Towards a functional cure for HIV:
Targeting essential RNA splicing
Disclaimer

This presentation contains information pertaining to Abivax S.A. (“Abivax”). Neither Abivax, nor its management, shareholders, directors, advisors, employees or representatives make any representation or warranty, express or implied, as to the fairness, the accuracy, completeness or correctness of any information contained in this presentation or any other information transmitted or made available to the viewer or recipient hereof, whether communicated in written or oral form. Neither Abivax, nor its management, shareholders, directors, advisors, employees or representatives accept any responsibility in this respect.

This presentation contains forward-looking statements. These statements reflect management’s current views with respect to Abivax’s product candidates’ development, clinical and regulatory timelines and anticipated results, market opportunity, potential financial performance and other statements of future events or conditions, which are naturally subject to risks and contingencies that may lead to actual results materially differing from those explicitly or implicitly included in these statements. Although Abivax believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of various factors, many of which are beyond Abivax’s control. No reliance should be made on such forward-looking statements.

Abivax does not undertake to update or revise the presentation, including the forward-looking statements that may be presented in this document to reflect new information, future events or for any other reason, following distribution, beyond what is required by applicable law or applicable stock exchange regulations if and when circumstances arise that will lead to changes compared to the date when these statements were provided.

In the European Union (including in France), this presentation is intended solely for “qualified investors” within the meaning of Article 2(1)(e) of the Prospectus Directive (Directive 2003/71/EC) as amended (including amendments by Directive 2010/73/EU), to the extent implemented in the relevant member state). This presentation has been prepared on the basis that any offering of securities by the Company in any member state of the European Economic Area has implemented the Prospectus Directive (2003/71/EC) will be made either by means of a prospectus filed with the authority of the relevant member state, or pursuant to an exemption under the Prospectus Directive, as implemented in that relevant member state, from the requirement to publish a prospectus.

This presentation does not constitute or form part of, and should not be construed as, an offer to sell or issue or the solicitation of an offer to buy or acquire securities of Abivax, in any jurisdiction or an inducement to enter into investment activity, nor shall there be any sale of securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities law of any such state or jurisdiction. No part of this presentation, nor the fact of its distribution, should form the basis of, or be relied on in connection with any contract or commitment or investment decision whatsoever.
Today’s presenters

**ABI\text{VAX}** core management team

- **Prof. Hartmut Ehrlich, M.D.**
  - Chief Executive Officer
  - Ex-Head of Global R&D, Baxter BioScience

- **Didier Blondel**
  - Chief Financial Officer & Board Secretary

- **Jean-Marc Steens, M.D.**
  - Chief Medical Officer
Company highlights

ABX464: Targeting a HIV functional cure
- HIV remains an unresolved problem with a chronic treatment need and a global market of USD >20b
- Recent phase II studies confirm reduction of HIV viral reservoir in patients
- ABX464 final phase IIa results in mid 2018 to confirm profound effect on HIV viral reservoir and potential promise of functional cure; phase IIb to start in H2 2018

ABX464: Anti-inflammatory potential
- ABX464 has further blockbuster potential in the USD 6b Ulcerative Colitis market
- ABX464 has shown strong anti-inflammatory effects that allowed for accelerated development in UC
- Phase IIa topline results expected in Sept 2018, and phase IIb to start in Q4 2018

ABX196: Anti-cancer immune enhancer
- ABX196 was safe and showed potent humoral and cellular immune responses in a phase I clinical trial in human volunteers
- Strong anti-tumor growth effect in combination with a checkpoint inhibitor in liver cancer model
- Phase I/II study to start in Q4 2018 in a rapidly growing liver cancer patient population

Experienced management team
- Experienced management team with a significant track-record
- Expanded key opinion leader network including HIV, UC and cancer specialists
- Drug discovery pipeline driven by three productive platform technologies
ABIVAX has three key core pillars of value

