

# SECURITIES & EXCHANGE COMMISSION EDGAR FILING

**Nemauro Medical Inc.**

**Form: 8-K**

**Date Filed: 2019-04-19**

Corporate Issuer CIK: 1602078

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of  
the Securities Exchange Act 1934

Date of Report (Date of earliest event reported): **April 19, 2019**

**NEMAURA MEDICAL, INC.**

(Exact name of registrant as specified in charter)

**Nevada**

(State or other jurisdiction of incorporation)

001-38355

(Commission File Number)

46-5027260

(IRS Employer Identification No.)

Advanced Technology Innovation Centre,  
Loughborough University Science and Enterprise Parks,  
5 Oakwood Drive,  
Loughborough, Leicestershire  
LE11 3QF  
United Kingdom

(Address of principal executive offices)

N/A

(Zip Code)

Registrant's telephone number, including area code:

00 44 1509 222912

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12(b) under the Exchange Act (17 CFR 240.14a-12(b))

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

**Item 8.01. Other Events**

Nemaura Medical Inc. (the “Registrant”) has released a presentation on the use of the BEAT® non-invasive sensor technology to trend blood lactate levels during intense exercise. The Registrant has previously disclosed in its periodic filings with the Securities and Exchange Commission the potential use of the technology for other applications. A copy of the presentation is attached to this Current Report on Form 8-K as [Exhibit 99.1](#).

**Item 9.01. Financial Statements and Exhibits**

(d) **Exhibits**

Exhibit No.	Description
<a href="#">99.1</a>	<a href="#">Nemaura Medical Inc. Presentation</a>

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Nemauro Medical, Inc.

Dated: April 19, 2019

By: /s/ Dewan F H Chowdhury

Name: Dewan F H Chowdhury

Title: Chief Executive Officer

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Exhibit List

Exhibit No.	Description
99.1	Nemauro Medical Inc. Presentation



Better Diagnostics for Life

**BEAT-Continuous LACTATE TRENDING**

**Corporate Presentation &  
Market Evaluation**

April 2019

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**Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995:**

*Certain statements in this presentation that are not historical facts constitute “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. Any statements that refer to expectations or other characterizations of future events, circumstances or results are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. The factors may include, but not be limited to, factors related to the Company’s anticipated growth strategies, future business development, , ability to develop new products, expand to other related industries or markets, and other information detailed from time to time in the filings and future filings with the United States Securities and Exchange Commission. The views expressed are those of management and are based on currently available information. Estimates and projections contained herein have been prepared by management and involve significant elements of subjective judgment and analysis and are based on certain assumptions. No representation nor warranty, expressed or implied, is made as to the accuracy or completeness of the information contained in this document, and nothing contained herein is, or shall be relied upon, as a promise or representation, whether as to the past or the future. You are cautioned not to place undue reliance on these forward-looking statements.*

*This presentation was developed by Nemauro Medical Inc. and is intended solely for informational purposes and is not to be construed as an offer to sell or the solicitation of an offer to buy the Company’s stock. This profile is based upon information available to the public, as well as other information from sources which management believes to be reliable, but is not guaranteed by the Company as being accurate nor does it purport to be complete. Opinions expressed herein are those of management as of the date of publication and are subject to change without notice. Except for ongoing obligations of the company to disclose material information under the federal securities laws, the Company does not undertake any obligation to release any revisions to any forward-looking statements, to report events or to report the occurrence of unanticipated events.*

## Summary of Presentation

1. Outcome of a healthy volunteer study for continuous measurement of lactate levels, non-invasively, using the BEAT® platform technology, and newly developed lactate nano-sensor.
2. Market Evaluation of Lactate Monitoring in athletic and fitness training.
3. Summary of the potential for continuous lactate monitoring using the BEAT® platform technology





## Volunteer Study: Study Objective

A UK based study to trend blood lactate levels in healthy adult males, during intense exercise using the BEAT® non-invasive sensor technology.



