UNITED STATES 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 of 1934

May 17, 2016
Date of Report (Date of earliest event reported)

Flex Pharma, Inc.

(Exact name of registrant as specified in its charter)

	Delaware	001-36812	40-508/339		
(State or other jurisdiction		(Commission File Number)	(IRS Employer Identification No		
	of incorporation)				
	800 Boylston Street, 24th Floor Boston, MA		02199		
	(Address of principal executive office	ces)	(Zip Code)		
	Registra	nt's telephone number, including area code: (617)	874-1821		
	eck the appropriate box below if the Form 8-K filit owing provisions:	ng is intended to simultaneously satisfy the filing of	obligations of the registrant under any of the		
	Written communications pursuant to Rule 425	under the Securities Act (17 CFR 230.425)			
	Soliciting material pursuant to Rule 14a-12 und	ler the Exchange Act (17 CFR 240.14a-12)			
	Pre-commencement communications pursuant t	o Rule 14d-2(b) under the Exchange Act (17 CFR 2	240.14d-2(b))		
	Pre-commencement communications pursuant t	o Rule 13e-4(c) under the Exchange Act (17 CFR 2	240.13e-4(c))		

Item 7.01. Regulation FD Disclosure.

A copy of the slide presentation that will be used by representatives of Flex Pharma, Inc. (the "Company") in connection with investor meetings or presentations from time to time (the "Corporate Presentation") is attached to this Current Report on Form 8-K as Exhibit 99.1. The Corporate Presentation is current as of May 17, 2016, and the Company disclaims any obligation to correct or update this material in the future.

The information in this Form 8-K (including Exhibit 99.1) shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

The following exhibit relating to Item 7.01 shall be deemed to be furnished, and not filed:

Exhibit No.	Description			
99.1	Corporate Presentation current as of May 17, 2016			

SIGNATURES

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

Flex Pharma, Inc.

Dated: May 17, 2016

By: /s/ Robert Hadfield

Robert Hadfield

General Counsel and Secretary

INDEX TO EXHIBITS

Exhibit No.	Description
00.1	C

99.1 Corporate Presentation current as of May 17, 2016

FLEXPharma

Novel Treatments for Neuromuscular Conditions

May 2016

NASDAQ: FLKS



FLEXPharma

Forward-Looking Statements

Any statements in this presentation and the oral commentary about future expectations, plans and prospects for the company, including statements about the company's strategy, future operations, development of its consumer and drug product candidates, plans for potential future product candidates and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "suggest," "target," "potential," "will," "approximately," "development plans," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the status, timing, costs, results and interpretation of the company's clinical studies; the uncertainties inherent in conducting clinical studies; results from our ongoing and planned preclinical development; expectations of our ability to make regulatory filings and obtain and maintain regulatory approvals, our ability to develop and commercialize our consumer products; anticipated positioning and product attributes of our consumer products; results of early clinical studies as indicative of the results of future trials; availability of funding sufficient for the company's foreseeable and unforeseeable operating expenses and capital expenditure requirements; other matters that could affect the availability or commercial potential of the company's consumer or drug product candidates; the inherent uncertainties associated with intellectual property; and other factors discussed in the Risk Factors set forth in the company's Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) and in other filings the company makes with the SEC from time to time. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. The forward-looking statements in this presentation represent our views as of the date of this presentation. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this presentation.

This presentation also contains estimates and other statistical data made by independent parties and by the company relating to market size and growth and other data about the company's industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of the company's future performance and the future performance of the markets in which the company operates are necessarily subject to a high degree of uncertainty and risk.

This presentation contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this presentation, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

FLEXPharma

Flex Pharma Overview

 Developing innovative and proprietary treatments for a broad range of painful and debilitating cramps and spasms

Exercise Associated Muscle Cramps

Nocturnal Leg Cramps

MS, ALS, etc

- Novel insights regarding neuromuscular physiology from our co-founders (ion channels and TRP biology, MacKinnon Nobel Prize 2003; NAS members) form the basis of our development efforts
- Nocturnal Leg Cramps: positive human efficacy in a randomized, blinded, controlled cross-over study with statistically significant effects (p<0.05) demonstrated on multiple efficacy endpoints
- Muscle cramps in athletes: statistically significant benefit in a randomized, double-blinded, vehicle-controlled crossover study by Penn State
- Next studies in NLC, MS and ALS with synthesized single agent -- TRPA1 and TRPV1 agonist -- initiating in 2016