**ABX464**  
Targets CBC 80/20 complex, thereby inducing enhanced RNA splicing

**ABX196**  
Targets and activates invariant natural killer T immune cells

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Disease</th>
<th>Details</th>
</tr>
</thead>
</table>
| **ABX464** | HIV | Long-lasting HIV viral suppression, as shown in humanized mice  
Decrease in HIV DNA in reservoir containing cells, as shown in patients  
A potential functional cure to HIV, having already shown an up to 50% viral reservoir reduction in the blood of patients¹  
Mid 2018: Three months results of ongoing phase IIa study  
H2 2018: Start phase IIb study |
| **ABX196** | Ulcerative Colitis | Upregulation of miRNA124 resulting in reduced inflammation  
Strong therapeutic potential in Ulcerative Colitis as demonstrated in a validated DSS mouse model  
Sept 2018: Results from ongoing phase IIa study in 30 UC patients in Europe |
| **ABX196** | Hepatocellular Carcinoma | Specific enhancer of cellular immune responses in cancer  
Strong therapeutic potential in Hepatocellular Carcinoma (HCC) and other cancers in combination with checkpoint inhibitor  
Q4 2018: Start of US phase I/II study in HCC patients |

**Multiple drug discovery platforms to drive drug candidate pipeline**

- **Antiviral platform**: novel antiviral drugs for Respiratory Syncytial Virus, Influenza, Dengue
- **Immune Enhancer platform**: novel anti-cancer drugs
- **Polyclonal Antibodies platform**: novel polyclonal antibodies for Ebola

¹: As demonstrated in phase IIa clinical studies after 28 days of ABX464 treatment
HIV therapy represents a growing multi-billion dollar market

Current HIV therapies leave viral reservoir intact

- Targeting the reservoir is the opportunity for HIV therapy to move from chronic treatment to a potential functional cure
- Triple therapy targets circulating HIV (viral load), leaving the HIV reservoir intact
- Drug compliance with existing therapies remains poor; patients take drug holidays, risking: Rebound of HIV viral load, treatment resistance and spread of infection
- HIV reservoir is source of chronic inflammation

HIV represents a global USD 23b market

- Conventional antiretroviral drug prices are under pressure due to patent expiries
- HIV sales are rising due to growing population and life expectancy
- Abivax aims for a premium pricing model based on offering a potential functional cure
- Global HIV drug sales were USD 23.3b in 2017, according to J&J

Today, over 2m patients live with HIV in the Western world

<table>
<thead>
<tr>
<th>Region</th>
<th>2016 HIV prevalence</th>
<th>2016 HIV new annual cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU4+US</td>
<td>2.1m</td>
<td>73k</td>
</tr>
<tr>
<td>RoW</td>
<td>34.6m</td>
<td>1.7m</td>
</tr>
<tr>
<td>Global</td>
<td>36.7m</td>
<td>1.8m</td>
</tr>
</tbody>
</table>

Global HIV footprint recorded in 2016

1: GlobalData; 2: France, Germany, Italy, Spain, UK; 3: UNAIDS Databook 2017; 4: Western and Central Europe
The goal of ABX464: A functional cure for HIV

Standard ART\(^1\) suppresses HIV as long as patients are compliant with treatment

**HIV Untreated**

**Virus Suppressed**

1. **Viral recurrence loop**

**1** Standard HIV ART treatment only reduces the viral load

**2** Treatment interruption leads to rebound of HIV viral load

**Viral reservoir:** Viral reproduction machine that allows the virus to replicate. The viral reservoir is integrated in specific human cell types

**HIV viral load:** Circulating virus

ABX464 aims to be a functional cure for HIV by reducing the viral reservoir

**Standard Treatment**

**ABX464 Current Results**

1. **Reduced viral reservoir**

**2** ABX464 has the potential to be a first-in-class HIV functional cure

**ABX464 Target**

1. **Functional cure:** Elimination of viral reservoir

1: ART = antiretroviral therapy
ABX464 showed long-lasting viral suppression in HIV mice

**Invention ABX464**
- **2013**: Recognition of long-lasting viral suppressive effect in mice

**Preclinical demonstration of long-term viral load reduction in mice**
- **April 2015**: Publication in Retrovirology of novel anti-viral mechanism of action showing promising efficacy in HIV

**HIV viral load rapidly rebounds after standard (HAART\(^1\)) therapy is stopped**

- HAART - Triple therapy
  - 50 day treatment
  - Rebound to pre-treatment levels

**ABX464 induces long-lasting HIV suppression: a 25x lower viral load was shown six weeks post treatment**

- ABX464 - Monotherapy
  - 50 day treatment
  - 25x lower!

