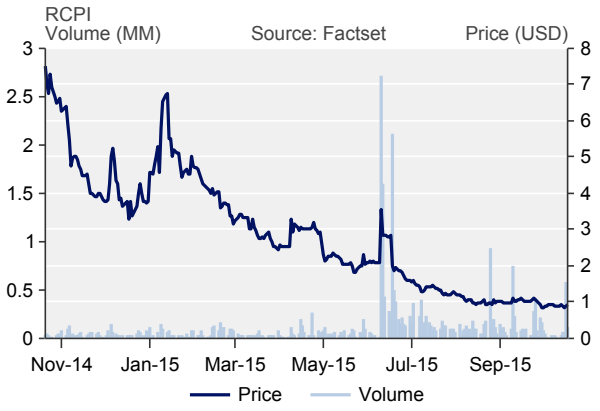
Biotechnology

RCPI - NASDAQ October 19, 2015

Closing Price 10/19/2015	**$0.83**
Rating:	Buy
12-Month Target Price:	$4.00
52-Week Range:	$0.76 - $8.50
Market Cap (M):	9
Shares O/S (M):	10.9
Float:	99.9%
Avg. Daily Volume (000):	135
Dividend:	$0.00
Dividend Yield:	0.00%
Risk Profile:	Speculative
Fiscal Year End:	December

Total Expenses ('000)

	2015E	2016E	2017E
1Q	3,819A	3,264	3,766
2Q	2,024A	3,314	3,836
3Q	2,024	3,414	3,976
4Q	2,024	3,464	4,046
FY	9,891	13,456	15,625



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Rock Creek Pharmaceuticals — Buy

Initiating Coverage with a Buy Rating and $4 Price Target: Taking a Successful Nutraceutical to the Clinic

Summary

- **Rock Creek's lead product, anatabine citrate, which is derived from the natural anti-inflammatory compound, anatabine (from the tobacco plant), is in clinical development for the treatment of psoriasis. Anatabine was a successful nutraceutical ("Anatabloc") used by more than 500,000 people, primarily to alleviate inflammation conditions, like osteoarthritis. There was also anecdotal evidence supporting anatabine citrate exerted on psoriasis. As the product gained popularity, it came across the FDA's radar screen. Subsequently, the company voluntarily withdrew the product from the US market and entered into a development stage to investigate anatabine citrate's clinical benefits.**
- **The company has just completed an ex-US phase I study consisting of three parts to target psoriasis as an initial indication. The initiation of a follow-up Ib study is set for 1Q16.**
- **We also note that anatabine citrate's IND is currently on an FDA clinical hold pending additional PK and safety data requested by the FDA. Rock Creek's regulatory strategy is to complete a single-site phase Ib/IIa trial in the EU and prepare data for a multi-site phase IIb trial, which includes the US. The FDA's approval for the phase IIb trial is expected in 2Q16.**
- **We believe, based on the large amounts of established user data (reports from the Anatabloc users), support the compound's effectiveness as an anti-inflammatory and mitigates much of the risk associated with the product. We see psoriasis (an inflammatory disease manifesting in the skin) as the first of multiple possible indications – the "low-hanging fruit" opportunity. We expect our first look at trial data by year's end. We believe that this catalyst, coupled with a distressed valuation, equals an opportunity for investors.**

Details

From nutraceutical to drug; anatabine to anatabine citrate. The company has transformed from successfully selling anatabine as a dietary supplement (Anatabloc), reported to have anti-inflammatory effects, to developing anatabine as a drug, "anatabine citrate." Citrate is a benign carrier agent for pharmaceuticals and, thus, likely has not altered the properties of anatabine. The company voluntarily withdrew its commercialization of Anatabloc as a dietary supplement since it appeared to have a clinical benefit. Many of the more than 500,000 end users of Anatabloc were using it to alleviate inflammatory diseases. **Anatabine citrate targets two key inflammatory pathways.** It is a small molecule with anti-inflammatory properties that binds to cholinergic receptors on the surface of immune cells and shuts down the signaling pathways responsible for driving inflammation. Anatabine citrate's binding and suppression of inflammation is unique in that it effectively suppresses two key mediators of inflammation, the transcription factors NF-kB and STAT3, while many other drugs only suppress one or the other. NF-kB and STAT3 drive the expression of damaging inflammatory cytokines like TNF-alpha, which is the target of blockbuster drugs like Humira, Remicade, and Enbrel. We see psoriasis as an ideal initial indication for anatabine citrate. Anatabine citrate efficacy should be relatively easy to observe through changes in skin lesions as measured by the PASI (Psoriasis Area Severity Index) scoring system.