FLEXPharma

Management Team and Board of Directors

Management Team

- Christoph Westphal, MD PhD, CEO; Cofounder/Lead investor ALNY MNTA XLRN SIRT Alnara CNCE VSTM OVAS
- · Jennifer Cermak, PhD, Cofounder, VP R&D; Sirtris, Glaxo SmithKline, United Therapeutics, Pfizer
- · Rob Hadfield, General Counsel; Cooley LLP, Kiva Systems, SG Cowen
- · Marina Hahn, President, Consumer Goods; Spirits Marque One (SVEDKA vodka), William Morris, Pepsi
- · Kathie Lindemann, COO; DAVIDs TEA, Starbucks
- John McCabe, VP Finance; Ariad, Charles River Associates, Biogen, Arthur Andersen
- Laura Rosen, MD PhD; AstraZeneca, Shire, Merck
- · Angelene Simonello, VP Corporate and Program Development; Viacell, Biogen
- Thomas Wessel, MD PhD, CMO; JNJ (Razadyne®), SEPR (Lunesta®), ACOR (Ampyra®)
- · Elizabeth Woo, SVP, Investor Relations; Biogen, Ironwood, Cubist

Board of Directors

- Jeff Capello, former CFO Ortho-Clinical Diagnostics; BOD OVAS, former Boston Scientific CFO, PKI, PWC
- · Peter Barton Hutt, former Chief Counsel FDA; Sirtris, Momenta, Concert, Covington and Burling
- Marc Kozin, LEK Consulting, former President of North American practice; BOD OVAS, ECYT, DYAX, UFPT
- Rod MacKinnon, MD, Co-founder, Chair, SAB; Nobel Prize 2003, ion channels; Professor, Rockefeller; NAS
- Rob Perez, former CEO Cubist; former Biogen, BOD AMAG, CDTX
- · Stuart Randle, Ivenix CEO, former CEO GI Dynamics, former CEO ACT Medical, Baxter
- · John Sculley, former CEO Pepsi (current owner of Gatorade), former CEO Apple
- · Michelle Stacy, former Keurig President, Gillette/P&G, BOD iRobot

Scientific Advisory Board & Select Investors

Scientific Advisory Board

Rod MacKinnon, MD, Cofounder, Chair, SAB; Nobel Prize 2003, ion channels; Professor, Rockefeller; National Academy of Science (NAS)





Bruce Bean, PhD, Cofounder, Chair, SAB; Winthrop Professor, Harvard Med; Neurophysiology; NAS

Alfred Sandrock, MD, PhD; Neurologist, Chief Medical Officer of Biogen

Roger Tung, PhD; Medicinal chemist, Vertex, Merck (inventor multiple drugs); CEO, Concert

Chris Walsh, PhD; Professor Emeritus, Harvard Med; Genzyme, Verastem, Sirtris; NAS

John Winkelman, MD, PhD; Chief Sleep Disorders, MGH; BWH, RLS clinical development

Sports Team investors

Wyc Grousbeck, Managing Partner, Governor, CEO Boston Celtics

KPC Venture Capital (Kraft family), Owner New England Patriots, New England Revolution

PagsGroup (Steve Pagliuca), Managing Partner, Bain Capital; Managing Partner, Boston Celtics

Mark Wan, Causeway Partners; Minority Owner: Boston Celtics, SF 49ers

Christoph Westphal, Minority Owner Boston Celtics

Biotech investors

Rick Beleson, retired SVP, Capital Research Co
Peter Lynch, Trustee, The Lynch Foundation
John Maraganore, PhD, Biogen, MLNM, CEO Alnylam

FLEXPharma

Large and Diverse Market Opportunities

Prescription Drug Nocturnal Leg Cramps

Sudden painful contraction reducing sleep quality

No drug approved in the U.S.

