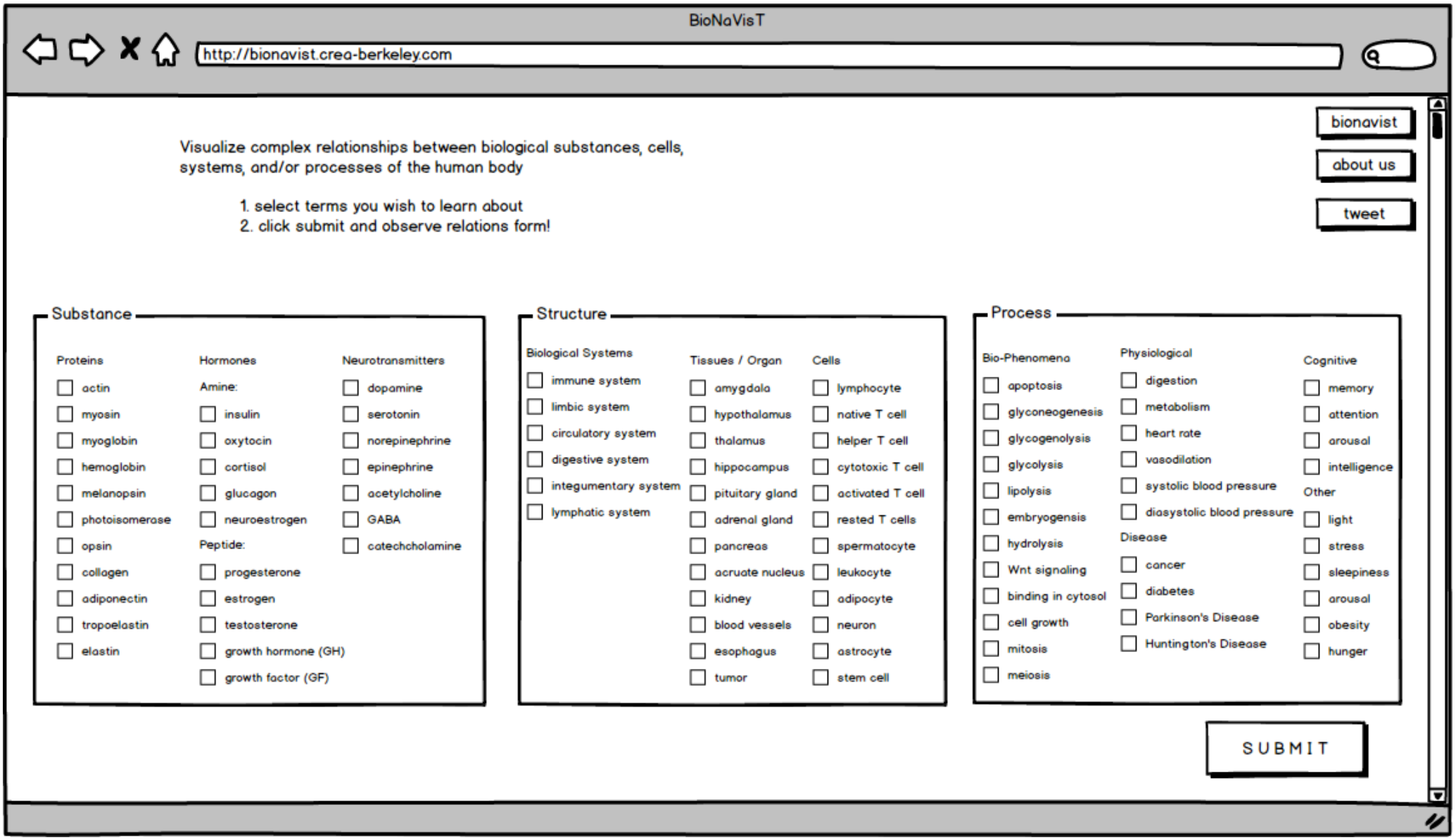
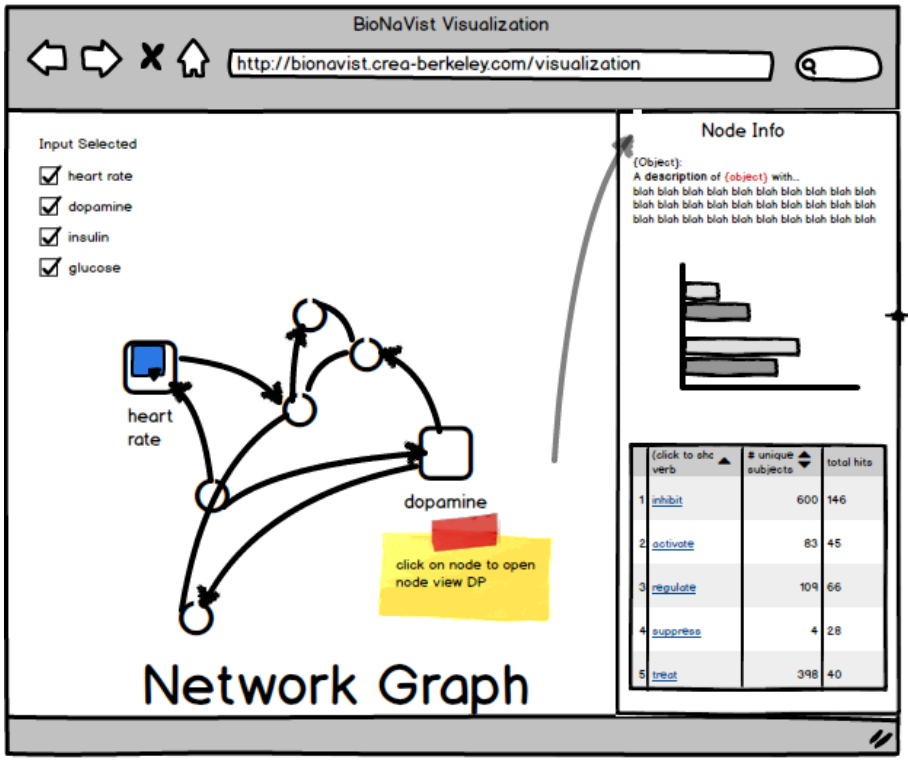
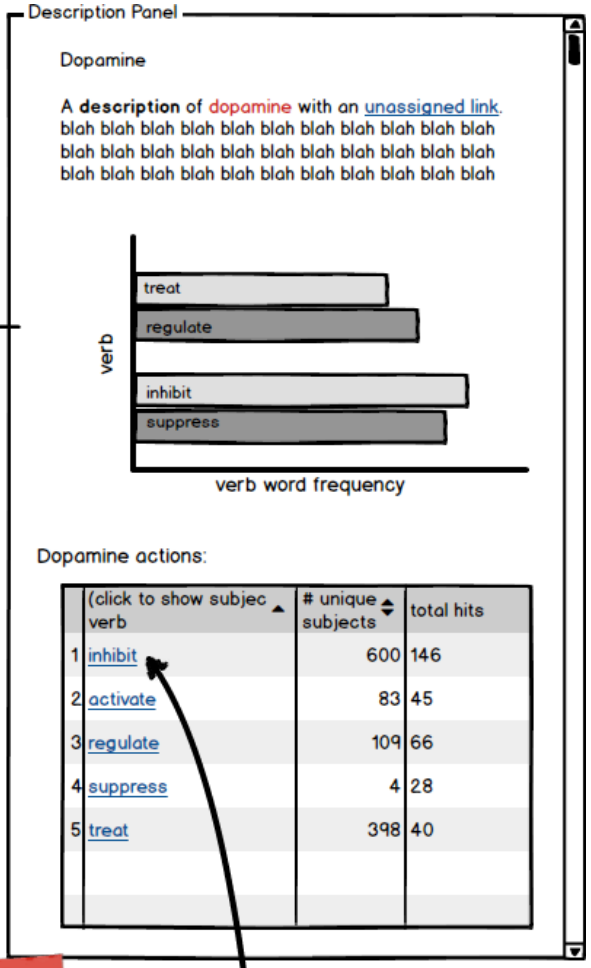

