UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934 (Amendment No.)*

Xenetic Biosciences, Inc.

(Name of Issuer)

Common Stock, par value \$0.001 per share

(Title of Class of Securities)

984015503

(CUSIP Number)

CLS Therapeutics LLC. Attention: Georgy Tetz, CEO 180 Varick street New York, NY 10014 (646) 617-3088

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

June 14, 2023

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

| CUSIP N | o. 9840 | 15503 | | | | | | |
|---------|--------------------------------------------------------------------------------------|-------------------------------------------------------|--------------|--------------------------------------------------------------|--|--|--|--|
| 1. | | Names of Reporting Persons. CLS Therapeutics, LLC | | | | | | |
| 2. | Che | ck the A | Appropriate | Box if a Member of a Group (See Instructions) | | | | |
| | (a) | | | | | | | |
| | (b) | V | | | | | | |
| 3. | | | | | | | | |
| 4. | Sour OO | ce of F | unds (See Ir | nstructions) | | | | |
| 5. | Che | ck if Di | sclosure of | Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) | | | | |
| 6. | | Citizenship or Place of Organization United States | | | | | | |
| Ni | ımber of | : | 7. | Sole Voting Power 85,000* | | | | |
| Ве | Shares neficially | y | 8. | Shared Voting Power | | | | |
| | wned by Each eporting | | 9. | Sole Dispositive Power 85,000* | | | | |
| Pei | son Wit | h | 10. | Shared Dispositive Power | | | | |
| 11. | Agg 85,0 | | Amount Ben | neficially Owned by Each Reporting Person | | | | |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) | | | | | | | |
| | | | | | | | | |

Percent of Class Represented by Amount in Row (11)

5.6% (see Item 5)

13.

| | | 00 | | | | | | | | |
|----|-----------|-----------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| * | | | | direct wholly-owned subsidiary of CLS Therapeutics Ltd., owns 85,000 shares of the Common Stock of the Issuer. As the ultimate parent of | | | | | | |
| | CLS Th | erapeutics | s LLC, CLS | Therapeutics Ltd. may exercise voting and dispositive power over these shares. | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| CU | SIP No. | 9840155 | 03 | | | | | | | |
| 1. | | Names o | f Reporting | Persons. | | | | | | |
| _ | | CLS Therapeutics Ltd. | | | | | | | | |
| 2. | | Check th | e Appropriat | te Box if a Member of a Group (See Instructions) | | | | | | |
| | | (a) □ (b) ☑ | | | | | | | | |
| 3. | | (0) | | | | | | | | |
| 4. | | Source o | rce of Funds (See Instructions) | | | | | | | |
| 5. | | Check if | Disclosure o | of Legal Proceedings Is Required Pursuant to Items $2(d)$ or $2(e)$ | | | | | | |
| 6. | | Citizensl Guernsey | | of Organization | | | | | | |
| | | • | 7. | Sole Voting Power | | | | | | |
| | | ber of ares | | 147,500* | | | | | | |
| | Benef | icially | 8. | Shared Voting Power | | | | | | |
| | | Owned by Each | 9. | Sole Dispositive Power | | | | | | |
| | | orting n With | 10. | 147,500* Shared Dispositive Power | | | | | | |
| | | | | | | | | | | |
| 11 | | Aggrega 147,500 | te Amount B | eneficially Owned by Each Reporting Person | | | | | | |
| 12 | | Check if | the Aggrega | te Amount in Row (11) Excludes Certain Shares (See Instructions) \square | | | | | | |
| 13 | | Percent of Class Represented by Amount in Row (11) 9.7% (see Item 5) | | | | | | | | |
| 14 | | Type of CO | Reporting Pe | erson (See Instructions) | | | | | | |
| | | | | | | | | | | |
| * | | | | lirect wholly-owned subsidiary of CLS Therapeutics Ltd., owns 85,000 shares of the Common Stock of the Issuer. As the ultimate parent of Fherapeutics Ltd. may exercise voting and dispositive power over these shares. | | | | | | |
| | | | | | | | | | | |
| _ | | | | 2 | | | | | | |
| | | | | | | | | | | |
| CU | SIP No. | 9840155 | 03 | | | | | | | |
| | | | | | | | | | | |
| 1. | | Names o Dmitry (| f Reporting l Genkin | Persons. | | | | | | |
| 2. | | Check th | e Appropriat | te Box if a Member of a Group (See Instructions) | | | | | | |
| | | (a) 🗆 | | | | | | | | |
| | | (b) | | | | | | | | |
| 3. | | | | | | | | | | |
| 4. | | Source o | f Funds (See | Instructions) | | | | | | |
| 5. | | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items $2(d)$ or $2(e)$ | | | | | | | | |
| 6. | | Citizensl Israel | nip or Place o | of Organization | | | | | | |
| | | | 7. | Sole Voting Power | | | | | | |
| | | ber of | 8. | Shared Voting Power | | | | | | |
| | | ares icially | 0. | 147,500* | | | | | | |
| | Own Ea | ed by ich | 9. | Sole Dispositive Power | | | | | | |
| | Repo | orting | | | | | | | | |

