the composition of the nuclei of these several taxonomic categories. Such differences were revealed by fixing the five species of amoebae found in the intestine of man with the same fixing agent, namely, Schaudinn's fluid plus 5 per cent. of acetic acid, and then staining them by three different methods: Heidenhain's hematoxylin, Mayer's hemalum and the Feulgen reaction. If our attention is confined to the nuclei it may be noted that the picture that has been considered characteristic for each species is given by the Heidenhain's stain. For *Entamoeba histolytica* and *E. coli* the endosome and peripheral layer stain well and a certain amount of periendosomal material also. This periendosomal material is usually more voluminous in *E. coli*. For *Iodamoeba bütschlii* there is no peripheral layer but the endosome and periendosomal layer stain deeply. For *Endolimax nana* the endosome stains deeply but the peripheral layer does not stain so well. With *Dientamoeba fragilis* no peripheral layer is seen, but the central nuclear mass stains well.

With hemalum the peripheral and periendosomal layers of *E. coli* and *E. histolytica* stain well, but the endosome tends to remain unstained, especially in *E. histolytica*. In *Iodamoeba* the endosome tends to stain more lightly than the peripheral layer, especially in the cysts, while in *Endolimax* both the endosome and the peripheral layer stain well. In *Dientamoeba* the stain is about the same as with Heidenhain's.

After Feulgen's technique only the periendosomal material of *E. histolytica* and *E. coli* show a coloration which is weak, but usually more pronounced for *E. coli*. In *Iodamoeba* only the periendosomal layer stains but the reaction is strong. In *Endolimax* only the peripheral layer stains but the reaction is weak. In *Dientamoeba* the reacting material is apparently identical to that which stains with Heidenhain's and hemalum. These evidences of chemical differences in the constitution of the nuclei of different kinds of intestinal amoebae offer important confirmation to the validity of the taxonomic groupings that have been established.

It may be well to repeat that different techniques may produce decidedly divergent appearances in the same species of parasite; on the other hand, there may be much variation in the appearances of various races or strains or individuals of the same species when treated with the same technique due to peculiarities of the organisms themselves or to differences in the environment at the time of fixation; various species give divergent reactions to the same technique because of inherent differences in their chemical constitution.

SCIENTIFIC EVENTS

MEDICAL FELLOWSHIPS OF THE NATIONAL RESEARCH COUNCIL

FOURTEEN fellowships in the medical sciences, including four renewals, were awarded at the recent meeting of the Medical Fellowship Board of the National Research Council, Washington, D. C., of which Dr. Francis G. Blake, Sterling professor of medicine at Yale University, is the chairman. A list of the successful candidates and institutions where they are to work follows:

Reginald M. Archibald (renewal), Hospital of the Rockefeller Institute.
Lindsay E. Beaton (renewal), Northwestern University.
Lauritz R. Christensen, New York University.
Albert H. Coons (renewal), Harvard Medical School.
William J. Darby, Jr., Columbia University.
J. Russell Elkinton (renewal), Yale University.
Frank L. Engel, Yale University.
Nathan B. Friedman, Yale University.
Robert Hodes, University of Pennsylvania.
Max N. Huffman, Columbia University.
Joseph L. Irvin, Columbia University.
Harry Lusk, University of Michigan.
Maclyn McCarty, Hospital of the Rockefeller Institute.
Francis D. Moore, Harvard Medical School.
Richard J. Porter, Harvard Medical School.
Douglas S. Riggs, Yale University.
Richard B. Singer, Harvard Medical School.
Stewart G. Wolf, Cornell University Medical College.

In addition to the above, in the new series of fellowships announced last fall for work in the filtrable viruses and orthopedic surgery, made possible through a grant from the National Foundation for Infantile Paralysis, Inc., seven fellowships were awarded, as follows:

Seymour S. Cohen, Rockefeller Institute for Medical Research, Princeton.
Charles E. Evans, University of Rochester.
Robert H. Green, Hospital of the Rockefeller Institute.
Walter P. Havens, Jr., Hospital of the Rockefeller Institute.
Joseph L. Melnick, Yale University.
Eleanora Molloy, Columbia University.
Addison B. Scoville, Vanderbilt University.