AFLATOXIN HISTORY

The discovery and isolation of aflatoxins was a result of investigations on the mysterious Turkey-X disease of 1960 which resulted in a loss of several thousand turkey poults in the United Kingdom.

The cause of the enormous mortality in the turkey poults and of similar outbreaks in other farm animals could be linked to the use of moldy Brazilian peanut meal in the diet of the affected birds. The suspected toxic factor was found to be extractable by using chloroform. Its association with *Aspergillus flavus (A. flavus)* was established in 1961. In 1962, the name “aflatoxin”, using first letter from “Aspergillus” and the first 3 letters from “flavus” was proposed.

ASPERGILLUS FLAVUS

Remember:

- *A. flavus* is an extremely common soil fungus and an opportunistic pathogen of crops.
- The optimum temperature for *A. flavus* to grow is 37ºC, but fungal growth can be observed at temperatures ranging from 12 to 48ºC.
- *A. flavus* is also a pathogen of animals and insects. In humans, it is predominantly an opportunistic pathogen of immunosuppressed patients.

- *A. flavus* is the main agent of acute and chronic invasive and granulomatous Aspergillus sinusitis. It is also an agent of otitis, keratitis, pulmonary and systemic infections in immunocompromised patients, cutaneous aspergillosis and aspergillosis in other vertebrates.
- Until recent years, the only drugs available to treat aspergillosis were amphotericin B and itraconazole, the latter in oral and intravenous formulations. Recently voriconazole, posaconazole and caspofungin have also been approved for the treatment of aspergillosis.
- Many *A. flavus* isolates produce aflatoxin B1, the most toxic and potent hepatocarcinogenic natural compound ever characterized.