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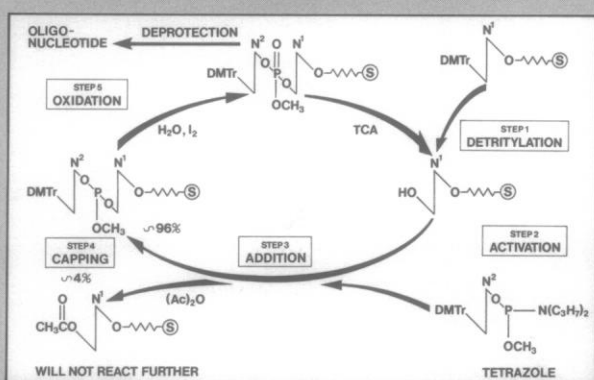
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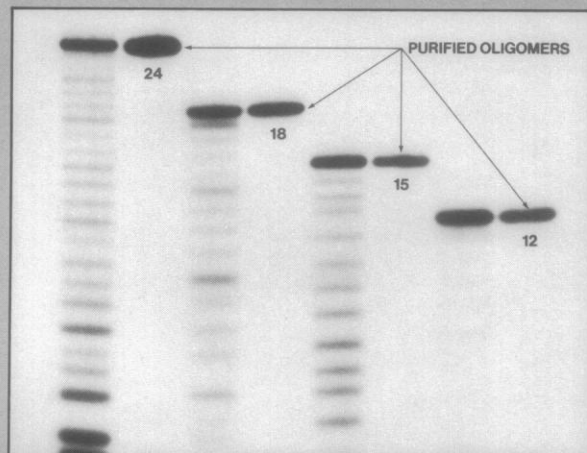
Synthesis cycle for phosphoramidite chemistry gives high yields of easily purified oligonucleotides.

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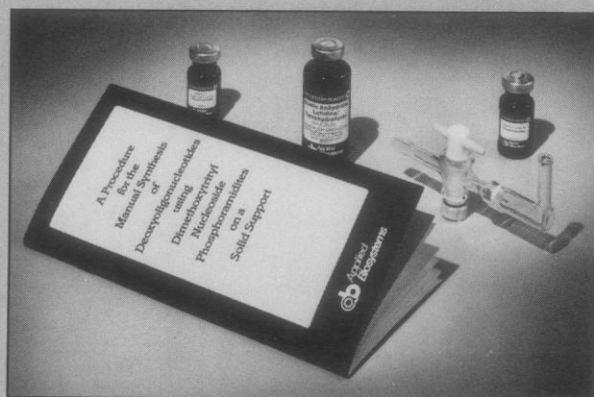
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COVER

Multispectral thermal image of Death Valley, California. Furnace Creek Fan is located in the upper left and the Panamint Mountains are at the bottom. (North direction is left.) Digital image is processed to show spectral emissivity differences in color and temperature variation as differences in intensity. See page 24 [John Reimer, Jet Propulsion Laboratory, Pasadena, California 91109]

TIAA announces MOD ONE...

a brand new concept in personal life insurance
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- gives discounts of 33⅓% to 40% on large policies

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Policy Amount ▶	\$50,000	\$100,000	\$150,000	\$200,000	\$250,000
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First-year premium	\$126.75	\$169.00	\$253.50	\$338.00	\$380.25
Premium per \$1,000	\$2.53	\$1.69	\$1.69	\$1.69	\$1.52
Issued to women aged 35					
First-year premium	\$110.25	\$147.00	\$220.50	\$294.00	\$330.75
Premium per \$1,000	\$2.20	\$1.47	\$1.47	\$1.47	\$1.32

As you can see, premium rates for policies of \$100,000 to \$249,000 are ⅓ less than those for smaller policies, and for policies of \$250,000 or more, they're 40% less. Substantially lower first-year premiums for all ages and big discounts for larger policies encourage everyone to consider the higher levels of family protection they may have felt they just couldn't afford until now.

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Note to present TIAA policyowners: MOD ONE premium rates apply only to policies issued on or after October 1, 1982, but cash dividends payable in accordance with the 1982 scale will continue to provide equitable treatment for policies issued prior to that date.

