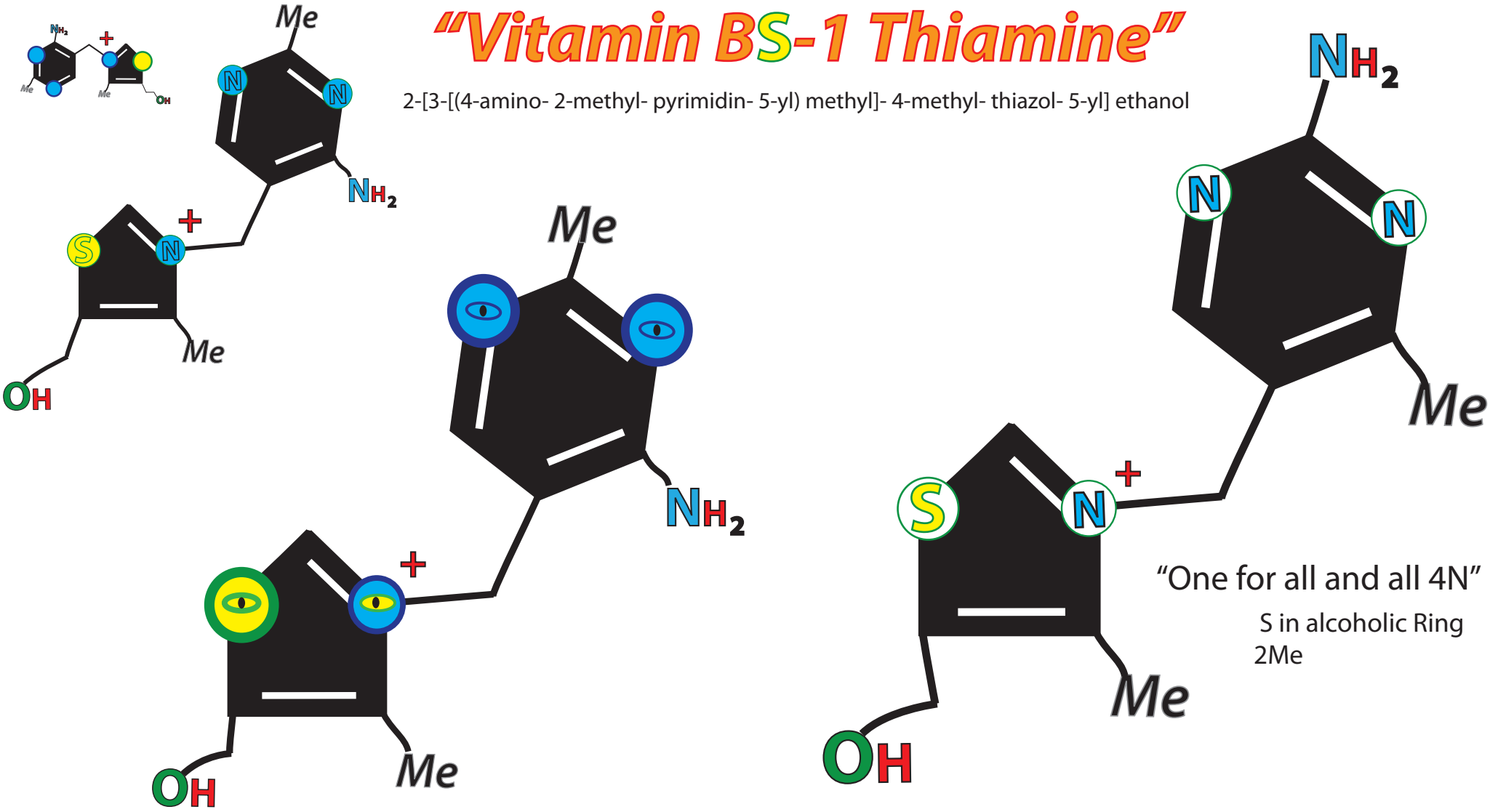
"Vitamin BS-1 Thiamine"

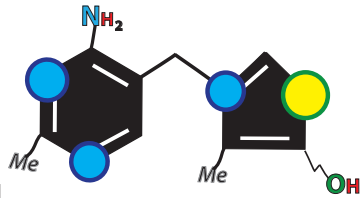
2-[3-[(4-amino- 2-methyl- pyrimidin- 5-yl) methyl]- 4-methyl- thiazol- 5-yl] ethanol



"One for all and all 4N"

S in alcoholic Ring

2Me



Thiamine, or thiamin, sometimes called aneurin, is a water-soluble vitamin of the B complex (vitamin B1), whose phosphate derivatives are involved in many cellular processes. The best characterized form is thiamine diphosphate (ThDP), a coenzyme in the catabolism of sugars and amino acids. In yeast, ThDP is also required in the first step of alcoholic fermentation.

Thiamine is synthesized in bacteria, fungi and plants. Animals must cover all their needs from their food and insufficient intake results in a disease called beriberi affecting the peripheral nervous system (polyneuritis) and/or the cardiovascular system, with fatal outcome if not cured by thiamine administration .[1] In less severe deficiency, nonspecific signs include malaise, weight loss, irritability and confusion.[2] Today, there is still a lot of work devoted to elucidating the exact mechanisms by which thiamine deficiency leads to the specific symptoms observed (see below). Finally, new thiamine phosphate derivatives have recently been discovered,[3] emphasizing the complexity of thiamine metabolism and the need for more research in the field.