The fruits of her historical training are apparent in her approach to many epidemiological questions, particularly where her investigations have been retrospective, as in her studies of the consequences of the 1944/45 famine in the Netherlands and in her mastery of handling the epidemiology of prenatal development. It has also contributed notably to her analyses of the health situation in Cuba and in countries of south-east Asia, and to her two well-received books, Famine and Human Development: The Dutch Hunger Winter, 1944/45 (1975) and Conception to Birth: Epidemiological Perspectives (1989). Her early interest in Down's syndrome has been expanded into a general consideration of autosomal trisomies and other chromosomal abnormalities and the extent to which they may be subject to environmental factors.

Dr Stein has rendered exceptional services to the country of her birth and to medical science in general. The medical care of the underprivileged in South Africa owes a great deal to her importation to the Alexandra Township and Health Centre of the ideas of Sydney Kark. Together with her husband, Mervyn Susser, Zena Stein has played a leading role in supporting and advising prominent persons in the field of medicine opposed to the policy of apartheid and its effects on the health of the individual and the community. In the field of international scholarship, her rational and pragmatic approach to epidemiology has done much to enable science more practically useful, while retaining and advancing its academic responsibility. For these reasons, the university at which she qualified in medicine wishes to acknowledge her outstanding contributions. It brings honour to the University in bestowing on her its accolade.

From the beginning of her medical career she gave evidence of an epidemiological approach to the problems she confronted. Her four early papers on the families of deaf children convincingly established the significance of several important variables in the study of mental retardation. Her ensuing publications conveyed a new, and often more rational, approach she was developing towards mental retardation and ways of preventing it. Zena Stein has inspired, initiated or supervised much of the scientifically more admirable work on the effects of maternal age and nutritional status, whether of the pregnant mother or the growing child, on fertility and on the mental condition of children and the adults into whom they grow. She has written extensively on the impact on maternity of the changing role of women in the economy and has drawn attention to the impact of occupation and the intake of drugs and environmental toxins on reproduction.

The problem of the epidemiology of mental retardation in less developed countries had appeared to be intractable, until Zena Stein devised her now universally accepted Ten Question door-to-door interview test. The test was validated under field conditions and has been used widely, permitting distinct patterns of retardation to be discerned. Governments and health planners in developing countries are now able to devise strategies for dealing with the problem of mental retardation, to introduce measures for the care and training of the children so identified. Countless thousands of children (and their families) will be in the debt of Dr Stein for her fundamental contributions in this field.