BioNaVisT
http://bionavist.crea-berkeley.com
bionavist
about us
tweet
Visualize complex relationships between biological substances, cells, systems, and/or processes of the human body
1. select terms you wish to learn about
2. click submit and observe relations form!
Substance
Proteins
actin
myosin
myoglobin
hemoglobin
melanopsin
photoisomerase
opsin
collagen
adiponectin
tropoelastin
elastin
Hormones
Amine:
insulin
oxytocin
cortisol
glucagon
neuroestrogen
Peptide:
progesterone
estrogen
testosterone
growth hormone (GH)
growth factor (GF)
Neurotransmitters
dopamine
serotonin
norepinephrine
epinephrine
acetylcholine
GABA
catechcholamine
Structure
Biological Systems
immune system
limbic system
circulatory system
digestive system
integumentary system
lymphatic system
Tissues / Organ
amygdala
hypothalamus
thalamus
hippocampus
pituitary gland
adrenal gland
pancreas
acruate nucleus
kidney
blood vessels
esophagus
tumor
Cells
lymphocyte
native T cell
helper T cell
cytotoxic T cell
activated T cell
rested T cells
spermatocyte
leukocyte
adipocyte
neuron
astrocyte
stem cell
Process
Bio-Phenomena
apoptosis
glyconeogenesis
glycogenolysis
glycolysis
lipolysis
embryogensis
hydrolysis
Wnt signaling
binding in cytosol
cell growth
mitosis
meiosis
Physiological
digestion
metabolism
heart rate
vasodilation
systolic blood pressure
diasystolic blood pressure
Disease
cancer
diabetes
Parkinson's Disease
Huntington's Disease
Cognitive
memory
attention
arousal
intelligence
Other
light
stress
sleepiness
arousal
obesity
hunger
SUBMIT





