Biomarkers Working Group Launch

- **Co-Leads**
  - Markus Cornberg, Hannover Medical School
  - Doug Mayers, Antios Therapeutics
- Doug Mayers conceptualized this project through suggestions at HBV Forum 8 meeting in June 2022
  - The field needs data sharing among sponsors for ongoing HBV clinical studies
- HBV Forum SC discussed – agreed to launch

Background

- ## As new HBV therapies (and combination therapies) become available, biomarkers field is moving rapidly

  - ### How do we leverage biomarker data in interim analyses to make decisions on fast-tracking certain therapies?

    - How informative are HBV DNA, HBcrAg, and HBV RNA?

  - ### Can biomarkers help predict which agents are most promising for achieving functional cure?

    - Are there trends across studies in biomarkers outcomes with respect to study population, drug / combination drugs tested, mechanisms of action, etc?

Biomarkers Project

- With support/guidance from the WG co-leads, HBV Forum will:

  - Collate biomarkers data from ongoing HBV clinical studies

  - Produce a repository / collection / summary of clinical study-level data

  - Update this resource continuously as new data become available

  - Provide this shared "living" resource to investigators, sponsors, regulators, patient advocates to help achieve clarity

HBV Diagnostics Working Group

THE FORUM For Collaborative Research℠

As of August 2017

Company	Assay (Yellow generally indicates research ite	Marker	CE approved?	US approved?	Other Regulat	Commercial status
Abbott	RealTime HBV	HBV DNA	Yes	Yes		Available for sale Inte
Abbott	RealTime HBV sequencing assay	HBV Genotype	Yes	No		not available for sale
Abbott	ARCHITECT Anti-Hbe - B6C340	Anti-Hbe	Yes	No		
Abbott	ARCHITECT HBsAg II Assay	HBsAg qual	Yes	Yes		
Abbott	AxSYM Anti-HBe 2.0	Anti-Hbe	Yes	No		
Abbott	AxSYM HBsAg	HBsAg qual	Yes	Yes		
Abbott	AxSYM Core-M 2.0	Anti-HBc IgM		Yes		
Abbott	AxSYM Core 2.0	Anti HBc total		Yes		
Abbott	AxSYM AUSAB	Anti HBs		Yes		
ACON Labs	HBcAb	Anti HBc total	Yes	No		Available for sale in E
ACON Labs	HBcAb IgG	Anti-HBc IgG	Yes	No		Available for sale in E
ACON Labs	HBeAb	Anti-Hbe	Yes	No		Available for sale in E
ACON Labs	HBeAg	HBeAg qual	Yes	No		Available for sale in E
ACON Labs	HBsAb	Anti HBs	Yes	No		Available for sale in E
ACON Labs	HBsAb Quantitative	Anti HBs	Yes	No		Available for sale in E
ACON Labs	HBsAg	HBsAg qual	Yes	No		Available for sale in E
Alere	Determine™ HBsAg	HBsAg qual		No		Available for sale glol
Alere	ImmunoComb HBsAg	HBsAg qual		No		Available for sale glol
Bio-Rad	MONOLISA Anti-HBC IgM EIA	Anti-HBc IgM		Yes		For sale in the US
Bio-Rad	MONOLISA Anti-HBC EIA	Anti HBc total		Yes		For sale in the US
Bio-Rad	MONOLISA Anti-HBS EIA	Anti HBs		Yes		For sale in the US
Bio-Rad	MONOLISA Anti-HBS Plus	Anti HBs	Yes	No		

Berkeley Public Health

Previous Forum (HIV) Data Collaboration

- ## HIV drug resistance Collaboration

  - Database with published and unpublished datasets from academic and industry collaborators

  - Common data-analysis plan

    - Industry, academic and FDA statisticians

  - Algorithms for resistance to specific drugs

  - Testing new statistical approaches

  - Produced multiple publications and at least one PhD Thesis!

- ## Boehringer-Ingelheim (BI) tipranavir pivotal study data set

  - Made available via Forum for analysis requests

Working Group Output

- A repository of HBV clinical studies information:
  - Resource to be continuously updated as more data become available
    - Includes published and unpublished information on what biomarkers were probed
  - In the first instance – metadata on studies
    - Potential for patient level data sharing at a later time point?
  - Under the umbrella of Forum's new Data & Analysis Center at UC Berkeley SPH

Column Names (1)

- Study

- Sponsor

- NCT ID

- Phase

- Drug(s)

- Mechanism(s) of action

- Sample size

- Study population characteristics

  - Median age at entry

  - Age range

  - Region

  - Ethnicity

  - Treatment naïve vs. experienced

  - HBeAg status

  - Liver fibrosis (F score)

  - Phase of infection (immune tolerant vs active)

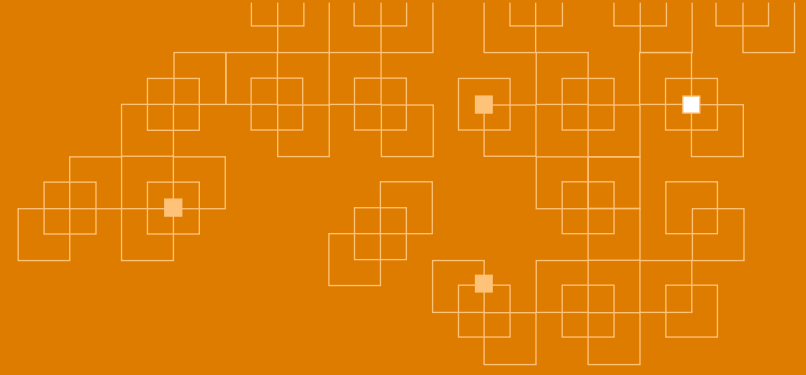 - HBsAg entry criteria

As of 11/2022

Column Names (2)

- **Primary endpoint**

  - HBsAg Loss?

  - HBsAg under 100?

  - HBsAg under 1000?

  - HBsAg assay used

  - Meet primary endpoint?

- **Biomarkers**

  - HBV DNA

  - HBV DNA assay used

  - HBcrAg

  - HBcrAg assay used

  - HBV RNA

  - HBV RNA assay used

- **Additional Information**

  - Host markers (immunology, genetics, epigenetics, proteomics, metabolomics)

  - Assays used

  - Liver Biopsy/FNA

- **Safety Outcomes**

  - ALT Flares: on treatment

  - ALT Flares: off treatment

As of 11/2022

Screen share spreadsheet

Discussion, Input, Questions