SCI-B-VAC: THIRD GENERATION HBV VACCINE

WORLD VACCINE CONGRESS 2017

NASDAQ: VBIV
TSX: VBV

APRIL 2017
Cautionary Statement Regarding Forward-Looking Information

Certain statements in this presentation contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 or forward-looking information under applicable Canadian securities legislation (collectively, “forward-looking statements”) that may not be based on historical fact, but instead relate to future events, including, without limitation, statements containing the words “believe”, “may”, “plan”, “will”, “estimate”, “continue”, “anticipate”, “intend”, “expect”, “goals” and similar expressions. All statements other than statements of historical fact included in this presentation are forward-looking statements.

Such forward-looking statements are based on a number of assumptions, including, without limitation, assumptions regarding the successful development and/or commercialization of the company’s products, such as the receipt of necessary regulatory approvals; general economic conditions; that the company’s business is able to operate as anticipated without interruptions; competitive conditions; and changes in applicable laws, rules and regulations.

Although management believes that the assumptions made and expectations represented by such statements are reasonable, there can be no assurance that a forward-looking statement contained herein will prove to be accurate. Actual results and developments may differ materially from those expressed or implied by the forward-looking statements contained herein, and, even if such actual results and developments are realized or substantially realized, there can be no assurance that they will have the expected consequences or effects. Factors which could cause actual results to differ materially from current expectations include, without limitation: the failure to successfully develop or commercialize the company’s products; adverse changes in general economic conditions or applicable laws, rules and regulations; and other factors detailed from time to time in the company’s reports filed with the U.S Securities and Exchange Commission and the Canadian Securities Commissions.

Given these risks, uncertainties and factors, you are cautioned not to place undue reliance on such forward-looking statements and information, which are qualified in their entirety by this cautionary statement and are made only as of the date of this presentation. All forward-looking statements and information made herein are based on the company’s current expectations, and the company undertakes no obligation to revise or update such forward-looking statements and information to reflect subsequent events or circumstances, except as required by law.
Introduction to Sci-B-Vac™

Sci-B-Vac™ is a 3rd Generation HBV Vaccine Expressing All Major Surface Antigens of HBV – A Better Viral Mimic, Leads to Improved Potency

1st Generation HBV Vaccines
- Inactivated HBV particles derived from serum of infected individuals
- Native human glycosylation
- Include HBsAg, Pre-S1, Pre-S2
- Highly Potent

2nd Generation HBV Vaccines
- Recombinant HBV VLPs produced in yeast
- Includes only HBsAg with yeast glycosylation
- Highly Potent in children
- Less potent in adults & immunocompromised

Sci-B-Vac™
- Recombinant HBV VLPs produced in (CHO) cells
- Naturally mammalian glycosylated
- Include HBsAg, Pre-S1, Pre-S2
- Highly Potent in all studied populations
Aging Cohorts of Unvaccinated Adults Define Key Market Segments for an Improved HBV Vaccine

Universal Pediatric Vaccination in 1990’s Still Leave Majority of Adults Exposed (Adult Vaccination Rates in US & EU = 20 – 24%)

### Market Segment

- “Otherwise Healthy”
- Immuno-Compromised

### Unvaccinated At-Risk Populations

- **Obese, Over-40, Smokers & HCW**
  - >94M in USA
  - >200M in EU
  - >375M in China

- **Diabetics & Chronic Renal Failure**
  - >20M in USA
  - >40M in EU
  - >50M in China

### Key Product Attributes

- Superior Potency
- Superior Potency & Earlier Seroconversion

---

2) [http://www.euro.who.int/en/health-topics/noncommunicable-diseases/diabetes](http://www.euro.who.int/en/health-topics/noncommunicable-diseases/diabetes)
4) [https://www.cdc.gov/mmwr/volumes/65/ss/ss6501a1.htm](https://www.cdc.gov/mmwr/volumes/65/ss/ss6501a1.htm)
5) [http://www.biomedcentral.com/1471-2458/8/132](http://www.biomedcentral.com/1471-2458/8/132)
The Unmet Need: High-Risk Populations of Non-Responders & Low Responders to Yeast-derived, Alum Adjuvanted, HBsAg Vaccination

**Exemplar Seroprotection Rates:**

- **Immuno-compromised**
  - Patients with chronic liver disease ............................................. ~50%
  - Chronic renal failure, dialysis & diabetes ........................................ 34-81%
  - Pre-transplantation candidates .................................................. 28-36%
  - Post-transplantation patients ...................................................... ~10%

- **“Otherwise Healthy”** ~50-85%
  - Obese
  - Over age 40
  - Smokers
  - Travellers & HCW

Sources:
- Yang et al, Scientific Reports (2016)
  - [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4914839/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4914839/)
Key Attributes of Sci-B-Vac