clicking on verb will open component screen showing all subjects acted on by dopamine

Node (Noun):
1. Substance
2. Structure
3. Process

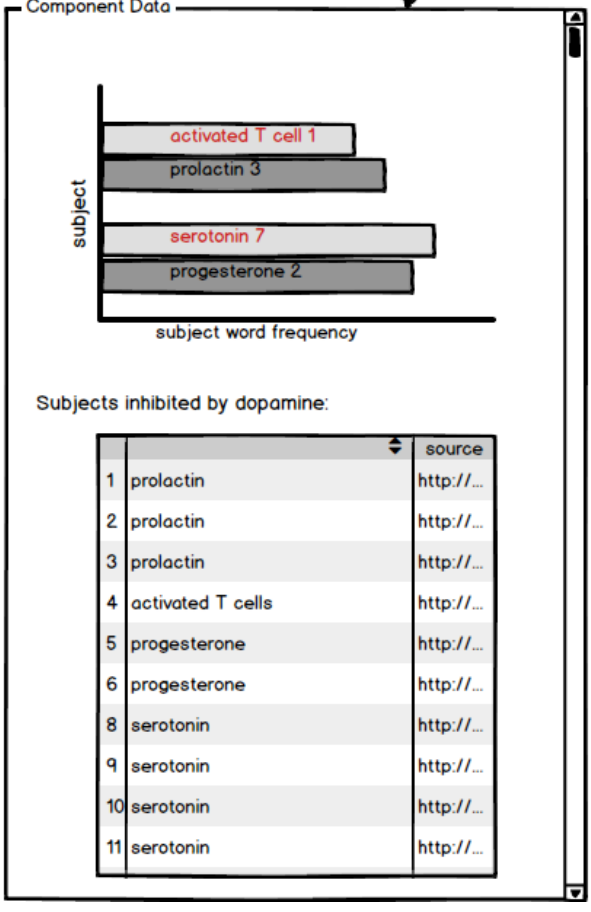
Edge (Verb):

