**Harnden D G**. A human skin culture technique used for cytological examinations. *Brit. J. Exp. Pathol.* **41**:31-7, 1960.

**The culture of fibroblastic cells front tiny pieces of skin that could be taken from patients or volunteers is described in this paper, together with results of the use of these cells for studying the chromosomes of patients with a variety of developmental abnormalities. [The *SCI*® indicates that this paper was cited 201 times in the period 1961-1977.]**

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"While working in Charles Ford's laboratory at Harwell, I found his work on human chromosomes more interesting than my own project, which involved culture of mouse tumours. The bone marrow technique used at that time for human chromosomes was hard to apply universally because obtaining the sample can be unpleasant. It seemed to me sensible to culture a more easily accessible tissue, and skin seemed the obvious choice. I asked a colleague to cut a tiny piece from my own forearm and I set it up in culture, using essentially the classical plasma clot technique for chick heart tissue that I had learned from Honor Fell in Cambridge. I also incorporated an idea from Henry Harris, who cultured rat cells for a short period before dissociation with the enzyme trypsin. It worked and I examined my own chromosomes (maybe I was the first to do so).

"The technique was reliable even in relatively unskilled hands, and since the sample required was small it could be obtained from anyone. It could be used for skin taken post mortem or sent long distances. (I examined the chromosomes of a pure blood aborigine from the Australian outback.) Human fibroblasts of embryonic origin or from surgical biopsies had been grown before and I was influenced by the studies, published while I was doing this work, of T.T. Puck in Denver, who cultured skin cells from biopsies using direct dissociation with trypsin. The cytogenetic results in the paper confirmed results already reported, but subsequently I used the technique for studying the first E trisomy, the first triple X female and other new chromosome complements.

"The paper was quoted, I am sure, because it describes a technique in detail. There was nothing tremendously original—as I have indicated it was an amalgam of previous work. It was, however, very exciting for me to have a powerful new technique, which was much in demand because of the upsurge of interest in human cytogenetics at that time. It has been largely superseded for this purpose by Paul Moorhead's blood culture technique. Possibly more important, cultured fibroblasts are now widely used in the study of human metabolic disease, and though there are now many different techniques, the one described in this paper gave a stimulus at an appropriate moment. The work was carried out when I was an inexperienced postdoctoral fellow. Knowing what I now know about the culture of cells, I realize that I was clearly very lucky to get the conditions right the first time It may be important, however, that young workers should chance their arm a bit before they get inhibited by too much conventional wisdom."