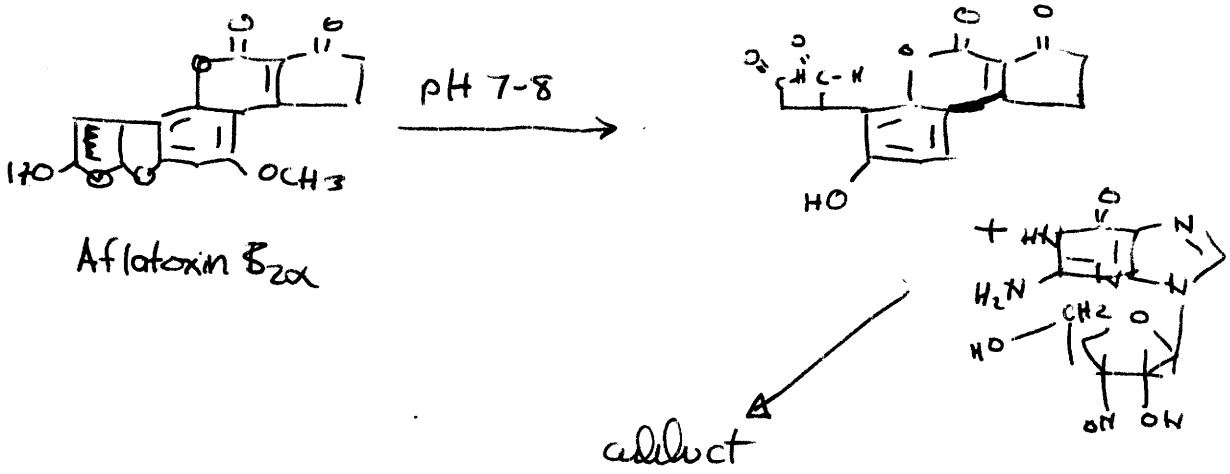
4/23/76 Reaction of Aflatoxin B_{2a} with Guanosine

Purposes:

1. To attempt a chemical synthesis of an adduct
2. To test the reactivity of B_{2a} with a typical nucleic acid component. - B_{2a} may exist in the cell and is a possible ultimate carcinogen metabolite.

Reaction:



Aflatoxin B_{2a}

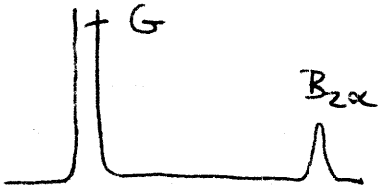
Procedure

4-23-1

~ 1/2 mg B_{2a}
~ 1/2 mg G
1 ml TRIS-HCl pH 7.5 (0.05 M)

- incubate 30 min at T: 60-50° - the sample slowly dissolved
- on standing, a precipitate formed - this was dissolved by heating in an equal volume of methanol.
- ~ 5 µl of the dissolved solution was injected into HPLC (MeOH - water)

4/23/76 Results:



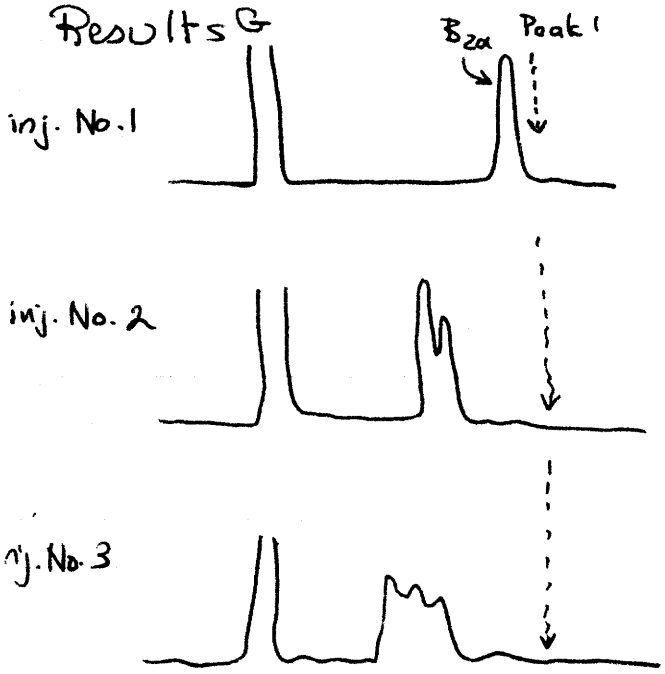
4-23-2

~½ mg $B_2\alpha$

~½ mg G

2 ml 1.0 M TRIS·HCl (pH 8.09)

- heat at 60-50°C in H_2O bath for ± 30 min.
- Observation: This sample did not form a precipitate when it was cooled.



Conclusion: Standing at room T may have caused degradation of the $B_{2\alpha}$