Despite their diverse molecular targets, addictive drugs have in common that they increase mesolimbic DA levels. We examine the cellular mechanism that cause the increase of DA levels, and propose a three distinct classes based on these findings. We will also discuss how this surge in mesolimbic DA levels triggers synaptic adaptations, first in the VTA, which may be permissive for subsequent more general changes in other parts of the brain. We believe that such circuit reorganization may eventually cause behavioral changes that underlie addiction.

Host: Yann Hérault