



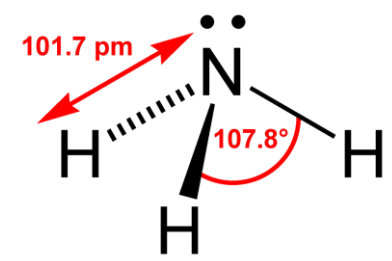
Institute of Pharmacy named after A.P. Nelyubin. Sechenov University

Department of Pharmaceutical and Toxicological Chemistry named after. A.P. Arzamastsev

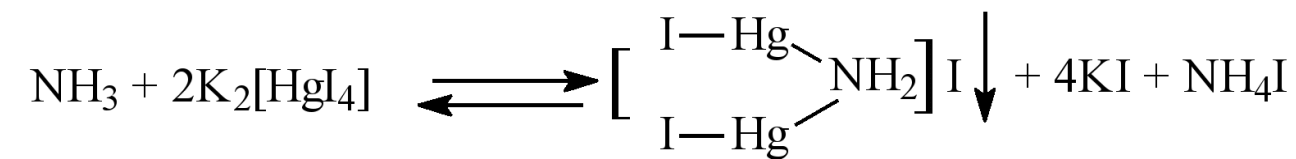
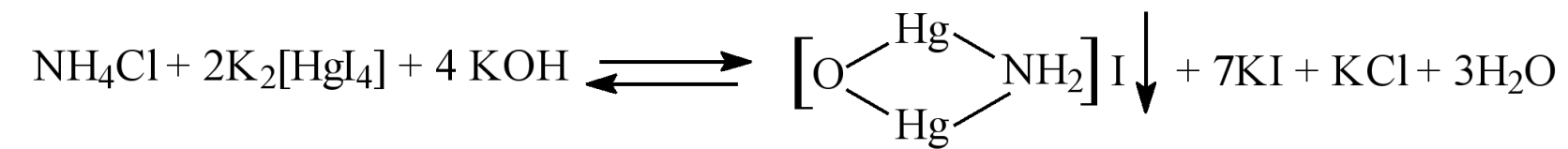
AliReza Mohammad Alipour, student,
Galina Rodionova, PhD, Associate Professor

Ammonia – new green fuel or inevitable danger?