Spasticity in Severe Neuromuscular Conditions

Multiple Sclerosis, ALS/Motor Neuron Disease





U.S. Patient Population

- 37% prevalence for 50+ yo¹
- ~4M over 65 yo suffer daily²

U.S. Patient Population

MS: 250K – 350K patients³

ALS: 12K patients⁴

Consumer Brand

Exercise Associated Muscle Cramps (EAMCs)

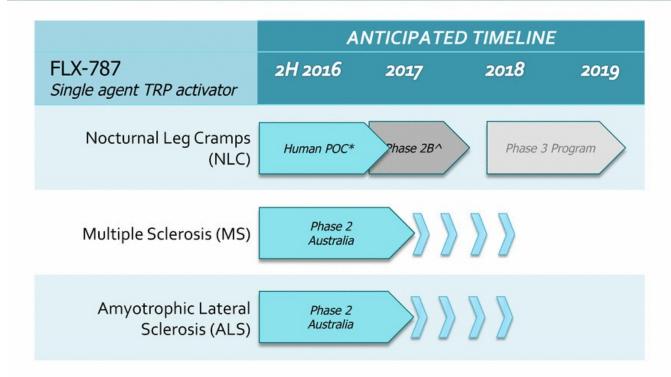


U.S. Market

- Initial target: athletes engaging in high-intensity sports
- Potential future targets: casual sports participants
- 1 Naylor & Young, A General Population Survey of Rest Cramps, Age and Ageing 1994.23 418-420
- 2 Management estimates based on third party survey results
- 3 National Institute of Neurological Disorders and Stroke
- 4 Morbidity and Mortality Weekly Report July 2014

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Flex Pharma Development Path



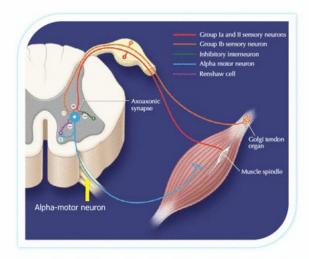
All Studies are randomized, controlled, blinded
*Study conducted under dietary supplement guidelines. Single agent TRP activator referred to as BV-164 for this study.

^ Subject to FDA review of IND application

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Neurogenic Origin of Muscle Cramping/Spasms

Cramps and spasms are generally NOT caused by dehydration, lactic acid build-up or electrolyte imbalances affecting the muscle

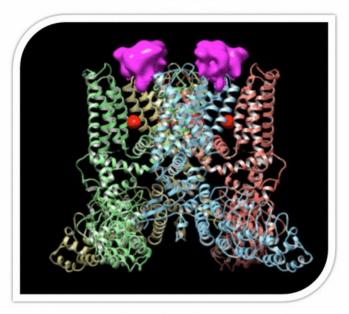


- Muscle cramping is caused by excessive firing of alpha-motor neurons in the spinal cord, which trigger a painful contraction of the muscle
- Repetitive muscle use induces hyperexcitability of alpha-motor neurons, causing them to fire excessively and trigger cramping

Hyperexcitability of alpha-motor neurons is also a likely basis for spasticity and spasms

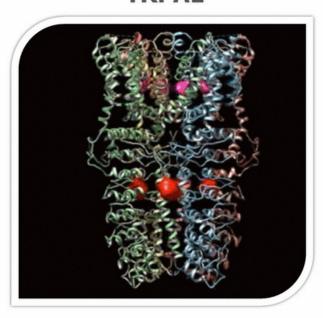
TRP Ion Channel Co-crystal Structures – Flex Drug Targets in Two Recent Nature Papers