**Long-term mice outcome data suggest a sustained response of the immune system**

---

1: HAART = highly active antiretroviral therapy; 2: 3TC = lamivudine, TDF = tenofovir disoproxil fumarate, RGV = raltegravir
ABX464 has shown to be safe in over 180 people

<table>
<thead>
<tr>
<th>Year</th>
<th>Phase</th>
<th>Study</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Phase I¹</td>
<td>001 Ph1 Study</td>
<td>24 healthy volunteers: Single oral dose</td>
</tr>
<tr>
<td>2015</td>
<td>Phase I¹</td>
<td>002 Ph1 Study</td>
<td>48 healthy volunteers: Food intake effect</td>
</tr>
<tr>
<td>2015</td>
<td>Phase IIa¹</td>
<td>003 Ph2 Study</td>
<td>70 HIV treatment naïve patients: Dose-finding antiretroviral study</td>
</tr>
<tr>
<td>2016</td>
<td>Phase IIa¹</td>
<td>004 Ph2 Study</td>
<td>30 HIV patients: Evaluating the impact on the viral reservoir (28 days)</td>
</tr>
<tr>
<td>2017</td>
<td>Phase IIa¹</td>
<td>005 Ph2 Study</td>
<td>23 HIV patients: Add-on to ART for one and three month(s)</td>
</tr>
<tr>
<td>2018</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ABX464 demonstrated to be safe and well tolerated
ABX464 demonstrated a favorable PK profile and an antiviral effect
First proof of reduction in HIV viral reservoir
Cohort one confirmed a reduction of the HIV viral reservoir after 28 days

In addition to solid safety data, the 004 and 005 studies showed promising preliminary efficacy

¹: Clinical trial.gov study references: 001 = NCT02792686, 002 = NCT02731885, 003 = NCT02452242, 004 = NCT02735863, 005 = NCT02990325
ABX464-005: Up to 50% viral reservoir reduction after 28 days

Building upon strong interim efficacy data, the next results are expected in mid 2018

Significant viral reservoir reduction in HIV patients

Results ABX464-005 (first patient cohort):
The graph shows the difference in HIV-DNA copies in the blood of nine patients after 28 days of ABX464 treatment compared to baseline

Ongoing ABX464-005 study and next steps

• September 2017: Again, a reduction of the viral reservoir after 28 days of ABX464 treatment was shown (first patient cohort)
• Today: Based on final results of 004 study and the first cohort of 005 study, Abivax is preparing now for Phase IIb initiation
• Mid 2018: The results of three months ABX464 treatment (second patient cohort), will provide insights into the ability to further reduce the HIV reservoir
Long-term phase IIb 006 and 007 studies are planned to start in H2 2018.

Two phase IIb studies will evaluate the effect of ABX464 on HIV viral reservoir over 12 months in combination with ART:

1. **Phase IIb study ABX464-006**
   - 150-180 chronically ART treated HIV patients:
     - EU and US sites
     - Duration: 1.5 year
     - Time to maximum reduction of HIV reservoir, leading to treatment interruption

2. **Phase IIb study ABX464-007**
   - 60-90 early ART treated HIV patients:
     - EU sites
     - Duration: 1.5 year
     - Time to maximum reduction of HIV reservoir, leading to treatment interruption

---

**Clinical development and upcoming milestones for ABX464**

- **004**
  - First ever shown reduction in viral reservoir in HIV patients

- **Ongoing**
  - **005**
    - Confirmed viral reservoir reduction at one month
    - Expected three months results of the second cohort
    - Long-term reduction in HIV reservoir to be shown in 006 and 007 study

- **006: Chronically ART treated HIV patients**
  - Expected results
  - Published results

- **007: Early ART treated HIV patients**
  - Expected results
  - Published results

---

**Timeline**

- **May 2017**
- **Sept 2017**
- **Today**
- **Mid 2018**
- **H2 2018**
- **2020**
ABIVAX has three key core pillars of value

**ABX464**
Targets CBC 80/20 complex, thereby inducing enhanced RNA splicing

1. **HIV**
- **What:**
  - Long-lasting HIV viral suppression, as shown in humanized mice
  - Decrease in HIV DNA in reservoir containing cells, as shown in patients
- **Promise:**
  - A potential functional cure to HIV, having already shown an up to 50% viral reservoir reduction in the blood of patients
- **Next:**
  - Mid 2018: Three months results of ongoing phase IIa study
  - H2 2018: Start phase IIb study

