

WHAT DOES THE FIBROBLAST DO FOR THE EPITHELIAL CELL?  
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Epidermal keratinocytes require the presence of fibroblast products in order to form colonies in culture. This requirement can be most easily met by including in the culture lethally irradiated fibroblasts. In some cases the medium in which fibroblasts have grown (conditioned medium) is sufficient to support the growth of the keratinocytes. The product(s) required by the keratinocytes are specific in that so far only fibroblasts have been able to condition medium effectively for keratinocyte growth.

Keratinocytes differentiate terminally in cell culture according to a rather complex program. It can be determined whether each part of the program depends on fibroblast products or not. An analysis of epithelial-mesenchymal interactions must include the study of instructive effects, demonstrable in organ culture, but not yet at the cellular level. It seems likely that the effects of fibroblasts on keratinocytes will have some relevance to other epithelial cell types.