TRPV1



E. Cao, M. Liao, Y. Cheng and D. Julius, Nature, 5 Dec 2013

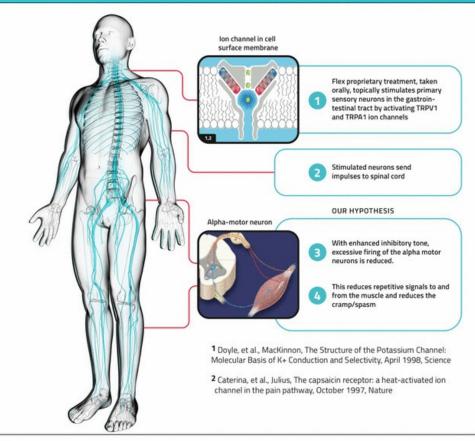
TRPA1



C.E. Paulsen, J. Armache, Y. Gao, Y. Cheng and D. Julius, Nature, 8 April 2015

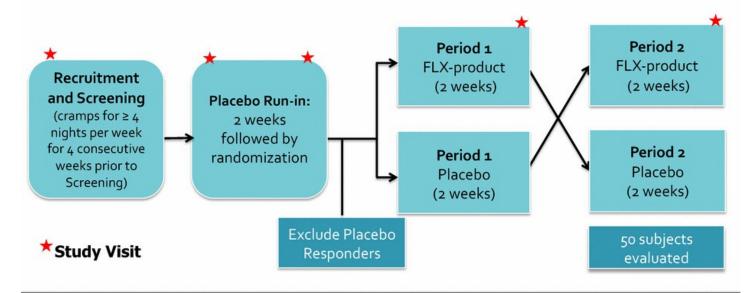
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Therapeutic Mechanism: Chemical Neuro Stimulation



NLC Proof-of-Concept Study of Extract Formulation

- · Randomized, blinded, controlled, cross-over design with extract formulation
- Evaluated 50 healthy subjects (50-77 years of age) who experienced nocturnal leg cramps at least four nights per week.



AAN 2016: Selected for Late-Breaking Presentation Positive Human Efficacy in Nocturnal Leg Cramps

Selected for podium presentation at AAN 2016 (only 1 of 14 late-breakers)

· Statistically significant effects demonstrated on multiple efficacy endpoints

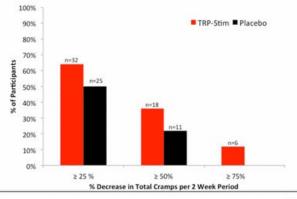
		Mean		Median				
Change from Baseline in:	TRP- Stim Placebo		p-value	TRP- Stim	Placebo	p-value*		
Total Cramps/ Period	-7.0	-5.0	<0.05	-6	-4	<0.05		
Total Cramp-Free Days/ Period	2.3	1.3	<0.01	2	1	<0.01		
CGI	3.1	3.6	<0.01	3	4	<0.01		
VAS Pain Intensity • Mean / Period • Mean / Last 3 Days of Period	-6.7 -7.5	-3.6 -4.3	0.051					
Insomnia Severity Index (5 items):	TRP- Stim	Placebo	p-value					
Sub-question Q1b: Difficulty staying asleep**	39%	33%	<0.05					

p-values from Wilcoxon Signed Rank Test

 The positive effects were seen across a broad range of enrolled subjects; in addition, a subset of patients showed pronounced benefit. Patient benefit appears clinically meaningful.

Clinical Global Impression of Change (CGI-C) by Treatment. Responders were defined as those who scored 1 or 2 on the CGI-C, as assessed by the site principal investigators. TRP-Stim beverage treatment led to 40% of subjects being considered Responders vs. only 24% with Placebo beverage.

Scale (Score)	Period 1 N=62			Flex-Aid N=50			Placebo N=49		
Very Much Improved (1)	1	(2%)	7	(14%)	3	(6%)
Much Improved (2)	6	(10%)	13	(26%)	9	(18%)
Minimally Improved (3)	7	(11%)	16	(32%)	11	(22%)
No Change (4)	34	(55%)	8	(16%)	18	(37%)
Minimally Worse (5)	8	(13%)	1	(2%)	3	(6%)
Much Worse (6)	1	(2%)	2	(4%)	0	(0%)
Very Much Worse (7)	5	(8%)	3	(6%)	5	(10%)



^{**} Responder analysis (answer of 'none' or 'mild')

Green = statistically significant; amber = trend toward significance

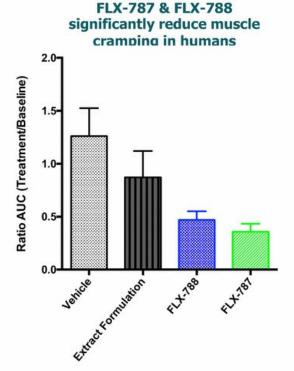
AAN 2016: Summary & Conclusions

- Treatment with TRP activators resulted in statistically significant effects on clinically meaningful endpoints:
 - cramp frequency (p<0.05)
 - cramp-free days (p<0.01)
 - physician-rated Clinical Global Impression of Change (p<0.01)
 - "difficulty staying asleep" (p<0.05)
 - VAS pain intensity over the last 3 days of each treatment period (p<0.01)
- The magnitude of efficacy in this study on reduction in muscle cramps appears similar to published "Class 1 level" quinine efficacy studies.
- Extract formulation was safe and well-tolerated; no SAEs reported.
- Chemical Neuro Stimulation of TRPV1 and TRPA1 channels in the oral mucosa may be a generally applicable method to treat disorders stemming from α -motor neuron hyperexcitability.