2. **Ulcerative Colitis**
- **What:**
  - Upregulation of miRNA124 resulting in reduced inflammation
- **Promise:**
  - Strong therapeutic potential in Ulcerative Colitis as demonstrated in a validated DSS mouse model
- **Next:**
  - Sept 2018: Results from ongoing phase IIa study in 30 UC patients in Europe

3. **Hepatocellular Carcinoma**
- **What:**
  - Specific enhancer of cellular immune responses in cancer
- **Promise:**
  - Strong therapeutic potential in Hepatocellular Carcinoma (HCC) and other cancers in combination with checkpoint inhibitor
- **Next:**
  - Q4 2018: Start of US phase I/II study in HCC patients

**Multiple drug discovery platforms to drive drug candidate pipeline**

- **Antiviral platform:** novel antiviral drugs for Respiratory Syncytial Virus, Influenza, Dengue
- **Immune Enhancer platform:** novel anti-cancer drugs
- **Polyclonal Antibodies platform:** novel polyclonal antibodies for Ebola

---

1: As demonstrated in phase IIa clinical studies after 28 days of ABX464 treatment
Ulcerative Colitis continues to be a therapeutic challenge

The global Ulcerative Colitis market exceeds USD 6b

- Ulcerative Colitis (UC) represents one of the two major types of IBD, the other being Crohn’s disease
- UC is associated with significant gastro-intestinal symptoms including pain, recurring diarrhea, fatigue, reduced appetite and weight loss
- Existing treatment options for UC aim for symptom reduction and result in a chronic treatment need
- 30% of UC patients eventually require surgery and lose their colon\(^1\)
- UC pharma sales for Europe and the US were nearly USD 6b in 2017\(^2\)

<table>
<thead>
<tr>
<th>Region</th>
<th>2017 UC prevalence</th>
<th>2017 UC new annual cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU (G5)+US(^2)</td>
<td>1.4m</td>
<td>70k</td>
</tr>
<tr>
<td>Global(^3)</td>
<td>2.4m</td>
<td>200k</td>
</tr>
</tbody>
</table>

Ulcerative Colitis (UC) is an inflammatory bowel disease (IBD) that causes chronic inflammation and ulcers (sores) in the latter part of the intestine (colon)

Despite the introduction of novel treatments, there remains a high unmet medical need in UC

1: NIH public access: PMC2753491
2: GlobalData; US, France, Germany, Italy, Spain, UK
3: GlobalData: US, France, Germany, Italy, Spain, UK, Japan, Australia, Brazil, Canada, India, Mexico, Russia, South Africa and South Korea
ABX464 protects the intestine from inflammation

**Invention ABX464**

- **2015**: Recognition of ABX464 having strong anti-inflammatory properties (through miRNA124)

**Preclinical validation in Ulcerative Colitis (UC) mouse model**

- **July 2017**: Nature scientific reports publication of compelling anti-inflammatory efficacy in a DSS\(^1\) mouse model

-- **ABX464 protects mice from death in the DSS mouse model**

  - Induction of inflammation by DSS
  - ABX464, 20 days
  - ABX464, 60 days
  - No treatment

  ![DSS without treatment leads to intestinal damage](image1)

  ![ABX464 protects intestinal flora (villi)](image2)

-- **Upcoming milestones in UC:**

  - **Topline results in Sept 2018**: ABX464 is currently evaluated in a randomized placebo controlled phase IIa POC study (30 UC patients)
  - **Phase IIb in Q4 2018**: A multicenter US and EU study in 150-200 patients

---

1: DSS = Dextran sulfate sodium
ABIVAX has three key core pillars of value

<table>
<thead>
<tr>
<th>ABX464</th>
<th>Targets CBC 80/20 complex, thereby inducing enhanced RNA splicing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What:</strong></td>
<td>Long-lasting HIV viral suppression, as shown in humanized mice</td>
</tr>
<tr>
<td></td>
<td>Decrease in HIV DNA in reservoir containing cells, as shown in patients</td>
</tr>
<tr>
<td><strong>Promise:</strong></td>
<td>A potential functional cure to HIV, having already shown an up to 50% viral reservoir reduction in the blood of patients¹</td>
</tr>
<tr>
<td><strong>Next:</strong></td>
<td>Mid 2018: Three months results of ongoing phase IIa study</td>
</tr>
<tr>
<td></td>
<td>H2 2018: Start phase IIb study</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ulcerative Colitis</strong></th>
<th>Upregulation of miRNA124 resulting in reduced inflammation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strong therapeutic potential in Ulcerative Colitis as demonstrated in a validated DSS mouse model</td>
</tr>
<tr>
<td></td>
<td>Sept 2018: Results from ongoing phase IIa study in 30 UC patients in Europe</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Hepatocellular Carcinoma</strong></th>
<th>Specific enhancer of cellular immune responses in cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strong therapeutic potential in Hepatocellular Carcinoma (HCC) and other cancers in combination with checkpoint inhibitor</td>
</tr>
<tr>
<td></td>
<td>Q4 2018: Start of US phase I/II study in HCC patients</td>
</tr>
</tbody>
</table>

