LETTERS

Ilya Glezer's Struggle

The actions of diplomats tend to overshadow the countless individual struggles upon which they are based. One such struggle which should not be ignored or forgotten by the scientific community is that of the Soviet investigative neuropathologist, Ilya Glezer. He is coauthor, with Samuel Blinkov, of *The Human Brain in Figures and Tables* (Plenum, New York, 1968). On 7 February 1972, Glezer was arrested and convicted of anti-Soviet activity. His crime was the possession of Zionist literature. He was given a sentence of 3 years at hard labor to be followed by 3 years of banishment to Siberia. The hard labor portion of his sentence terminated on 8 February 1975, and it has been learned that, immediately thereafter, he was transferred to Krasnoyarsk for the banishment portion of his sentence.

Glezer, now 43, was in poor health when he began his sentence. He suffers from severe myopia with night blindness. Conditions at the camp have resulted in swelling of his legs with resulting physical disability. Some medical treatment that was previously available to him has now been withdrawn, and he has been denied contact with fellow prisoners of conscience. Thus, at a time when détente is preached at government levels, the treatment of Glezer and other political prisoners appears to be as bad or worse than ever.

Despite Soviet protestations about interference in its internal affairs, external pressure can bring relief to individual sufferers. Valery and Galina Panov, who are now free in the West, would still be detained if such pressure had not been applied. Now is the time to mount a campaign to relieve Glezer of the further torture of the prison camp and of three additional years of banishment to Siberia. We urge all readers to wire or write Leonid I. Brezhnev, General Secretary, Communist Party of the Soviet Union, The Kremlin, Moscow, U.S.S.R., asking him to grant a pardon to Ilya Glezer, to suspend the remainder of his sentence, and to permit him to join his mother who now lives in Israel. Copies should be sent to His Excellency Ambassador Anatoly F. Dobrynin, Ambassador of the U.S.S.R., 1125 16th Street, NW, Washington, D.C., and to your local senators and representatives urging further action by them. We also suggest that resolutions demanding Glezer's release be proposed at all international scientific meetings. Inquiries about further details of the Glezer case are welcome and should be directed to the first signer.

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X-ray Crystallography Techniques

We would like to reply to the article by Thomas H. Maugh II, "X-ray crystallography: A refinement of technique" (Research News, 6 Dec. 1974, p. 913), because we believe it is likely to cause some misconceptions. The technological developments discussed may indeed prove useful, but they need to be put in the perspective of the whole process of obtaining a protein structure.

Briefly, the process of determining a protein structure consists of the following steps: (i) crystallization of the native protein and collection of diffraction data; (ii) obtaining and collecting diffraction data from heavy atom derivatives; (iii) obtaining phases for the native data; (iv) computing an electron density map from the data of steps (i), (ii), and (iii); (v) interpreting the electron density map; (vi) checking the structural model against the observed data and possibly refining the model to improve the fit to the data.

The misconceptions stem in part from minimizing the last two steps. Essentially, methods exist [MIR (multiple isomorphous replacement) phasing] for obtaining the phases necessary in step (iii). The techniques described in Maugh's article can be used primarily in a place between steps (iii) and (v): that is, it is apparently possible to take a poorly phased map or a map with limited resolution and improve it by extending the set of phases and by improving those on hand without imposing any interpretation on the electron density map. Inasmuch as protein crystallographic work in the past has been based only on interpretation of MIR-phased maps without