Human Efficacy: Synthesized Single Molecules & No Measurable Systemic Exposure

Presented at ECTRIMS and Society for Neuroscience, October 2015

- In normal healthy volunteers (n=9), cramps were electrically elicited, followed by 1h and 2h measurements after dosing
- Treatment arms of synthesized single agents FLX-787 & FLX-788 capable of activating both TRPA1 and TRPV1 strongly, statistically significantly reduced human cramp intensity relative to vehicle control
- Both FLX-787 and FLX-788 provided a significant 2-fold improvement in efficacy compared to the original extract formulation
- Initial Human PK (n=2) indicates no measurable systemic exposure; Parent form not detectable in plasma



Oral Disintegrating Tablet (ODT)



NLC Market Opportunity

Unmet Need

- Sudden painful contractions negatively impacting sleep and quality of life
- No drug approved in the U.S. In 1994, FDA banned use of quinine for treatment of leg cramps due to association with serious and life-threatening adverse events (primarily thrombocytopenia)

Affected U.S. Population

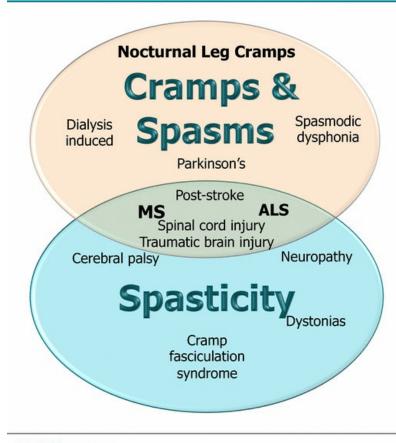
- 37% prevalence for 50+ yo¹
- Approximately 4M people over 65 yo suffer daily²
- NLC population increasing dramatically given aging US demographics

Significant Demand

- 4.5 Million Quinine sulfate prescriptions in 2013 in UK (1/5 of the US population)
- 1 Naylor & Young, A General Population Survey of Rest Cramps, Age and Ageing 1994.23 418-420
- 2 Management estimates based on third party survey results
 *Two published studies of quinine treatment in muscle cramps that were categorized as Class I level of evidence by Katzberg et al for the American Academy of Neurology in 2010:
- Randomised controlled trial of hydroquinine in muscle cramps. Jansen et al, Lancet 1997; 349: 528-32.
- Effectiveness of quinine in treating muscle cramps: a double-blind, placebo-controlled, parallel-group, multicentre trial. Diener et al. Int J Clin Pract. 2002 May;56(4):243-6. Comprehensive meta-analysis of quinine studies by the Cochrane Collaboration in 2010.

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Potential across Many Indications



- Muscle cramps is a common occurrence in healthy and neurological populations
- Large unmet medical need, not covered by quinine or other drugs like benzodiazepines
- Chemical Neuro Stimulation implies topical application and rapid reflex-like response
- Expect minimal to no systemic exposure, no anticipated drug-drug interactions, good option for polypharmacy patients

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Upcoming Milestones

- ✓ Feb: Results of NLC study with extract formulation
- ✓ Apr 19: Late-breaking NLC results selected by AAN for podium presentation
- Q2 2016: Consumer product limited launch in 3 markets
- 2016: Initiate MS study ex-US with FLX-787, subject to regulatory approval
- 2016: Initiate ALS study ex-US with FLX-787, subject to regulatory approval
- 2016: Initiate single agent NLC study
- H1 2017: IND filing

Flex Pharma Consumer Brand

Introducing a groundbreaking category-defining product that solves a medical mystery

The Equation

Breakthrough, Efficacious PRODUCT



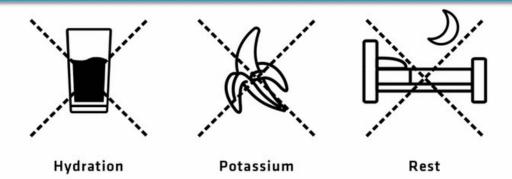
Culturally Relevant, magnetic LIFESTYLE BRAND HUGE OPPORTUNITY