**Multiple drug discovery platforms to drive drug candidate pipeline**

- **Antiviral platform**: novel antiviral drugs for Respiratory Syncytial Virus, Influenza, Dengue
- **Immune Enhancer platform**: novel anti-cancer drugs
- **Polyclonal Antibodies platform**: novel polyclonal antibodies for Ebola

¹: As demonstrated in phase IIa clinical studies after 28 days of ABX464 treatment
ABX196 shows anti-cancer effects in mouse models

Liver cancer is a devastating disease with rapid mortality

<table>
<thead>
<tr>
<th>Region</th>
<th>2017 HCC prevalence¹</th>
<th>2017 HCC new annual cases¹</th>
<th>2017 HCC sales¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU (G5²) + US</td>
<td>77k</td>
<td>65k</td>
<td>USD 0.4b</td>
</tr>
<tr>
<td>China</td>
<td>265k</td>
<td>328k</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Significantly reduced tumor growth in HCC (liver cancer)

- ABX196 shows to be a potent immune response activator
  - Reduces tumor progression in Hepatocellular Carcinoma (HCC) and B16 melanoma models
  - Shows survival benefit as stand-alone treatment and in combination with a PD-1 checkpoint inhibitor
  - Strong immune response observed
  - Preliminary results indicate the ability of ABX196 to sensitize the tumor micro-environment for checkpoint inhibitors

ABX196 will be evaluated in combination with a checkpoint inhibitor in HCC patients in Q4 2018

1: GlobalData; 2: France, Germany, Italy, Spain, UK
ABIVAX has a mature and growing pipeline

Lead generation

Research

Preclinical

Phase 1

Phase 2

Phase 3

HIV

Lasting viral remission

ABX464

In 3rd Phase 2

Ulcerative Colitis

Anti-inflammatory

ABX464

In Phase 2 POC

Cancer

Immune enhancer

ABX196

Clinical trial in HCC to start Q4 2018

Ebola

Polyclonal antibodies

ABX544

Dengue

Antiviral drug

Respiratory Syncytial Virus

Antiviral drug

Influenza

Antiviral drug

ABIVAX has a mature and growing pipeline
ABIVAX has multi billion dollar revenue potential

<table>
<thead>
<tr>
<th>Therapeutic indication</th>
<th>Aimed ABIVAX product positioning</th>
<th>Global market(^1) ($)</th>
<th>Market growth(^1)</th>
<th>Potential Peak Market Share(^{1,2})</th>
<th>Potential Peak Revenues(^{1,2}) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABX464: HIV</td>
<td>Allow conventional HIV drug free intervals</td>
<td>USD 23b</td>
<td>2%</td>
<td>15%</td>
<td>USD 5b</td>
</tr>
<tr>
<td>ABX464: Ulcerative Colitis</td>
<td>Second line therapy after 5-ASA(^3) treatment</td>
<td>USD 6b</td>
<td>2.5%</td>
<td>15%</td>
<td>USD 1b</td>
</tr>
<tr>
<td>ABX196: Hepatocellular Carcinoma</td>
<td>Superior patient outcome in combination with checkpoint inhibitor</td>
<td>USD 0.7b</td>
<td>15%</td>
<td>20%</td>
<td>USD 0.5b</td>
</tr>
</tbody>
</table>

**Potential Peak Revenues\(^{1,2}\):** USD 6.5b

---

1: Management estimate based on GlobalData
2: Estimated peak market share, five years after product launch
3: 5-aminosalicylic acid (mesalamine) is the current standard first-line therapy for mild-to-moderate UC
**Overview**

Founded in 2013 by Truffle Capital

Abivax went public in June 2015, raising EUR 57.7m

Primary listing: Euronext (Paris)