Conclusion. Our current assumption is that anatabine citrate is approved and launched by 2020. We believe the success of the prior nutraceutical form of anatabine as an anti-inflammatory in more than 500K users partially mitigates the risks. Nevertheless, we apply a discount rate of 30% to our free-cash-flow, discounted-EPS, and sum-of-the-parts models, which are equally weighted to derive a $4 price target.

CORPORATE PROFILE

Rock Creek Pharmaceuticals, Inc.
2040 Whitfield Ave., Suite 300
Sarasota, FL 34243
www.rockcreekpharmaceuticals.com

Investment Risk:
Rock Creek Pharmaceuticals is an early clinical-stage, drug development company that currently has no commercialized products.

Regulatory Risk:
The company's products may not be successful in current and future clinical trials.

Financial Risk:
The company is not yet profitable and may need to raise additional capital to continue funding operations.

Ownership:
Insiders – 75%
Institutional – 11%

Balance Sheet Summary:
$3.7M in net proceeds from offering in June 2015 and $20M in convertible notes in multiple tranches.

Company Background. Rock Creek Pharmaceuticals is an emerging drug development company focused on the discovery, development, and commercialization of new drugs, formulations, and compounds that provide therapies for chronic inflammatory disease.

The company's development activities are currently focused on its leading compound, anatabine citrate, which is a small molecule with anti-inflammatory properties. Prior to September 2014, the company marketed and sold an anatabine-based dietary supplement under the name "Anatabloc" together with other anatabine-based products, reaching more than 500,000 end users who used Anatabloc to ameliorate conditions of inflammatory diseases, including osteoarthritis and psoriasis. The company has voluntarily discontinued the marketing and sale of such products, and narrowed the focus to pharmaceutical development activities primarily centered on anatabine citrate as a lead drug candidate.

The company's strategy is to leverage the underlying science, and clinical data previously accumulated, in part from commercialization of the prior anatabine-based products, to advance pharmaceutical development programs. The company currently has an ex-US, three-part, phase I trial underway to evaluate the anti-inflammatory effects of anatabine citrate: part one was completed in New Zealand to study the PK profile of anatabine citrate as a nutraceutical and reported human proof of principle data showing anatabine citrate lowering inflammatory responses in peripheral white blood cells after oral administration; part two and part three were approved by the UK Medicines and Healthcare Products Regulatory Agency (MHRA), with part two primarily implemented to evaluate the effects of food on PK parameters and part three to identify the optimal formulations in healthy subjects.

The company believes its technology appears to adequately and safely modulate the anti-inflammatory signaling pathway process, as it has proven in vitro and in vivo, thus compelling the company to embark on further human clinical study and FDA regulatory development. Rock Creek has a growing patent portfolio, including issued patents for the pharmaceutical composition of matter, as well as large-scale commercial synthesis and "use," and patents pending, both domestically and internationally, for the compound's isomers and derivative formulations.

Senior Management:
Michael J. Mullan, Chairman, MD, PhD, President, and CEO. Dr. Mullan is a global leader in medical research. From 2003 until present, Dr. Mullan served as Chief Executive Officer and President of the Roskamp Institute, an independent biomedical research establishment in Sarasota, Florida. He most recently served as Chief Executive Officer of Archer Pharmaceuticals, Inc., which, under his direction, advanced a drug to phase III clinical trials for Alzheimer's disease in Europe. Dr. Mullan trained first as a physician specializing in the assessment and treatment of Alzheimer's disease. He was one of the first to discover the genetic causes of Alzheimer's disease, and is the inventor of numerous patents related to the causes and treatments of the disease. He has co-authored more than 200 research papers on the causes (including the role of inflammation) and treatments of neurological disorders. Dr. Mullan received his medical degree, MBBS, and PhD in Molecular Genetics from London University.

Ryan K. Lanier, PhD, CSO. Dr. Lanier has been with Rock Creek since August 2009. Since joining Rock Creek Pharmaceuticals, Dr. Lanier has overseen the preclinical (toxicological, pharmacological, and behavioral), and clinical development of Rock Creek's lead compound, anatabine citrate, and worked closely with Rock Creek's CMC group on product formulation. Dr. Lanier has dedicated his career to investigating the interactions between the CNS and the immune system, evaluating the impact that drugs of abuse have on personal and public health, and developing new treatments and harm reduction options for those who are unable to quit abusing psychoactive substances. He received his PhD in Biological Psychology from the University of North Carolina at Chapel Hill, and completed a three-year postdoctoral fellowship within the Behavioral Pharmacology Research Unit (BPRU) at Johns Hopkins University School of Medicine.