Building a Cult Brand



Heretical Belief System

Existing "remedies" – that claim to treat the muscle – do not work



The Latent Need

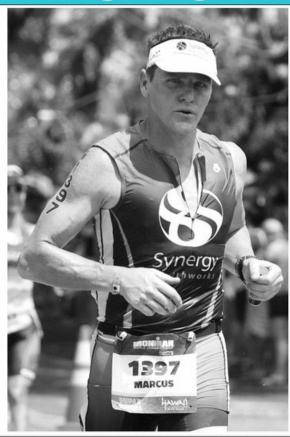
A loss of *power, achievement,* and *control* for people who are obsessed with all three - and, perhaps, further humiliation since cramps are (falsely) associated with failure to train properly

 \rightarrow

Potential for a high level of emotional engagement

THE TARGET	THE MUSCLE CRAMP		
over achieves	achievement prevention		
want to be immortal	body betrays them		
are control freaks	loss of control		
is defined by their sport	loss of identity		
is uber confident	humiliation		

Evangelizing Subculture



High propensity for muscle cramps

 We estimate 17 million endurance athletes in the US (ages 18+) experience muscle cramps monthly

High consequence for cramping:

- A performance killer

Experimenters

Constant quest for new products to control their body's performance

Affluent

- Willing to pay a premium

Tight subcultures

High levels of peer-to-peer knowledge sharing

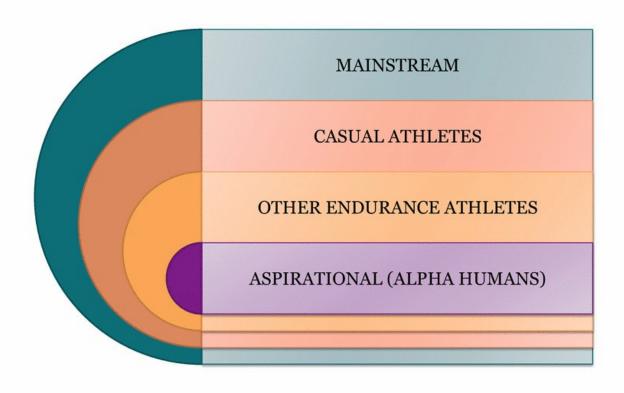
Event driven

Great for 1-to-1 marketing

Growing, trending market

- Especially cycling and triathlons

Target Evolution



Intensely Persuasive



PRODUCT

- 50ml
- Scientifically Proven to Treat & Prevent Cramps
- Certified NSF, USDA Organic, non-GMO, Gluten-free, Kosher

FOUNDER

- Endurance Athlete
- Nobel-prize Winner

EVIDENCE

- Real Athlete Testimonials
- Scientific Research + PSU Athletic cramp model

Positive Effect on Athletic Human Muscle Cramps

"I am not aware of any other consumer product that has demonstrated significant efficacy in mitigating muscle cramps in a rigorous double-blinded scientific study."

-- Dr. W. Larry Kenney, Professor at the Noll Laboratory at PSU

Presented at Experimental Biology by PSU (April 2016)

- Oral consumption of a mixture of TRPV1 and TRPA1 agonists prior to exercise mitigated muscle cramp intensity and perceived soreness.
- Overall muscle activity during cramping (integrated area of EMG intensity-duration curve) was reduced with the active treatment.

 Self-reported ratings of muscle soreness were lower within the first 20 minutes after cramp cessation with the active treatment.

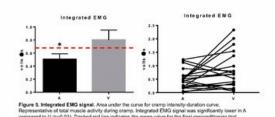


Figure 3. Experimental set up. Six recording EMG electrodes were affixed to all three heads of the triceps surse. EMG and muscle force were continuously measured during MVC and throughout the muscle cramp. all-induced cramp model:

Self-induced cramp model:
 1. Triceps surae placed in pre-shortened position.

Maximal voluntary isometric contraction of triceps surae until initiation of cramp (up to 90 seconds).

Upon cramp initiation, subject halted MVC, remained still and relaxed until cessation
of the muscle cramp.