## Study Design

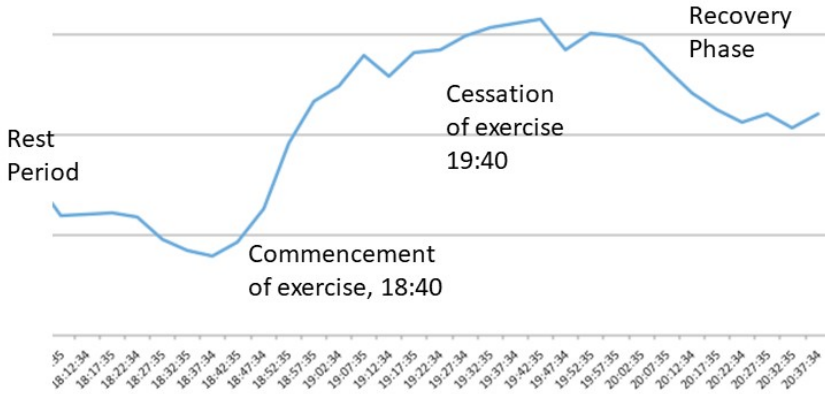
- ❖ 3 healthy male volunteers
- ❖ Assessment of sensor ability to provide lactate trends on intense exercise
- ❖ Blood sampling not undertaken, as measurements were purely qualitative trends



## Baseline Characteristics

Variable	
Age range	30-50
Gender	Male
No. of subjects	3 healthy male volunteers, not on any medication

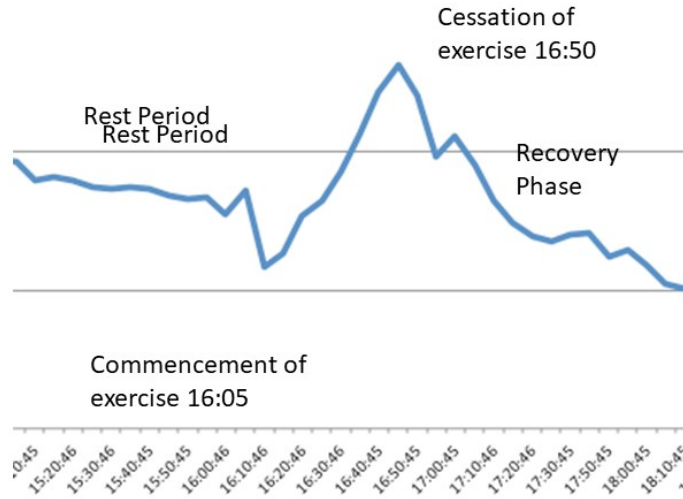
# Lactate Trend Profile – Subject 1



% increase in Lactate concentration during exercise compared with concentration at rest: up to 300%

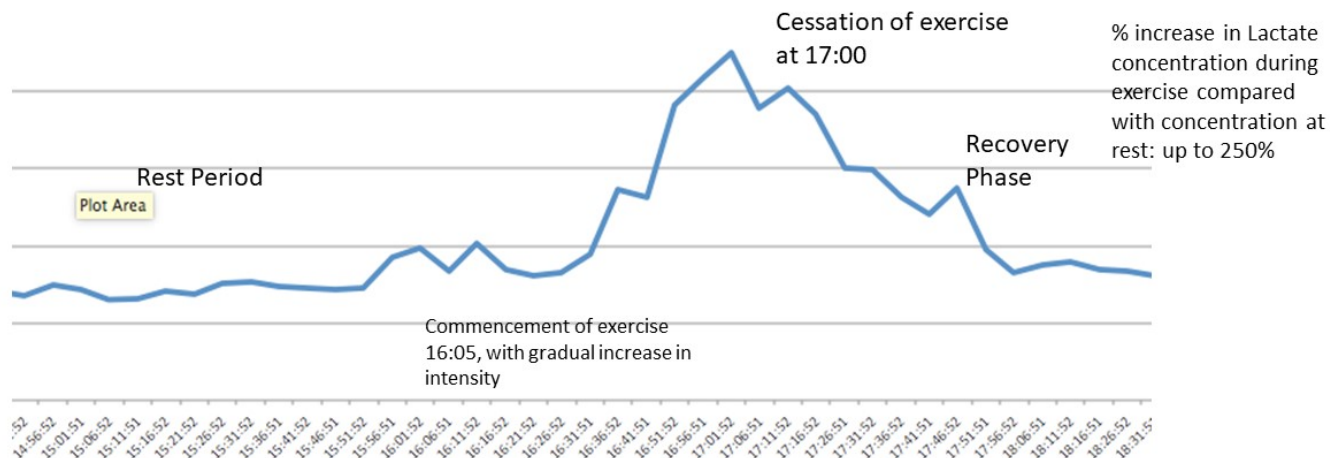


## Lactate Trend Profile – Subject 2



% increase in Lactate  
concentration during  
exercise compared with  
concentration at rest: up  
to 300%