14.

Type of Reporting Person (See Instructions)

| | 147,500* | |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 11. | Aggregate Amount Beneficially Owned by Each Reporting Person 147,500 | |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) □ | |
| 13. | Percent of Class Represented by Amount in Row (11) | |
| | 9.7% (see Item 5) | |
| 14. | Type of Reporting Person (See Instructions) IN | |
| | y Genkin along with the Victor Tets and Georgy Tets may exercise voting and dispositive power over the shares. Mr. Genkin otherwise disclaims beneficial oshares. | ownership |
| | 3 | |
| | | |
| CUSID No | . 984015503 | |
| 1. | Names of Reporting Persons. | |
| 1. | Victor Tets | |
| 2. | Check the Appropriate Box if a Member of a Group (See Instructions) | |
| | (a) | |
| | (b) ☑ | |
| 3. | | |
| 4. | Source of Funds (See Instructions) OO | |
| 5. | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items $2(d)$ or $2(e)$ | |
| 6. | Citizenship or Place of Organization United States | |
| | 7. Sole Voting Power | |
| | nber of hares 8 Shared Voting Power | |
| Bene | eficially 147,500* | |
| | ned by Each 9. Sole Dispositive Power | |
| Rep | porting | |
| Perso | on With 10. Shared Dispositive Power 147,500* | |
| 11. | Aggregate Amount Beneficially Owned by Each Reporting Person 147,500 | |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) | |
| 13. | Percent of Class Represented by Amount in Row (11) 9.7% (see Item 5) | |
| 14. | Type of Reporting Person (See Instructions) IN | |
| * Victor the sha | Tets along with Dmitry Genkin and Georgy Tets may exercise voting and dispositive power over the shares. Victor Tets otherwise disclaims beneficial owners. | ership of |
| | 4 | |
| | | |
| CUSIP No. | . 984015503 | |
| 1. | Names of Reporting Persons. | |
| 2 | Georgy Tets | |
| 2. | Check the Appropriate Box if a Member of a Group (See Instructions) | |
| | (a) □(b) ☑ | |
| 3. | (b) ☑ | |
| | | |
| 4. | Source of Funds (See Instructions) OO | |
| 5. | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) □ | |

Person With

10.

