| SEC For  | m 4<br>FORM   | 4  | UNITED  | STA     | TES  | s se  | ECUR   | ITIE | ES AND  | EXCHA              | NGE C  | оммі   | SSION   |   |                |  |   |  |
|--|---|--|---|---------|--|---|--|------|---|--------------------|--|--|---|---|----------------|--|---|--|
|  |   |  |   |         | Washington, D.C. 20549   |   |  |      |   |                    |  |  |   |   | OMB APPROVAL   |  |   |  |
| Section 16. Form 4 or Form 5<br>obligations may continue. See      |   |  |   |         | A pursuant to Section 16(a) of the Securities Exchange Act of 1934<br>or Section 30(h) of the Investment Company Act of 1940 |   |  |      |   |                    |  |  | SHIP  | OMB Number: 3235-0287   Estimated average burden    hours per response: 0.5                                     |                |  |   |  |
| 1. Name and Address of Reporting Person <sup>*</sup><br>LOH WILLIE |   |  |   |         |  |   |  |      | ker or Trading                                |                    | (Ch  | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br>X Director 10% Owner |   |   |                |  |   |  |
| (Last) (First) (Middle)<br>C/O YIELD10 BIOSCIENCE, INC.            |   |  |   |         |  | 3. Date of Earliest Transaction (Month/Day/Year)<br>10/04/2022                        |  |      |   |                    |  |  |   | (give title Other (specify below)   |                |  |   |  |
| 19 PRESIDENTIAL WAY  |   |  |   |         | 4. 1   | 4. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Jo<br>Line) |  |      |   |                    |  |  |   |   | o Filing       | (Check App   | blicable  |  |
| (Street)   | Street)<br>WOBURN MA 01801  |  |   |         |  |   |  |      |   |                    |  |  | X Form filed by One Reporting Person<br>Form filed by More than One Reporting<br>Person |   |                |  |   |  |
| (City)   |   |  |   |         |  |   |  |      |   |                    |  |  |   |   |                |  |   |  |
|  |   | Tab  | ole I - Non                                       | -Deriva | ative  | e Se  | curities   | s Ac | quired, Di                                    | isposed c          | of, or Be  | neficial   | ly Owned  |   |                |  |   |  |
| 1. Title of Security (Instr. 3) 2. Transa<br>Date<br>(Month/D      |   |  |   |         |  | ear) i  | 2A. Deemed<br>Execution Date<br>if any<br>(Month/Day/Yea |      | Code (Ins                                     |                    |  |  | 4 and Securities<br>Beneficially<br>Owned Foll  |   | Form<br>(D) or | n: Direct<br>or Indirect<br>nstr. 4)                                     | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |  |
|  |   |  |   |         |  |   |  |      | Code V  | Amount             | (A) or<br>(D)  | Price  | Price Reported<br>Transaction<br>(Instr. 3 and  |   |                |  |   |  |
|  |   | -  |   |         |  |   |  |      | uired, Dis<br>s, options,                     |                    |  |  | Owned   |   |                |  |   |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)                | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution I<br>if any<br>(Month/Day | ate, T  | ransaction<br>ode (Instr.  |   |  |      | 6. Date Exerc<br>Expiration D<br>(Month/Day/) | ate                | 7. Title an<br>of Securit<br>Underlyin<br>Derivative<br>(Instr. 3 an | g<br>Security  | 8. Price of<br>Derivative<br>Security<br>(Instr. 5)                                     | 9. Number<br>derivative<br>Securitie:<br>Beneficia<br>Owned<br>Following<br>Reported<br>Transacti<br>(Instr. 4) | e<br>s<br>illy | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | Beneficial<br>Ownership<br>(Instr. 4)                             |  |
|  |   |  |   | c       | ode  | v   | (A)  | (D)  | Date<br>Exercisable                           | Expiration<br>Date | Title  | Amount<br>or<br>Number<br>of<br>Shares   |   |   |                |  |   |  |
| Stock<br>Option<br>(right to<br>buy)                               | \$3   | 10/04/2022                                 |   |         | A  |   | 10,000   |      | (1)   | 10/04/2032         | Common<br>Stock  | 10,000   | \$0   | 10,00   | 0              | D  |   |  |

Explanation of Responses:

1. These options will vest and become exercisable in equal quarterly installments over 4 years from October 4, 2022, beginning on January 4, 2023 and ending on October 4, 2026.

## /s/ Charles B. Haaser, Attorney-10/06/2022

in-Fact

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

 $^{\ast}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.