

This Week's Citation Classic

Ridley D S & Jopling W H. Classification of leprosy according to immunity: a five-group system. *Int. J. Leprosy* 34:255-73, 1966. [Hospital for Tropical Diseases, London, and Jordan Hospital, Redhill, Surrey, England]

It is proposed that the classification of leprosy should be revised by relating the clinical and histological features used for classification to the resistance of the patient, which is what determines the course of the disease. A five-group spectrum is defined accordingly. [The **SCI**[®] indicates that this paper has been cited over 275 times since 1966.]

Dennis S. Ridley
Pathology Laboratory
Hospital for Tropical Diseases
London NW1 OPE
England

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"The origin of this work lay in the assumption (which proved false) that the response of leprosy patients to chemotherapy could be determined by observing the rate of disappearance of bacilli from the lesions, and in the view (probably valid) that this rate could best be determined from skin biopsies. Accordingly, in the middle-1950s, W.H. Jopling started to send me regular serial biopsies of his drug trial patients at the Jordan Hospital in Surrey. The trials were planned by Sir Neil Fairley, a methodical investigator who did not lightly give up. Leprosy being a chronic disease, it was some years before we were satisfied that the outcome was determined not by the drug (except that the infection had to be under control) but by the type of leprosy. The first International Leprosy Congress we attended was at Tokyo in 1958, and I was much impressed by the way the vexed confusion over classification brought so many discussions to an impasse. From this arose the idea that the rate of elimination of dead bacilli from skin lesions, which was evidently an immune response, would

provide an objective basis for a prognostic and clinically useful system of classification. An over hasty paper was rejected: 'Everyone is tired of classification; give it a rest.'

"I then set about correlating every possible histological feature of the initial biopsies with subsequent bacteriological response. Jopling, working on the clinical side, used other immunological parameters such as the lepromin test. And in the final analysis we concerted our conclusions to define five groups in the spectrum from tuberculoid, through borderline, to lepromatous, which we designated TT, BT, BB, BL, and LL. To make the new scheme acceptable, we arranged the groups as far as possible in conformity with previous ideas about the spectrum, and the outcome was by no means revolutionary. After the results had been confirmed at the Medical Research Council Unit in Malaysia with the assistance in particular of J.A. McFadzean and M.F.R. Waters, they were published in a preliminary report¹ in 1962 and later amplified in the paper cited. At this time it was still not known that immunity in leprosy was cell mediated, but later it became possible to corroborate the spectrum by reference to the lymphocyte transformation test, and an expanded and slightly modified histological classification was produced.²³

"This work has been widely quoted partly because classification in leprosy is clinically important; partly because the spectrum of leprosy serves as the model for other infectious diseases and so it is useful to immunologists and pathologists. Above all, this classification is comprehensive and comprehensible. There is another reason why it has to be cited as 'Ridley-Jopling': it has never been officially adopted and so has to be distinguished from the official classification of leprosy, which is still that of the Madrid Congress of 1953."

1. **Ridley D S & Jopling W H.** A classification of leprosy for research purposes. *Leprosy Rev.* 33:119-28, 1962.
2. **Ridley D S.** Histological classification and the immunological spectrum of leprosy. *Bull. WHO* 51:451-65, 1974.
3. *Skin biopsy in leprosy.* Basel, Switzerland: Documents Geigy, 1977. 57 p.