Shared Dispositive Power

| 6. | Citizenship or Place of Organization United States | | | | | | | |
|----------|----------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| | | 7. | Sole Voting Power | | | | | |
| | Number of | , · | | | | | | |
| | Shares | 8. | Shared Voting Power | | | | | |
| | Beneficially | | 147,500* | | | | | |
| | Owned by Each | 9. | Sole Dispositive Power | | | | | |
| | Reporting | <i>)</i> . | Sole Dispositive Forter | | | | | |
| | Person With | 10. | Shared Dispositive Power 147,500* | | | | | |
| 11. | Aggrega 147,500 | te Amount | Beneficially Owned by Each Reporting Person | | | | | |
| 12. | · · | the Aggreg | gate Amount in Row (11) Excludes Certain Shares (See Instructions) | | | | | |
| 13. | Percent o | of Class Rep | Represented by Amount in Row (11) | | | | | |
| 14. | | 9.7% (see Item 5) Type of Reporting Person (See Instructions) | | | | | | |
| 17. | IN | reporting i | CISOR (See Instructions) | | | | | |
| | Dmitry Genkin al | ong with V | ictor Tets and Georgy Tets may exercise voting and dispositive power over the shares. Georgy Tets otherwise disclaims beneficial ownership of | | | | | |
| | the shares. | | | | | | | |
| | | | 5 | | | | | |
| | | | | | | | | |
| CUS | SIP No. 9840155 | 03 | | | | | | |
| 1. | Names of Reporting Persons. M. Scot Maguire | | | | | | | |
| 2. | | Č | ate Box if a Member of a Group (See Instructions) | | | | | |
| | (a) 🗆 | | | | | | | |
| | (b) ☑ | | | | | | | |
| 2 | (0) | | | | | | | |
| 3. 4. | Source o | f Funds (Se | ee Instructions) | | | | | |
| 5. | OO Check if | Disclosure | of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) | | | | | |
| 6. | Citizensl | nip or Place | of Organization | | | | | |
| | United K | Cingdom | | | | | | |
| | | 7. | Sole Voting Power 0 | | | | | |
| | Number of Shares | | | | | | | |
| | Beneficially | 8. | Shared Voting Power 2,202 (See Item 5) | | | | | |
| | Owned by Each | 9. | Sole Dispositive Power 0 | | | | | |
| | Reporting Person With | 10. | Shared Dispositive Power | | | | | |
| 11. | Aggrago | ta Amount | 2,202 (See Item 5) Beneficially Owned by Each Reporting Person | | | | | |
| 11. | 2,202 | | | | | | | |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) □ | | | | | | | |
| 13. | Percent of Class Represented by Amount in Row (11) 0.01% (see Item 5) | | | | | | | |
| 14. | • | Type of Reporting Person (See Instructions) | | | | | | |
| | | | | | | | | |
| | | | 6 | | | | | |
| | | | | | | | | |

Item 1. Security and Issuer

- (a) Security: Common Stock, \$.001 par value per share(b) Issuer: Xenetic Biosciences, Inc.

945 Concord Street Framingham, Massachusetts 01701

This statement is filed by CLS Therapeutics, LLC, a Delaware limited liability company ("CLS LLC"), CLS Therapeutics Ltd., a limited company organized under the laws of Guernsey, United Kingdom ("CLS"), and its beneficial holders as follows: Dmitry Genkin ("Genkin"), Victor Tets ("VT") and Georgy Tets ("GT"). Messrs. Genkin and Maguire are former directors of the Issuer, and Mr. Maguire was formerly the chief executive officer of the Issuer.

CLS LLC is an indirect wholly-owned subsidiary of CLS. The principal business office of CLS LCC is 180 Varick street, New York, NY 10014. The principal business of CLS LLC is to develop biopharmaceuticals for itself and under license.

CLS is a corporation formed under the laws of the Isle of Guernsey; the principal business office of CLS Ltd. is PO Box 175, Frances House, Sir William Place, St Peter Port, Guernsey, GY1 4HQ, UK. The principal business of CLS is to develop biopharmaceuticals for itself and under license.

Genkin is an individual with citizenship in Israel; the business address of Genkin is Piazzale Baracca 2, Milan, Italy. Mr. Genkin's principal occupation is as an investor and advisor to various pharmaceutical and life sciences ventures and as a Senior Director Clinical Development of CLS.

VT is an individual with citizenship in Russia and permanent residence in the United States; the business address of VT is 180 Varick street, New York, NY 10014. VT's principal occupation is as an investor and advisor to various pharmaceutical and life sciences ventures and as a Scientific Advisor to CLS.

GT is an individual with citizenship in Russia and permanent residence in the United States; the business address of GT is 180 Varick street, New York, NY 10014. GT's principal occupation is as an executive officer of CLS.

The reporting persons also include M. Scott Maguire; Mr. Maguire's business address is 17 Ives Street, London, SW3 2ND, United Kingdom. Mr. Maguire is a United Kingdom citizen. Mr. Maguire's principal occupation is as an investor and advisor to various pharmaceutical and life sciences ventures.