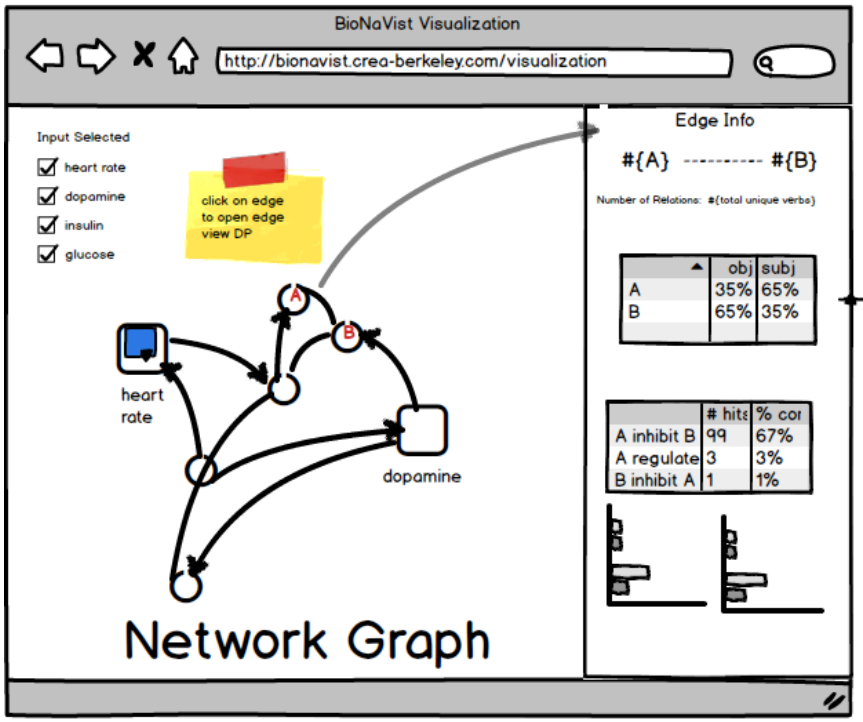
Types:
1. on / off (digital)
   - activate / deactivate
2. more / less (analog)
   - stimulate / inhibit
   - promote / suppress
   - increase / decrease
3. open / close (mechanical)
   - release / block

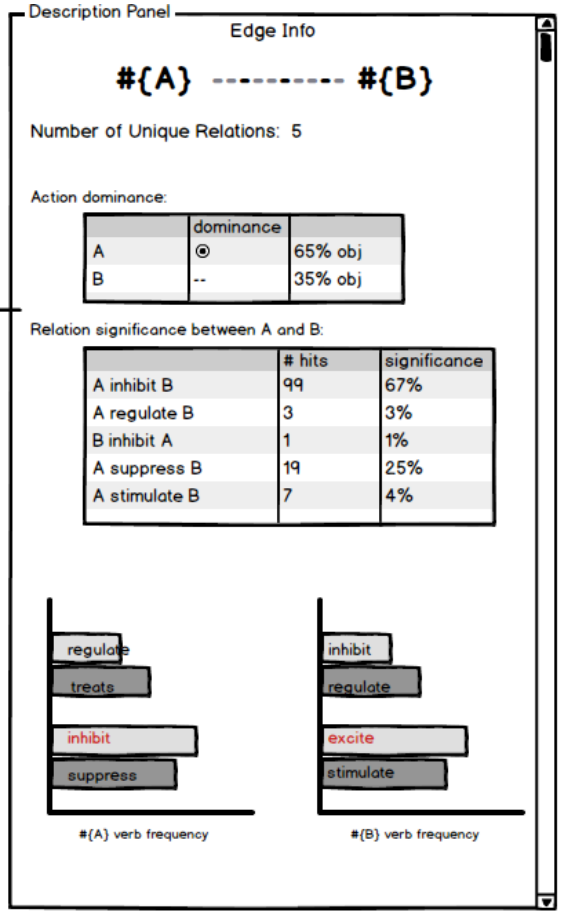
{object = nodeName} #{acts} on subject
i.e. DOPAMINE inhibits subject

- the node is the "doer"
- total k for component table = # hits for an nth verb in verbs table

I decided it's best to leave out data to display data about the node as an "object" in a relation (object predicate subject) and leave out data about it as a subject (at least for the conference).







Purpose: Provide overview of relationship between A and B:
- Action dominance (% object) in a relation (obj --> subj)
- Significance of interaction between two nodes
- Node Action Tendency (i.e. A has highest verb frequency for "inhibit", might be primarily inhibitory molecule)

(significance) is based off # hits / total relations extracted (sum of # hits)

Frequency histograms come from "Node Info" for individual nodes, A + B

- Include to provide compare / contrast Node Action Tendency

Node (Noun):
1. Substance
2. Structure
3. Process

Edge (Verb):

Example Types:
1. on / off (digital)
   - activate / deactivate
2. more / less (analog)
   - stimulate / inhibit
   - promote / suppress
   - increase / decrease
3. open / close (mechanical)
   - release / block

Can add more features below
- *Significance of "A inhibit B" to A and B*