## Lactate Trend Profile – Subject 3





# Lactate Trend Profile

## Summary of Key Observations

- Different individuals have different rates of rise and rates of fall in lactate levels
- Type and intensity of exercise leads to different rates of rise and fall in lactate levels
- Type and intensity of exercise and level of fitness leads to different rates of onset of build-up of lactate
- The overall area under the curve for the exercise and recovery period is indicative of the level of fitness of an individual

## **Safety Profile of the Wearable Device**

### Previous studies in clinical settings:

- ❖ Study 1: >100 patient days wear time, up to 14 consecutive hours per day – No major adverse events or skin irritation reported.
- ❖ Study 2: 525 patient days wear time, up to 14 consecutive hours per day – No major adverse events or skin irritation reported.
- ❖ Study 3: 525 patient days wear time, up to 14 consecutive hours per day – No major adverse events or skin irritation reported.

### Current study:

Wear time of up to 6 hours covering a rest period, exercise period and recovery period; No adverse events or skin irritation noted



## Lactate Monitoring - Background

- ❖ Lactic acid (lactate) is a natural by-product generated through the production of energy in the body, and is produced by the body at all times. The relationship of lactic acid to the ability of the body to perform must be assessed in two parts: the function of the lactate itself, and the adverse effects of the hydrogen ion produced in the reaction that creates lactic acid.
- ❖ Lactic acid is a key performance indicator for the body and a guide to how well muscles react to long term exertion and recovery.

*Ref:* <https://www.encyclopedia.com/sports/sports-fitness-recreation-and-leisure-magazines/lactic-acid-and-performance>

## Lactate monitoring – in Training

- ❖ Lactate threshold testing data can also be used as a starting point or in conjunction with more specific testing measures, including metabolic (VO2 max) testing. Lactate threshold testing is a field-tested method to reliably provide any athlete with the necessary training and guidelines for optimal performance.
- ❖ Lactate Threshold monitoring/testing especially benefits **endurance athletes**, such as:
  - Distance runners
  - Triathletes
  - Road cyclists
  - Mountain bikers
  - Spin training

Ref: <https://armorpt.com/sports-performance/lactate-threshold-testing/>

# ❖ Benefits of Lactate Monitoring

## ❖ Understanding training zone

- The primary benefit of lactate testing is **getting a simple summary of how the body is coping with the workload for comparative purposes.**

## ❖ Planning a training strategy

- The wearable lactate monitor allows athletes and trainers to **significantly improve training and performance while reducing the risk of injuries.** By understanding optimal levels of lactic acid or the “Lactate Threshold,” endurance athletes as well as explosive sports athletes and their trainers **can optimize training schedules, recovery patterns, and ultimately, performance.**
- **Adjust athlete training workload and reflect athlete’s fitness.** Coaches look for is adaptation to the work being placed on the athlete. If the same workload is easier for the body, the athlete is increasing their fitness.
- Lactate testing allows athletes to set their training zones precisely



## Benefits of Lactate Monitoring (continued)

### ❖ Knowing weaknesses of the body and improve on them

- Sports physiologists have learned, however, that your lactate threshold can be raised with proper training. Athletes can teach their bodies to use lactate more efficiently, so it takes longer to build up in the blood.
- The idea of finding out where the Lactate Threshold (LT) point is in order to effectively push the LT point higher, enabling greater performance for the same effort and 'cost' to the body. **It follows therefore that this can apply to anyone wishing to improve their level of fitness.**

Ref: <https://adventure.howstuffworks.com/outdoor-activities/running/training/lactate-threshold-training3.htm>