*ABVX : FR0012333284*

Liquidity: 52K shares/day in 2017¹

---

**Shareholder structure**² (undiluted)

- Public: 35%
- Truffle Capital: 50%
- Incubator Holding: 3%
- Founders: 2%

---

**Location**

Head Office (Paris)

**Cooperative Lab with CNRS (Montpellier)**

---

**Operations**

- **24 Employees**²
  - 18 in R&D
  - 6 in Support

- **EUR 17.0m Cash**²

---

1: Bloomberg

2: As of December 31st, 2017
Company highlights

**ABX464: Targeting a HIV functional cure**
- HIV remains an unresolved problem with a chronic treatment need and a global market of USD >20b
- Recent phase II studies confirm reduction of HIV viral reservoir in patients
- ABX464 final phase IIa results in mid 2018 to confirm profound effect on HIV viral reservoir and potential promise of functional cure; phase IIb to start in H2 2018

**ABX464: Anti-inflammatory potential**
- ABX464 has further blockbuster potential in the USD 6b Ulcerative Colitis market
- ABX464 has shown strong anti-inflammatory effects that allowed for accelerated development in UC
- Phase IIa topline results expected in Sept 2018, and phase IIb to start in Q4 2018

**ABX196: Anti-cancer immune enhancer**
- ABX196 was safe and showed potent humoral and cellular immune responses in a phase I clinical trial in human volunteers
- Strong anti-tumor growth effect in combination with a checkpoint inhibitor in liver cancer model
- Phase I/II study to start in Q4 2018 in a rapidly growing liver cancer patient population

**Experienced management team**
- Experienced management team with a significant track-record
- Expanded key opinion leader network including HIV, UC and cancer specialists
- Drug discovery pipeline driven by three productive platform technologies
Highly experienced Executive Committee

Prof. Hartmut Ehrlich, M.D.
Chief Executive Officer

Didier Blondel
Chief Financial Officer & Board Secretary

Pierre Courteille, Pharm.D.
Chief Commercial Officer & VP, BD

Jérôme Denis, Ph.D.
VP, Process Dev. & Manufacturing

Alexandra Pearce, Ph.D.¹
VP, Regulatory Affairs

Paul Gineste, Pharm.D.
VP, Clinical Operations

Didier Scherrer, Ph.D.
VP, R&D

Jean-Marc Steens, M.D.
Chief Medical Officer

Prof. Jamal Tazi, Ph.D.
CNRS Director & Founder of antiviral platform

Competencies from discovery to global commercialization

¹: Appointment confirmed as of May 21st, 2018
ABX464: Mechanism of Action

Molecular target:

Activity:

Biological effects:

- Enhanced viral RNA splicing and Prevention of REV mediated export of long viral RNA

Outcome:

HIV: Reduction of viral load

In vitro ✓
In vivo ✓

HIV: Sustained biological control of viral load

HIV and other inflammatory diseases: Dampening of inflammation

Observed outcome:

- Conformational change of CBC Complex ➔ Enhanced RNA splicing
- Hypotheses being investigated:
  1. Generation of neoantigens and initiation of immune response
  2. Cytotoxicity for reservoir cells by peptides related to viral RNA
  3. Generation of deficient virus

- 1. Enhanced splicing of a long, non-coding RNA, leading to miR124 upregulation
  2. Cytokine modulation

Note: *Italic characters = hypotheses*
ABX464: Effect on HIV-RNA Splicing

Viral unsplcied mRNA biogenesis in HIV infected cells

Effect of ABX464 on unsplcied mRNA biogenesis in HIV infected cells

Rev prevents pre-mRNA splicing

Presence of Rev and ABX464: Splicing of viral mRNA

Viral structural proteins

Aberrant small viral mRNAs

HIV REPLICATION

NO HIV REPLICATION

Peptide antigens

ABLIVAX hypothesis: HIV peptide antigens tagging the surface of immune cells containing HIV-DNA
By activating iNKT cells, ABX196 facilitates the induction of a rapid immune response

• ABX196 is a single synthetic compound that activates iNKT by binding to CD1d molecules, thereby:
  – Enhancing both innate and adaptive immunity and
  – Boosting desired immune response to weak antigens

Upon activation, iNKT cells induce a cascade of immune reaction:

1. Interaction with Dendritic Cells (DC) leads to an early maturation, activation and licensing of DCs needed to sustain the priming reaction

2. Secretion of large quantities of cytokines (e.g. IFNγ, IL-4)