In the last five years, none of the reporting persons has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or has been subject to a judgement, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

This Schedule 13D is being filed by the reporting persons under a joint filing agreement as an administrative convenience. Each of CLS, Genkin, VT and GT disclaims membership in a group or any relationship with Mr. Maguire which would constitute a group together with Mr. Maguire, as the term "group" is defined in Rule 13d-5 under the Exchange Act of 1934, as amended (the "Exchange Act"). Similarly, Mr. Maguire disclaims membership in a group or any relationship with CLS, Genkin, VT or GT which would constitute a group together with CLS, Genkin, VT or GT, as the term "group" is defined in Rule 13d-5 under the Exchange Act.

Item 3. Source and Amount of Funds or Other Consideration

On April 26, 2022, CLS entered into (i) an Exclusive License Agreement with the Issuer dated as of April 26, 2022, and (ii) an Exclusive Sublicense Agreement, pursuant to which shares in the Issuer were to be issued upon the occurrence of certain events (collectively, the "License Agreements"). On April 26, 2022, CLS acquired 625,000 shares of Common Stock of the Issuer (the "First Issuance"). On October 12, 2022, CLS acquired 850,000 shares of Common Stock of the Issuer (the "Second Issuance") and subsequently transferred the Second Issuance to CLS LLC. CLS is the direct parent and owner of 100% of the issued and outstanding shares of CLS Therapeutics Inc., which is the direct parent and owner of 100% of the issued and outstanding interests LLC. Collectively, Genkin, VT and GT beneficially own a majority of the issued and outstanding shares of CLS and indirectly beneficially own the First Issuance and the Second Issuance (and as to which each disclaims beneficial ownership). Effective May 15, 2023, the Issuer effected a 10-for-1 reverse stock split. The shares of Common Stock held by CLS represent beneficial ownership in the aggregate of approximately 9.7% of the issued and outstanding Common Stock of the Issuer, based on 1,516,660 shares of Common Stock issued and outstanding as of May 15, 2023 as reported by the Issuer.

Mr. Maguire acquired his shares of Common Stock through joint share ownership plans (JSOPs) which were established for the benefit of Mr. Maguire in 2010 and 2012 during his employment by and service as a director of the Issuer. Mr. Maguire resigned as an employee, officer and director of the Issuer on August 9, 2017. The shares of Common Stock held by Mr. Maguire represent beneficial ownership in the aggregate of approximately 0.01% of the issued and outstanding Common Stock of the Issuer, based on 1,516,660 shares of Common Stock issued and outstanding as of May 15, 2023 as reported by the Issuer.

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Item 4. Purpose of Transaction

The shares of Common Stock were acquired by CLS as an investment in consideration of the License Agreements. The Shares of Common Stock were acquired by Mr. Maguire as compensation for services performed by Mr. Maguire as an officer and employee of the Issuer. The reporting persons may acquire additional shares of Common Stock in one or more transactions in the future as approved, in the case of CLS, by its board of directors based upon the reporting persons' assessment, at the time of such acquisition (or such board approval, in the case of CLS), of the investment opportunity represented by the shares of Common Stock relative to the then-prevailing market price. The reporting persons have no current intention to sell any shares of Common Stock. Genkin, VT, GT and Mr. Maguire may communicate from time to time with representatives of the Issuer regarding customary matters of interest to significant investors or the exercise of their prerogatives as stockholders. The reporting persons may engage in customary investor communications and exercise (or refrain from exercising) their rights as stockholders from time to time, including voting of their shares of Common Stock, participation at stockholders meetings, submission of stockholder proposals and nominations, and exercise of their other prerogatives under the Company's articles of incorporation and by-laws and applicable SEC rules.

