Chapter 3

PLAN OF STUDY
1. TEST DRUGS

1.1 Ayurvedic formulations

a) Shankhpushpi Syrup (AY-1)
b) Saraswatarisht Syrup (AY-2)
c) Vidyarthi Amrit (AY-3)
d) Dimagh Poushtak Rasayana (AY-4)

1.2 Unani Formulations

a) Dimagheen (UN-1)
b) Roghan Badam Shirin (UN-2)

2. STANDARD NOOTROPICS

a) Piracetam (PM)
b) Korean Ginseng tea (KGT)

3. ANIMALS

Albino rats (Wistar strain) and mice (Swiss strain)

4. PARAMETERS OF STUDY

4.1 Active avoidance paradigm: Measurement of conditioned avoidance response (CAR) in young and old rats using Cook’s Pole Climbing Apparatus.

a) Acquisition (%)
b) Retention (%)
c) Learning scores
4.2 Passive Avoidance Paradigm by an improvised technique using Agressometer or Continuous Avoidance Apparatus (for shock) and an inverted petridish (as shock free zone-SFZ).

a) Latency to reach SFZ
b) Step down errors
C) Time spent in shock zone.

4.3 Food Motivation using Hebb-William Maze
Latency to reach the reward (food) chamber

4.4 Thirst Motivation using Anxiometer

a) Number of licks
b) Number of shocks

4.5 Preference for open (light)/Closed (dark) Areas using Elevated Plus Maze
Measurement of Transfer Latencies on Days 3, 4, 7 and 8.

4.6 Amnesic animals
Effects in amnesic animals. Amnesia induced by:

a) Scopolamine
b) Electro convulsive shock (ECS)
Assessment by Passive Avoidance Paradigm.

4.7 Biochemical parameters
Measurements in brain tissue:

a) Acetyl choline esterase (ACh-E)

b) Aspartate and Glutamate
c) Gama amino butyric acid (GABA)

4.8 Safety Aspects
Preliminary safety evaluation
Maximum tolerated doses (MTD).