## ❖ Current Lactate Monitoring Market

- ❖ LT testing can be utilized to determine an appropriate training intensity and monitor progression in athletes/fitness fanatics of all levels. This test is similar to the  $VO_2$  max test, although consists of slightly longer periods of time between changes in workload. This test currently involves several blood samples taken from the finger for the assessment of blood lactate, is invasive, cumbersome, and not aesthetic, and prone to infections from the finger prick blood samples removal.
- ❖ Lactate test kit measures blood lactate in 13 seconds on a very small drop of blood.
- ❖ Wearable Lactate Monitors are not yet on the market and the **BEAT non-invasive lactate Monitor is expected to be a world first.**

# Wearable Technology Devices Market Trend-1

**Global Wearable Technology Market addressing a \$45 Billion Market with 250+ Million Annual Unit Shipments by 2021 <sup>1</sup>**

- Wearable device shipments will grow at a CAGR of approximately 22% between 2018 and 2021. By the end of 2021, wearable devices will represent a market worth \$45 Billion with over 250 Million annual unit shipments.
- Top 5 vendors - Apple, Xiaomi, Fitbit, Samsung and Garmin - collectively account for more than 55% of the market.

## Wearable Technology Devices Market Trend-2

**Wearable Technology Market size in 2015 was valued at \$19.6 Billion, and is expected to reach \$57.6 Billion by 2022 <sup>3</sup>**

- The fitness & sports segment dominated the wearable technology market with over 39% share in 2015
- North America dominated the market in 2015, followed by Europe.

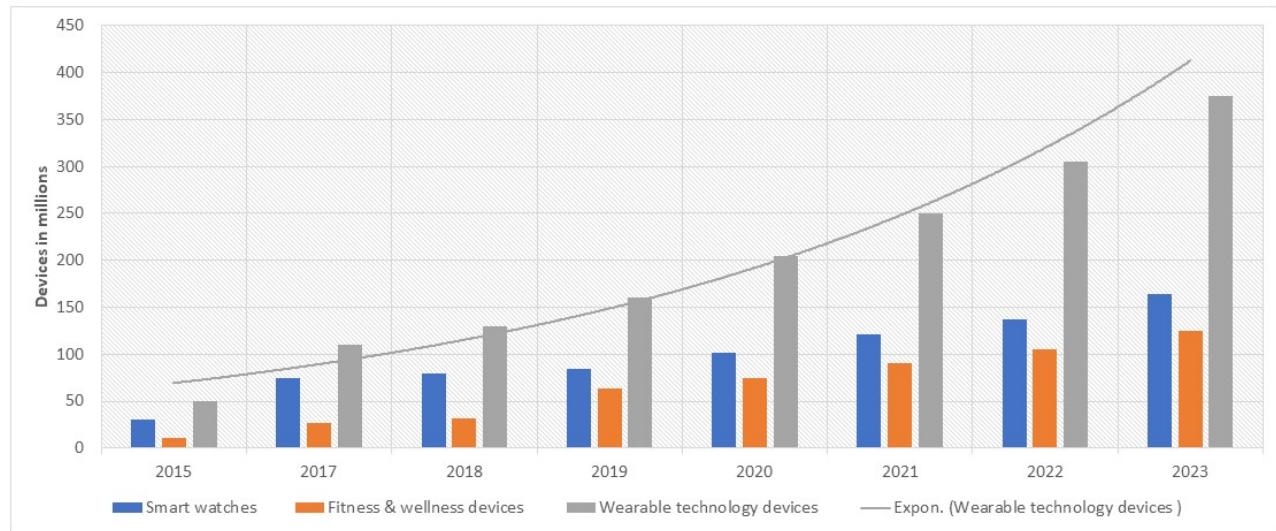
## Wearable Technology Devices Market Trend-3

### Global Wearable Fitness Tracker Market Worth USD 62 Billion by 2023 <sup>4</sup>

- The Global wearable fitness tracker market was valued at \$17,8 Billion in 2017 and is expected to increase at a CAGR of 19.2% by 2023 to value at \$62 Billion.
- Geographically, the market is segmented into North America, Latin America, Europe, Asia-Pacific, and Middle East & Africa.
- The sales of smartwatches and fitness bands in Britain to an estimated four million devices in 2017, up 18% on 2016. <sup>5</sup>