Item 5. Interest in Securities of the Issuer

CLS owns, directly and through its indirect wholly owned subsidiary CLS LLC, 1,475,000 shares of Common Stock as a result of issuances in consideration of the License Agreements, which represents 9.7% of the Common Stock outstanding. CLS LLC owns 85,000 shares of Common Stock as a result of such issuances, which represents 5.6% of the Common Stock outstanding. Collectively, Genkin, VT and GT beneficially own a majority of the issued and outstanding shares of CLS and indirectly beneficially own the First Issuance and the Second Issuance (and as to which each disclaims beneficial ownership). The voting and disposition of the shares of Common Stock reported herein as beneficially owned by CLS and CLS LLC is controlled by the board of directors of CLS. The board of directors of CLS, collectively, has sole voting power and sole dispositive power with respect to the shares of Common Stock which CLS and CLS LLC own, and none of Genkin, VT or GT has any individual voting power or dispositive power with respect to the shares of Common Stock reported herein as beneficially owned by CLS. Except for the members of the board of directors of CLS, no person has any voting power or dispositive power with respect to the shares of Common Stock which are reported herein as beneficially owned by CLS. Mr. Maguire disclaims any beneficial interest in the shares of Common Stock reported herein as beneficially owned by CLS.

Mr. Maguire individually participates in joint share ownership plans (JSOPs) together with JTC Group, established in 2010 and 2012, through which Mr. Maguire beneficially owns 2,202 shares of Common Stock granted to Mr. Maguire as compensation, which represent 0.01% of the Common Stock outstanding. Pursuant to the terms of the JSOPs, Mr. Maguire does not derive a pecuniary benefit from the shares of Common Stock subject to the JSOP unless the share price exceeds certain thresholds. Under the provisions of the JSOPs, Mr. Maguire exercises voting and dispositive power together with JTC Group; however, Mr. Maguire has, as a practical matter, substantial influence or discretion in the voting and disposition of the shares subject to the JSOPs.

The aggregate percentage of shares of Common Stock reported as owned by each of the reporting persons is based on 1,516,660 shares of Common Stock issued and outstanding as of May 15, 2023 as reported by the Issuer.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

There are no contracts, arrangements or understandings between the reporting persons and any other person with respect to the securities of the Issuer.

This Schedule 13D is being filed by the reporting persons under a joint filing agreement as an administrative convenience. Each of CLS LLC, CLS, Genkin, VT and GT disclaims membership in a group or any relationship with Mr. Maguire which would constitute a group together with Mr. Maguire, as the term "group" is defined in Rule 13d-5 under the Exchange Act. Similarly, Mr. Maguire disclaims membership in a group or any relationship with CLS LLC, CLS, Genkin, GT or VT which would constitute a group together with CLS, Genkin, VT or GT, as the term "group" is defined in Rule 13d-5 under the Exchange Act.

Item 7. Material to be Filed as Exhibits

1. Joint Filing Agreement, dated June 14, 2023

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Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

June 14, 2023 Date CLS Therapeutics, LLC /s/ Georgy Tets Signature Georgy Tets, MD, PhD, Chief Executive Officer Name/Title CLS Therapeutics Ltd. /s/ Georgy Tets Signature Georgy Tets, MD, PhD, Director Name/Title /s/ Dmitry Genkin Signature Dmitry Genkin Name /s/ Victor Tets Signature Victor Tets Name /s/ Georgy Tets Signature Georgy Tets, MD, PhD Name /s/ M. Scot Maguire Signature M. Scot Maguire

Name

ATTENTION
Intentional misstatements or omissions of fact constitute Federal Criminal Violations (See 18 U.S.C. 1001).

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1)(iii) promulgated under the Securities Exchange Act of 1934, as amended, the undersigned company and individuals agree to the joint filing on behalf of each of them of a Schedule 13D (including amendments thereto) with respect to the Common Stock of Xenetic Biosciences, Inc. This Joint Filing Agreement shall be filed as an Exhibit to such Statement.

June 14, 2023 Date CLS Therapeutics, LLC. /s/ Georgy Tets Signature Georgy Tets, MD, PhD, Chief Executive Officer Name/Title CLS Therapeutics, LLC /s/ Georgy Tets Signature Georgy Tets, MD, PhD, Director Name/Title /s/ Dmitry Genkin Signature Dmitry Genkin Name /s/ Victor Tets Signature Victor Tets Name /s/ Georgy Tets Signature Georgy Tets, MD, PhD Name /s/ M. Scot Maguire Signature

> M. Scot Maguire Name