

Consequences of Alcohol on End-Organ Pathology in Liver

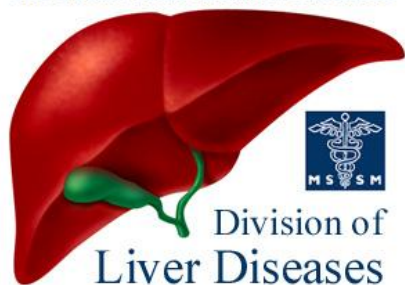
Perspectives on a Proposed NIAAA-NIDA Merger

Presentation to the SUAA Working Group of the SMRB
September 23, 2009

Scott Friedman, MD

- Fishberg Professor of Medicine & Chief, Division of Liver Diseases,
 - Mount Sinai School of Medicine
- President, American Assn for the Study of Liver Diseases
- Member, NIAAA Advisory Council
 - Grantee, NIAAA & NIDDK

The Mount Sinai School of Medicine



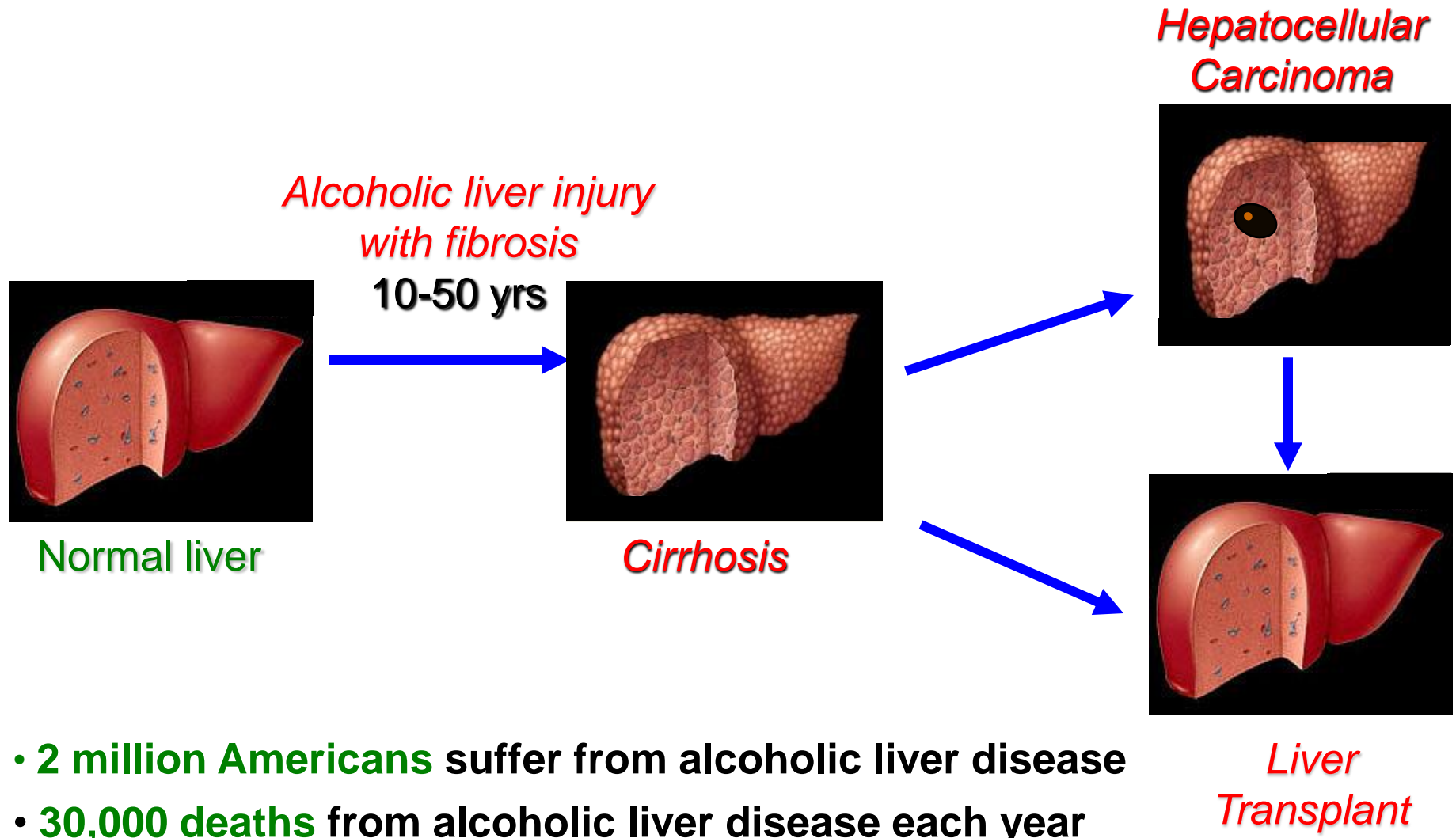
AMERICAN ASSOCIATION FOR
THE STUDY OF LIVER DISEASES



Three Key Points

1. Overall impact of alcoholic liver disease and its distinct features
2. Unique role of NIAAA in integrating alcohol research
3. Direct impact of an NIAAA-NIDA merger

Impact of Alcoholic Liver Disease