Inspiring Origin Story

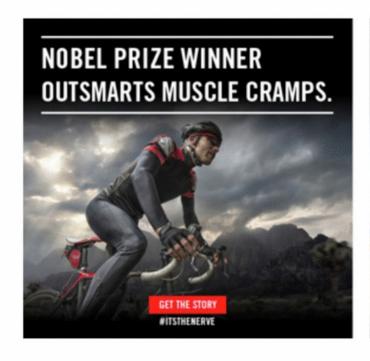
While sea kayaking he suffered debilitating muscle cramps
Rod the athlete was frustrated
Rod the scientist set out to find a solution

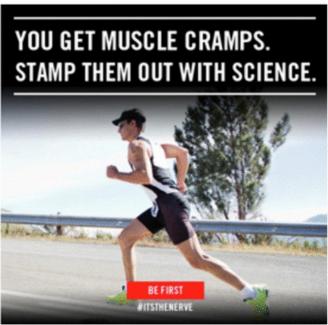
Nobel Prize winning neuroscientist

Endurance Athlete



Digital Media





Print Media



ADVERTORIAL

NOBEL PRIZE WINNERS ARE SORE LOSERS.



When muscle cramps hit Dr. Rod MacKinnon white kayaking in rough waters of it Clope Oxf, two things smoked him like a raping rapid for and insight. The file of being stack in deep, shank filled water of being stack in deep, shank filled waters triggered a moment of realization farth triggered as moment of realization farth Nobel Pice-winning resurroisment, the wassifging to go out like that. Minners short lose to fear—they pioneer and persevere.

This set him on course to invent the most effective way to prevent and their miscole cramps. Along with fellow kaysker and Narvacd Medical School professor, 0r. Bruce Bear, Rid used his operficia in semiscission—the part to the beard, or some procision—the nerve, of muscle cramps. Treating the nerve included of the miscole was the game changing evolution that left to an incredible discovery, and the provision that left to an incredible discovery.

LEAVE MUSCLE CRAMPS IN THE PAST.

It's easy. You want to maximize your athletic performance and we are coming out with a new bewrage that will holy you do just that. He will help you ready your petentia, and not in a insprational poster wind of any What were making is nothing poster game changing. You'll be able to take it before any athletic endeavor to prevent cramps or the antennance and the contract muscle cramps when they strike. You will use it to transfer yourself into an unstropable force. Can you imagine a drink that will do all of this? We dod. Then we made it. Soon, it will be mady, Are you!



IT'S THE NERVE, NOT THE MUSCLE.



Rod and Bruce went full-on "mad scientist"—essenching, exploring, testing, and electrings—out file fault, they came up with a genius solution that will change athletic performance as we know it. Cell ready for a blast of science, lor channels in the modith and showach, when activated by contain natural ingredient with the minimum control of the time of the control of the science of the control of the science of science sci get Inperactive, they brigger muscle cramps. We can all agree that's a bad thing. But, thenks to find and foreign stress through discovery, we now know how to effectively frind cramps by controlling the nerves. That's a good thing! Son, we'll be able to fair as a small shot — a proprietary formulation of natural ingredients. That will prevent and freat muscle cramps like never before.

THANKS, GROUNDBREAKING NEUROSCIENCE.

Beverage is currently being prepared

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FLEXPharma

Q2 Launch



Available within weeks

- Scientifically proven
- Premium value
- Retail presence in 3 markets
- Branded website
- Face-to-face events to cultivate influencers
- Authentic brand ambassadors
- Word of mouth amplified through social media

Financial Profile

- NASDAQ: FLKS
- \$84.4 M Cash balance as of 3/31/16
- · Cash through mid-2018 based on current operating plan
- ~17.9 million shares outstanding
- · No debt

FLEXPharma

Novel Treatments for Neuromuscular Conditions

NASDAQ: FLKS

Broad Intellectual Property

Prosecuting several patent applications

- Methods and compositions for preventing, treating or ameliorating muscle cramping and/or accelerating nerve-muscle recovery from exercise fatigue
- Compositions of ion channel activators and methods of preparation, formulation, and the medical use of these compositions

One provisional patent application filed in the U.S.

 Method and compositions for unwanted or abnormal muscle contraction (single and combination molecule TRP activators)