*Modified first-year premium.



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**Life Insurance Advisory Center
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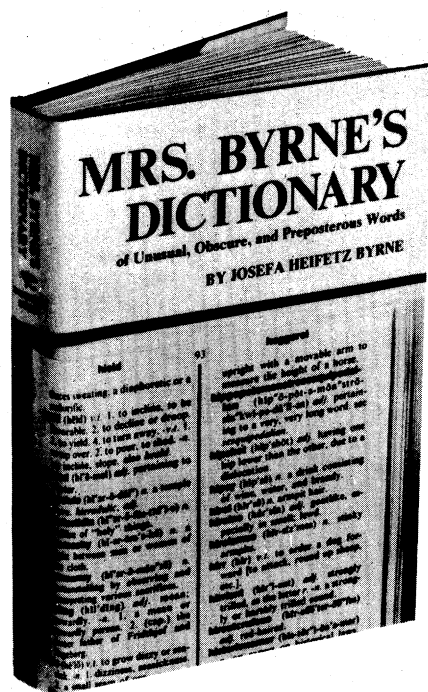
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The Global Agricultural Support System

For the architects of the post-World War II set of global institutions, meeting world food needs and reducing poverty in rural areas were essential elements in their vision of a world community that could ensure all people of freedom from want and insecurity. Agencies such as the U.S. Agency for International Development and the World Bank have used the development of national agricultural research systems as a major instrument for aiding poor countries in meeting domestic food needs. In a number of countries, assistance from external agencies has played an important role in the development of strong national agricultural research systems. But in too many cases, domestic economic and political support has failed to materialize. A period of rapid institutional development, supported primarily by external assistance, has often been followed by the decline or even collapse of research capacity as external project support has been phased out.

In my judgment, such cycles of development and decay are a result of the traditional project approach that agencies have used in encouraging the development of national agricultural research capacity. External assistance provides an alternative to the development of internal political support, and experience has shown that such political support within a country is vital to the continued development of national research programs. National research directors have frequently found, however, that generating external support requires less political effort than developing domestic support and have chosen the easier path. The system of external support needs to be reformed in a way that will redirect political entrepreneurship toward building domestic support for agricultural research.

One innovation that might be used is for the development assistance agencies to move toward a "formula funding" or "revenue sharing" approach in which the size of donor contributions is linked to growth of domestic support for agricultural research. A second alternative would be for the group of donors to establish a support consortium that would engage in joint planning and funding of the host country's agricultural research program. This method is being used successfully in Bangladesh.

Objections to such reform proposals more often come from the outside agencies than from the recipient country. Assistance agencies often prefer to have a free hand in directing assistance resources toward the achievement of short-run political rather than long-run development objectives. And the aid constituencies in the developed countries typically have their own reform agendas which they attempt to have national aid agencies impose on recipient countries.

Why are reforms needed in the system of external support? In the developed countries agriculture has made a transition from a resource-based to a science-based industry. In 1925 corn yields in Argentina were higher than those in the United States. Fifty years later corn yields were more than twice as high in the United States as they were in Argentina. This was not a result of changes in resource endowments; it was due to the scientific and technical advances embodied in the corn seed and other inputs used in agricultural production in the countries.

By the end of this century there will be few areas in world where agricultural production can be increased by expanding the area cultivated. Countries that cannot take advantage of yield-increasing biological and chemical technology will find it increasingly difficult to maintain their export earnings from agriculture or even to meet their domestic food needs. Only a country that establishes its own research capacity in agriculture can gain access to the advances in knowledge that are available to it from the global scientific community and embody that knowledge in the technology suited to its own resource and cultural endowments.—VERNON W. RUTTAN, *Department of Agricultural and Applied Economics and Department of Economics, University of Minnesota, Minneapolis 55455*

This editorial is based on a paper presented at the Colorado State University International School for Economic Development Studies on 11 March 1983.

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Yes we've changed our name...

But not our commitment.

The commitment of both companies to produce outstanding products from the most recent technology remains foremost in the objectives of this new organization. Look to the future for exciting new developments from **Pharmacia P-L Biochemicals, Inc.**



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