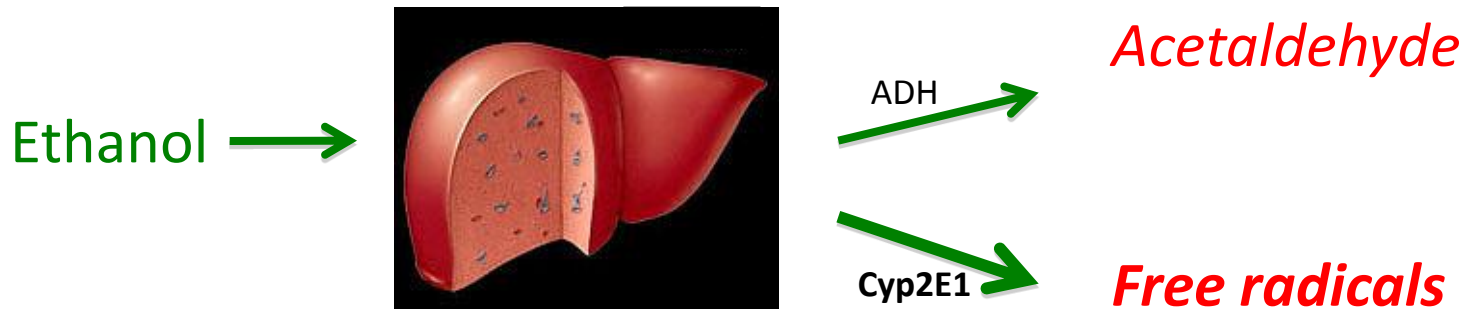


Impact of Alcoholic Liver Disease in the United States

- Alcohol use, together with hepatitis C (HCV) & hepatitis B (HBV) accounts for **70-90% of all cases of chronic liver disease** in the Western world
- Up to 44% of patients with chronic HCV have a history of alcohol abuse
- Alcoholic liver disease accounts for **~ 20% of liver transplantations** in the United States
- Alcohol abuse is an **independent risk factor for liver cirrhosis and primary liver cancer** (hepatocellular carcinoma)

Unique Features of Alcoholic Liver disease

- The liver is the main site of alcohol metabolism

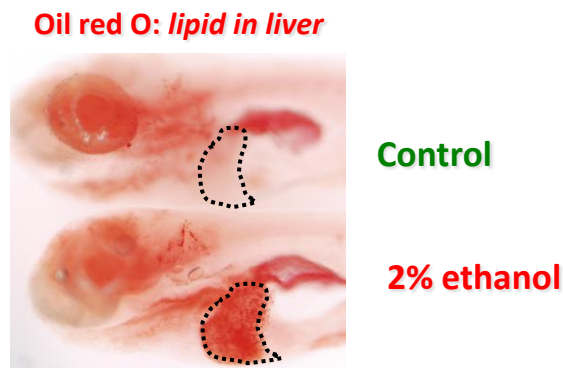


- Liver disease affects:
 - immunity
 - metabolism (protein, fat, and carbohydrate homeostasis)
 - bacterial clearance
 - drug detoxification

