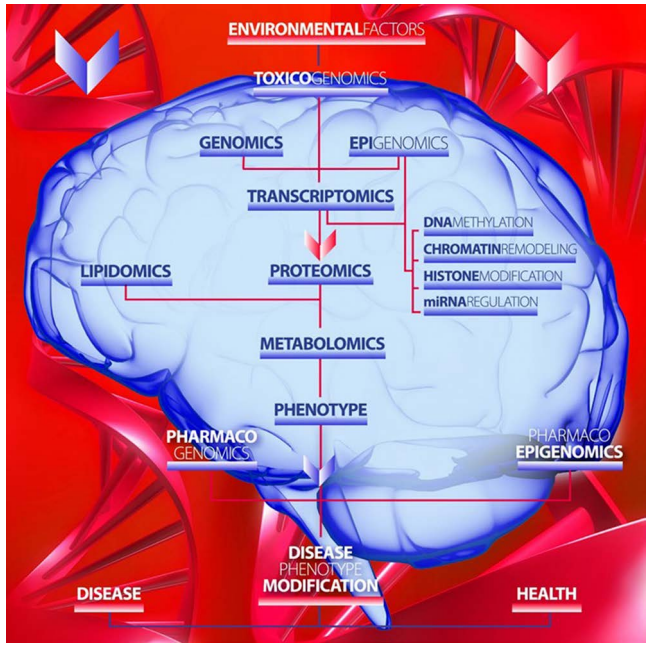

Figure 5.1 Pathogenic and therapeutic model of age-related neurodegenerative disorders.

Hb (35%).[12] Cardiovascular disorders (>40%), atherosclerosis (>60%), and different modalities of cerebrovascular damage (>60%) are also frequent among patients with AD. Most of these biochemical, hematological and metabolic anomalies exhibit gender differences and may contribute to accelerating the dementia process.

The pharmacological treatment of these concomitant pathologies adds complexity and risks to the multifactorial therapeutic intervention in patients with dementia. Of major relevance is the treatment of diabetes, hypertension, dyslipidemia, and cardiovascular, cerebrovascular and neuropsychiatric disorders. The most relevant chronic conditions among adults aged 55–64 in the USA are diabetes (18.9%), obesity (40.6%), hypercholesterolemia (50.1%), and hypertension (51.5%).[2] In the same population, the currently most-prescribed drugs are cardiovascular (45%), cholesterol-lowering (31.8%), gastric reflux (16%), analgesic (15%), antidepressant (14.4%), and antidiabetic drugs (12.9%).[2] The chronic treatment of these illnesses increases the risk of drug interactions and toxicity, aggravating the clinical condition of the demented patient. In this context, the incorporation of pharmacogenetic protocols into clinical practice is fundamental to minimize drug–drug interactions and ADRs, and to optimize the global therapeutic outcome, avoiding deleterious effects on mental function and cognition.