# Wearable Technology Devices Market Size

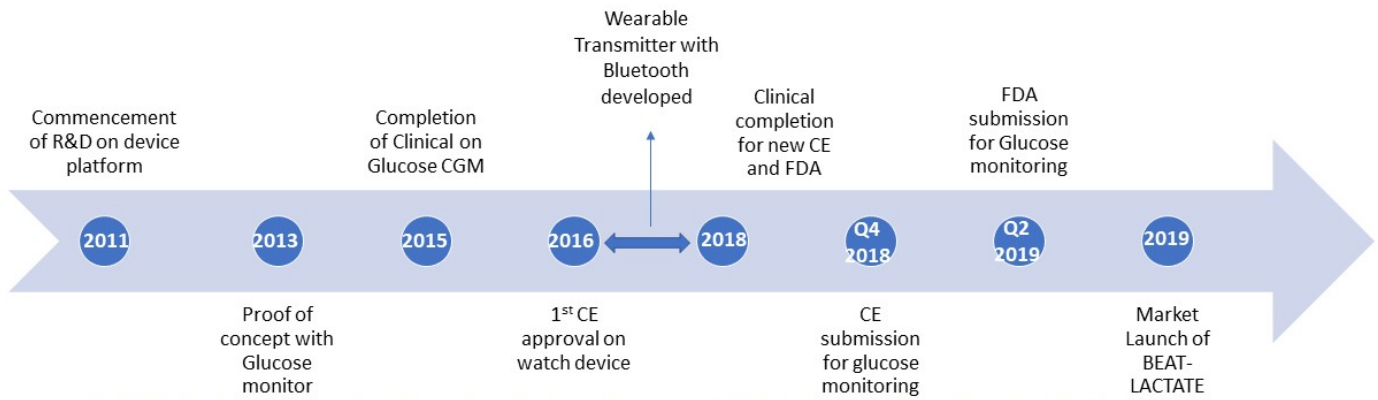


## Pricing

- ❖ Lactate meters are on average £350 (\$455), and up to £45 (\$58.5) per two test strips\*.
- ❖ A person testing once every month with 4 test strips, would incur over \$100 expenditure on consumables, plus the original cost of the meter.
- ❖ NMRD's BEAT lactate will provide continuous data trends and the sensors and transmitter device can be very competitively priced.

\* [https://www.habdirect.co.uk/product-category/medical-equipment/blood-urine-analysis/?pwb-brand-filter=arkray&gclid=EAlaIQobChMIs-mv4YHS4QIVVuh3Ch1JygVKEAAYASAAEgKDafD\\_BwE](https://www.habdirect.co.uk/product-category/medical-equipment/blood-urine-analysis/?pwb-brand-filter=arkray&gclid=EAlaIQobChMIs-mv4YHS4QIVVuh3Ch1JygVKEAAYASAAEgKDafD_BwE)

# BEAT-LACTATE Development Timeline



**NOTE:** The Lactate device is based entirely on the sugarBEAT device and App (i.e., the BEAT technology platform), hence development for lactate is shown in the context of Continuous Glucose Monitoring Application.

## Summary

Continuous non-invasive Lactate monitoring provides a lucrative world first market opportunity to bring an elite training device to the burgeoning global wearable market for fitness training.

Device safety and CE compliance by virtue of the development of the continuous glucose monitoring application reduce the lead time to market, reducing risks and costs for commercialisation.

Developments by Nemauro Medical in non-invasive continuous lactate monitoring provide an early commercialisation opportunity, and the company is evaluating the various routes to market.



# References

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6. [http://www.lactate.com/index\\_blood\\_lactate\\_testing.html?gclid=EAlaIQobChMI2tLymIrs4QIVz5TtCh0HqAI6EAAYAAEgIRrvD\\_BwE](http://www.lactate.com/index_blood_lactate_testing.html?gclid=EAlaIQobChMI2tLymIrs4QIVz5TtCh0HqAI6EAAYAAEgIRrvD_BwE)
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9. <https://www.marketwatch.com/press-release/global-wearable-fitness-tracker-market-worth-usd-62124-mn-by-2023-2018-12-04>
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