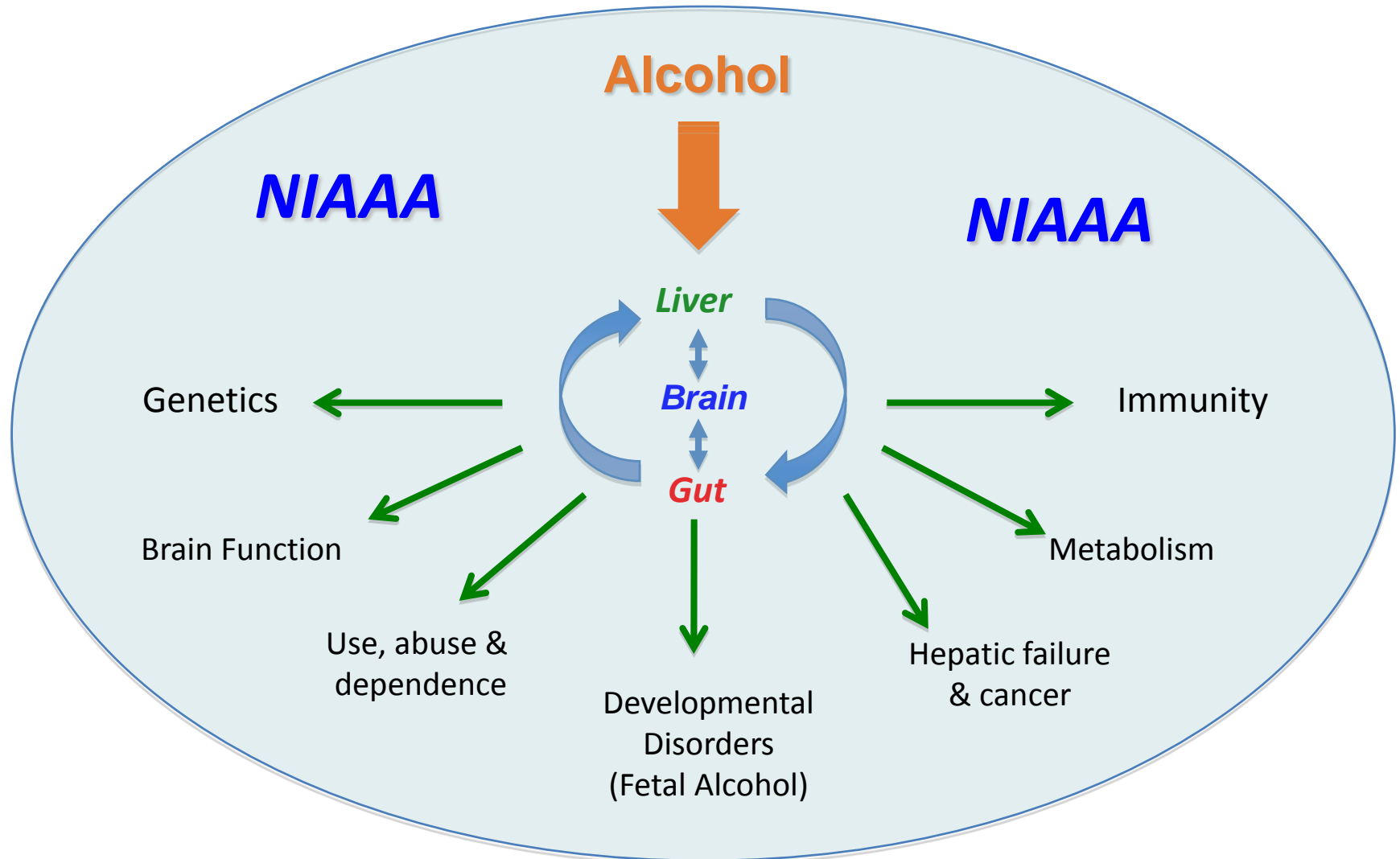
Milestones in Alcoholic Liver Disease

Leading to improved Health, supported by NIAAA

- Liver inflammation is precipitated by gut-derived pathogens due to altered intestinal permeability – relevant to ALL forms of liver disease
- Alcoholic liver injury results from ‘multiple hits’
- Studies of alcoholic liver injury uncovered new pathways and models relevant to fatty liver from obesity and other etiologies:
 - Role of oxidant stress and disordered fat metabolism
 - New models, e.g., zebrafish



The Multisystem and Inter-related Effects of Alcohol are Uniquely Integrated by NIAAA



Proposed NIAAA-NIDA Merger:

Concerns

- NIAAA has successfully and uniquely integrated the study of alcohol's effects on behavior, physiology, & pathology
- Integrated study of multi-organ damage has not been a focus of NIDA; this critical perspective may wither following a merger
- The impact of alcoholic liver injury and collateral effects on the health of Americans are significant and merit dedicated support
- It is uncertain what will be gained by an NIAAA-NIDA merger, but likely that much will be lost