Opportunity for an Improved HBV Vaccine in Adult Populations

- Improved Potency vs 2nd Generation Vaccines
- Rapid Onset of Immunity
- Potent in high-risk, non-responsive & immuno-compromised populations
- Safe, well-known adjuvant: Alum Hydroxide
- Exceptional Safety
  - Administered to over 300,000 (approx 50% neonates)
Sci-B-Vac Evokes Rapid Immunity – Recent Ph IV Study Showed Over 90% Sero-Protection After 2-Doses in Adults 18 - 40

Sci-B-Vac Phase IV Study in Israeli Adults (age 18-40, N=88) Seroprotection (>10 mIU/mL)

- Month 1 (P1Vd30): 56.8%
- Month 2 (P2Vd30): 91.9%
- Month 3 (P2Vd60): 98.8%

Clinical Study: SciB018
Opportunity for Improved Potency vs 2\textsuperscript{nd} Generation Vaccines in Adult Populations

Additional Clinical Development to Define Benefits in Key Adult Populations

**Study 38-96-040:** Sci-B-Vac Seroprotection and GMT vs Engerix-B \((n = 524)\) in Adults Age 18 - 60 (mean age = 43)

<table>
<thead>
<tr>
<th>Time</th>
<th>Sci-B-Vac GMT (10ug dose)</th>
<th>Sci-B-Vac Seroprotection (10ug dose)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month (P1Vd30)</td>
<td>9.5 (6.6 – 13.7)</td>
<td>5.4% (13.2 – 21.4)</td>
</tr>
<tr>
<td>7 month (P3Vd30)</td>
<td>1876 (1367 – 2574)</td>
<td>16.8% (13 – 21.4)</td>
</tr>
<tr>
<td>12 month (P3Vd180)</td>
<td>9211 (7093 - 11962)</td>
<td>99.2% (7093 – 11962)</td>
</tr>
<tr>
<td>12 month (P3Vd180)</td>
<td>421 (306 - 579)</td>
<td>92.4% (306 – 579)</td>
</tr>
<tr>
<td>12 month (P3Vd180)</td>
<td>2203 (1698 - 2858)</td>
<td>85.1% (1698 – 2858)</td>
</tr>
</tbody>
</table>

Engerix-B GMT (20ug dose)

Engerix-B Seroprotection (20ug dose)

Clinical Study: 38-96-040
Older Adults are one Population that may Benefit from Sci-B-Vac™: Superior Seroprotection Rates

Stratification by Age of Study 38-96-040 Demonstrates Significantly Improved Potency in Older Adults

Seroprotection Stratified by Age

Study Reference: Phase III 38-96-040
Sci-B-Vac Offers Potential for Improved Potency in High-Risk Groups, Including Diabetics & CKD

Sci-B-Vac Stimulates Seroproective anti-HBsAg Immunity in CKD Populations That Had Not Responded to Double-Dose of Engerix-B

Efficacy of Sci-B-Vac in Non-Responders:
Study of 16 Chronic Kidney Disease Patients who had not responded (<10 intl. units) to 4x40ug doses of Engerix-B

Study Reference: Post-launch V01
Data in Immuno-compromised: End-Stage Renal Disease

Investigator Led (T. Weinstein, 2004) Study at Rabin Medical Center, Israel Evaluated Seroprotection Rate of Sci-B-Vac™ in 29 ESRD Subjects – Notional Comparison Made to Historic Engerix-B® Responses in Same Department

![Sci-B-Vac Seroprotection (>10mIU/ml) in Israeli ESRD Patients vs Historic Controls](chart.png)

Data supports further well-controlled study in Immunocompromised/ESRD populations

Synopses of Existing Clinical Studies for Sci-B-Vac™

• 22 clinical trials conducted to date
• 14 open label clinical studies + extension studies
• 5 observer blind clinical studies
• 9 of the above studies conducted in adults, 7 of which will be used to support a phase 3 Clinical Trial Application
• More than 95% of patients are protected within 2 months after first vaccination
• Safe and well tolerated
VBI is Discussing Its Clinical Development Priorities with Regulators in North America & Europe

EMA

• Feb 2017: Received positive EMA Scientific Advice regarding Sci-B-Vac™ Phase III clinical program

Health Canada

• Feb 2017: Received positive response from Health Canada regarding Sci-B-Vac™ Phase III clinical program

FDA

• Expecting feedback on proposed clinical development plans in H1 2017
Prophylactic Sci-B-Vac™ Summary

OPPORTUNITY FOR IMPROVED POTENCY IN ADULT & AT-RISK POPULATIONS

• Potent & Rapid HBV Immunity
  o Improved potency vs 2nd generation HBV vaccines
  o Rapid onset of immunity
  o Stimulation of immunity in non-responders

• VBI is currently developing Sci-B-Vac for prophylactic adult Indication in US/EU
  o History of safety with over 300,000 doses administered (all populations)
  o Established manufacturing protocols at GMP commercial scale

• Integrated regulatory feedback on VBI’s proposed clinical development plan is expected from North American & European regulators in H1 2017
VBI Vaccines, Inc.
222 Third Street, Suite 2241
Cambridge, MA 02142
(617) 830-3031