Plants have evolved various defence mechanisms depending on the ecological context of their environment. The first part of this review summarises possibilities of plant defence. All types of defence are energy intensive. In most cases, a plant chooses between two strategies: being 'fast growing and non-poisonous' or being 'slowly growing and poisonous'. The next part of the review focuses on chemical defence of the Asterace family. Secondary metabolites of the Compositae are characterized by isoprenoids which cause bitterness of essential oils and latex. This review is mainly about sesquiterpene lactones due to their great role in plant – herbivore interactions and their pharmaceutical potential.