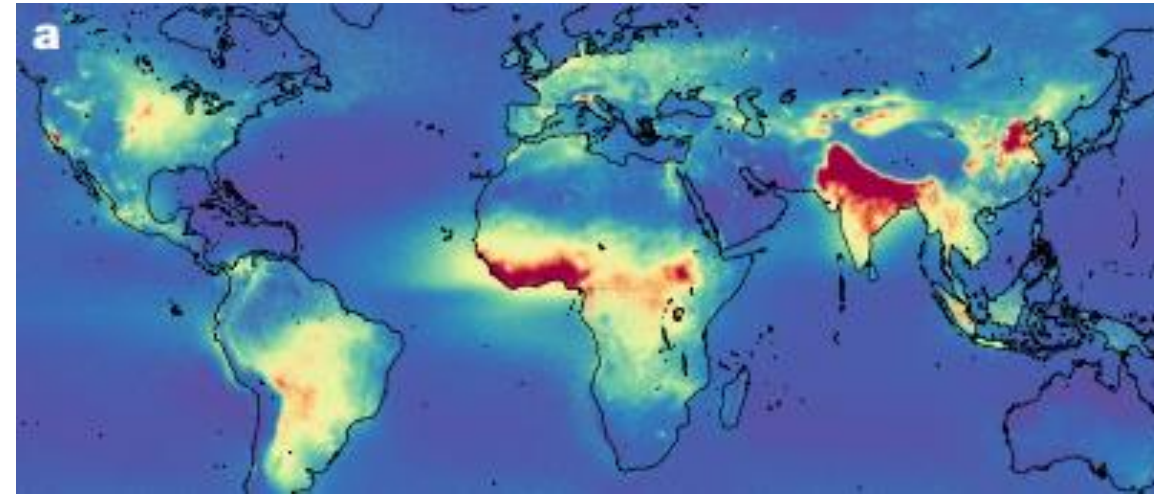
Physicochemical characteristics



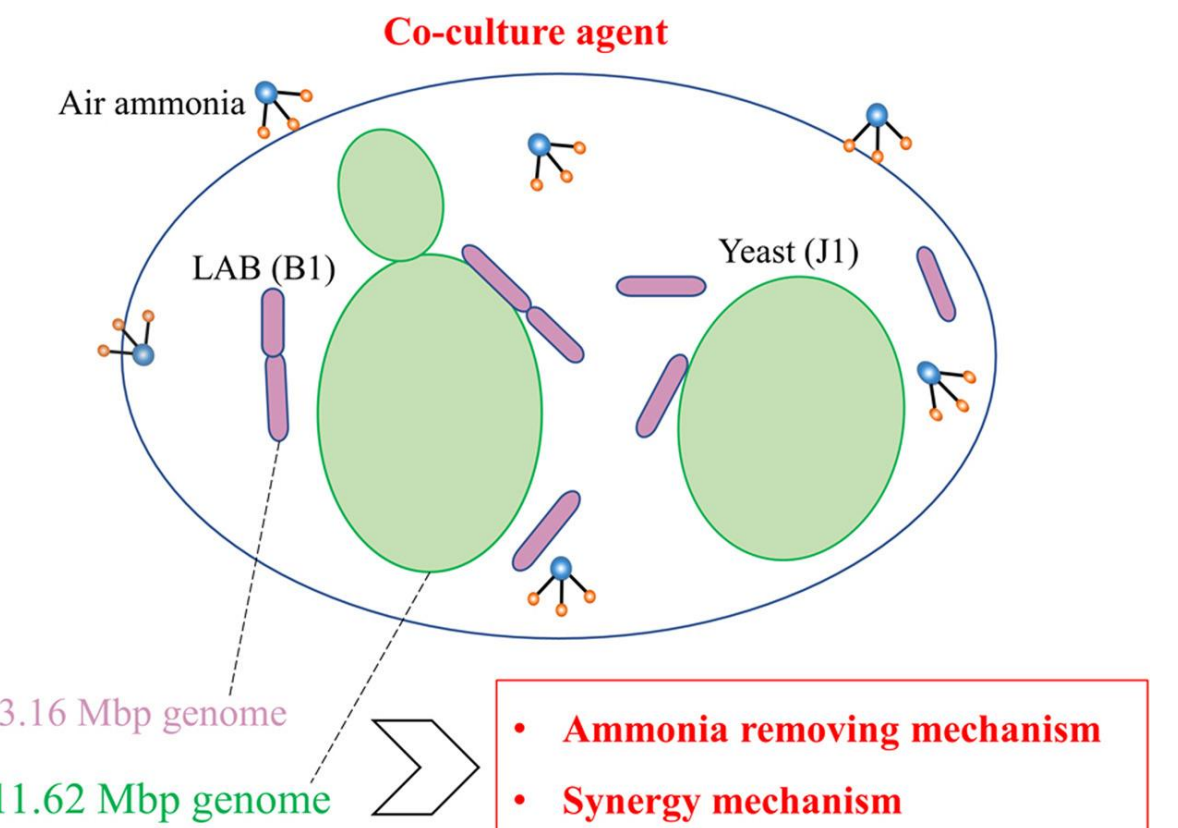
Determination of ammonium ions in water



Sources and problem of pollution



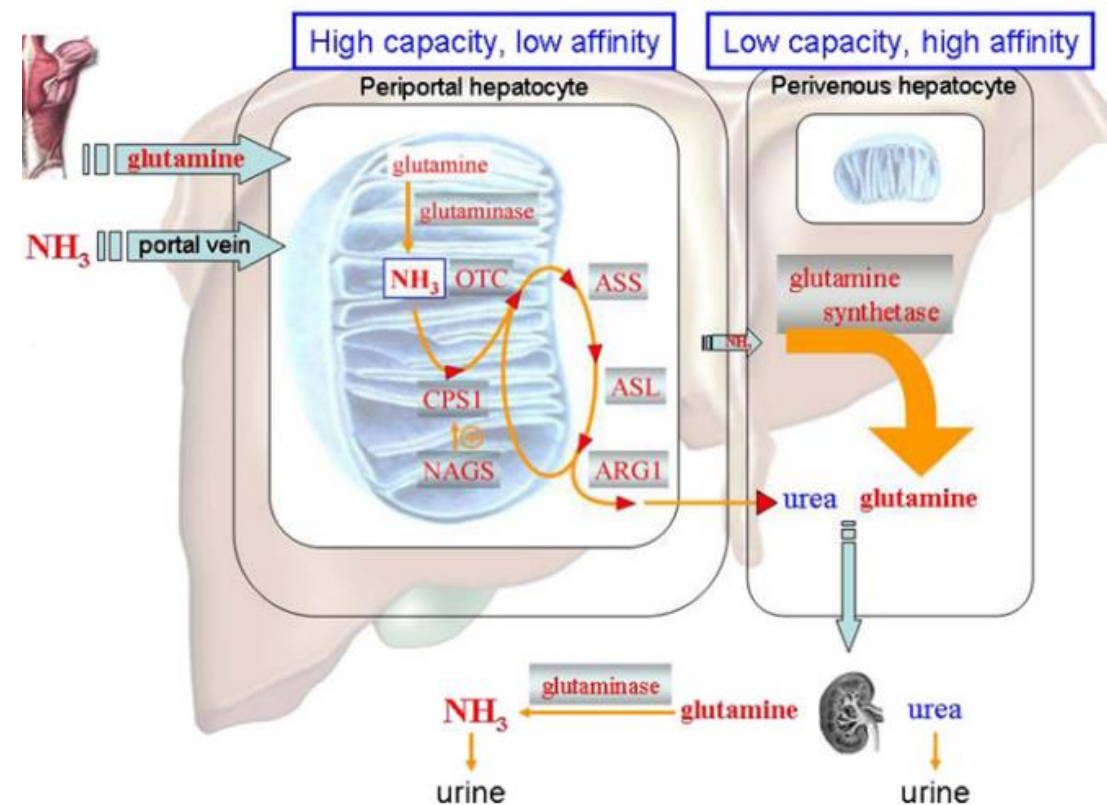
Microbiological cleaning methods



Ammonia poisoning and effects on the body

Metabolism and biotransformation

- Symptoms of **Hyperammonemia**
- General**
 - Growth retardation
 - Hypothermia
 - Central**
 - Combativeness
 - Lethargy
 - Coma
 - Eyes**
 - Papilledema
 - Muscular/Neurologic**
 - Poor coordination
 - Dysdiadochokinesia
 - Hypotonia or hypertonia
 - Ataxia
 - Tremor
 - Seizures
 - Decorticate or decerebrate posturing
 - Pulmonary**
 - Shortness of breath
 - Liver**
 - Enlargement



Ammonia as green fuel

How green ammonia is made

