CORRESPONDENCE

BACTERIA THAT GLYCOSYLATE

To the editor:

I would like to point out an error in "The Carbohydrate Frontier" by Pamela Knight (*Bio/Technology* 7:35, Jan. '89). On page 39, she states "...bacteria do not glycosylate at all."

In 1983 (*J. Biol. Chem.* 258:9514-9521), Dr. T. Kawamura and I published a paper that provided very substantial evidence that the exocellular N-acetylmuramoylhydrolase (a lysozyme-like enzyme) is indeed a glycoenzyme. We believe that this was the first example of a proven glycoenzyme in bacteria. This glycoprotein differs substantially from mammalian glycoproteins. The data presented showed that the polypeptide is multiply and covalently substituted by glucose oligosaccharides, probably O-linked. This enzyme, which was shown to processively hydrolyze the

lysozyme sensitive β -1,4 linkage between N-acetylmuramic acid and N-acetylglucosamine in bacterial cell walls (*J. Biol. Chem.* 259:11818-11827), is also noteworthy for being multiply substituted with a very unusual nucleotide, 5-mercaptopuridine monophosphate (*PNAS* 85:6667-6671). In common with many mammalian glycoproteins, this muramidase does pass through the cytoplasmic membrane to its substrate, to which it binds extremely tightly.

Lastly, I should point out that glycoproteins have been observed as major components (probably structural) of the cell envelopes of several species of Archaeobacteria.

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MORE MODELING TOOLS

To the editor:

The article "Dynamic Market Emerging for Molecular Modeling" (*Bio/Technology* 7:43, Jan. '89) failed to mention one of the most exciting developments worldwide. Chemical Design (Oxford, U.K.) is using transputer-based computing "surfaces" from Meiko to build "Fortran farms," using Occam and existing Fortran segments to achieve a 20-fold improvement in minimum energy calculations, versus a VAX 11/750. British Bio-technology Ltd. is using it for modeling t-PA variants.

And speaking of hardware, why no mention of Cyrus Levinthal's (National Institutes of Health plus Dupont)-funded FASTRUN project, now announced to be operational?

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翻訳

T-PA USE CLARIFIED

To the editor:

We would like to correct a misstatement of a quotation attributed to Bob Swanson in Mark Ratner's article "Genentech: Don't Sell the Company Short" (*Bio/Technology* 7:114, Feb. '89).

Bob Swanson stated that while only 30 percent (alternately "one-third") of those who qualify for thrombolytic therapy are being treated, nearly two-thirds of people treated are receiving t-PA. Unfortunately, those comments were incorrectly interpreted to mean that "almost all" eligible patients received t-PA, which is not an accurate reflection of the statement Mr. Swanson made.

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A review of Mr. Swanson's presentation at the Hambrecht & Quist Health Care Conference held in San Francisco in January does show that he said "an overwhelming majority" of patients receiving a thrombolytic drug got t-PA, not "almost all" patients, as stated in the article. —MR

AND SOFTWARE TOO

To the editor:

In the article by Mark Ratner, "Dynamic Market Emerging for Molecular Modeling" (*Bio/Technology* 7:43, Jan. '89), you did not mention BioDesign, another leading supplier of molecular modeling software packages. Our two major products, Biograf™ and Polygraf™, are currently in use in a wide variety of chemical industry segments, including the pharmaceutical, biotechnology, polymers, and materials markets. Biograf is a program for the biological and chemical industries that addresses a wide range of organic, inorganic, and organometallic molecules. Polygraf, our new software program, is the first commercial molecular design package for polymers, and addresses applications from small monomers to extended and infinite polymer structures.

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