Facial cleft is of multifactorial aetiology, and primary prevention will depend upon a thorough understanding of the developmental mechanisms involved and how they may be disturbed in cleft palate. It is therefore imperative that studies on abnormal development must proceed alongside studies on normal developmental mechanisms. A great deal of information has accumulated in the past two decades about the morphological and more recently, molecular regulation of secondary palate development. Despite all this, our knowledge of the exact mechanisms remains far from clear. The dilemma lies in whether knowledge obtained at the morphological and molecular levels can be integrated into a coherent picture of how in vivo regulation of secondary palate development is attained. The aim of this review is to provide a brief, selective outline of some current areas of interest in the development of the secondary palate, with particular emphasis on the control mechanisms involved.