INVESTMENT SUMMARY

The bull case. Rock Creek Pharmaceuticals has an extensive (three parts) phase I trial (data were just recently reported) in the EU investigating its lead compound, anatabine citrate, potentially targeting psoriasis. Psoriasis is a common chronic skin disease affecting approximately 2% of the US population (9M people) and represents a $7 billion dollar-plus market. Anatabine citrate may represent a lower cost, efficacious therapeutic for psoriasis versus the current drug, armamentarium. Anatabine was originally sold by Star Scientific (now Rock Creek) as an antioxidant/anti-inflammatory dietary supplement (Anatabloc) in GNC stores (General Nutrition Centers: GNC $40.75 NR). Many of the original users were using anatabine for autoimmune conditions, including psoriasis and osteoarthritis, and reporting symptom relief. During this period, the compound was used by up to 500,000 people. As such, we believe, with regulatory approval, we could see rapid uptake. Anatabine's market reception as a dietary supplement is risk mitigating, as the molecule is being re-tasked at the clinical level. Combined with a low valuation, bulls see a low risk/high reward opportunity for investors today.

The bear case. Anatabine citrate is a repurposed dietary supplement. Though supplement users claimed anti-inflammatory effects, there is no controlled clinical trial data to support the claims. Anatabine citrate is now only in the very early stages of clinical development (phase I), being conducted ex-US. Rock Creek's IND for anatabine citrate is on FDA clinical hold pending additional data, which could further extend timelines for development. In addition, due to the early stage of development, the company will likely need to raise capital multiple times at a very low valuation, which could dilute shareholders. With that being said, it should also be noted that the >$7B psoriasis market is dominated by big pharma biologics, like Enbrel, Humira, and Remicade, which could make market penetration (if approved) difficult.

Our take. We believe management has a strategic clinical plan to transition a formerly successful dietary supplement with anti-inflammatory effects to the clinic. Anatabine citrate decreases the expression of two key drivers of inflammation, NF-kB and STAT3, resulting in decreases in pro-inflammatory cytokines that damage tissue. However, the IND is on clinical hold pending additional safety data requested by the FDA. We are optimistic that comprehensive data from two ongoing parts of the ex-US phase I study (expected 4Q15) should be sufficient to lift the FDA clinical hold, marking the beginning of clinical development in the US, possibly starting at the phase Ib/II stage. Anatabine citrate initially will be developed for psoriasis, an autoimmune disease manifesting in the skin, and is a $7.4B market in the US alone. Though the existing market of psoriasis is dominated by big pharma biologics to treat severe conditions, there is no direct competition for Rock Creek, because anatabine citrate is targeting mild to moderate conditions of psoriasis, which represent 80% of the market opportunity.

Psoriasis may be the ideal starting point for anatabine citrate clinical development since it is a skin disease, which should make observing efficacy fairly straight forward. Skin biopsies should detect reductions in inflammatory markers, and changes in psoriasis skin lesions can be observed with relative ease using the PASI (Psoriasis Area and Severity Index) scoring system. PASI should be an approvable primary endpoint. We see psoriasis as a low risk/high reward opportunity. Further mitigating risk is the previous success of anatabine as a dietary supplement (Anatabloc) that was reported by many of its 500,000 users to reduce the inflammation and associated manifestations of multiple autoimmune diseases, including psoriasis. In conclusion, we see an undervalued company, an asset that, although in early in "clinical" development, has had success as a dietary supplement in a large population and the right initial indication in psoriasis translating into a low risk investing opportunity with significant upside.

Rock Creek finances. Rock Creek Pharmaceuticals closed a $3.7 million offering in June 2015. On October 15, 2015, the company entered into definitive agreements with several institutional investors relating to a private placement of $20.0 million in principal amount of senior secured convertible notes due on October 15, 2018. The convertible notes will be payable in 20 monthly installments, mature 36 months from issuance, and will accrue interest at 8.0% per annum from the date of issuance. The company is now funded through initial clinical trials. Rock Creek recently completed a reverse split (1:25, 2Q15) and up-listing to NASDAQ. The company currently only has 9.7M shares outstanding.

Exhibit 1. Upcoming Rock Creek Pharmaceuticals pipeline

Product	Indication	Geography	Event	Timeline	Impact
Anatabine Citrate	Psoriasis	United Kingdom	Phase I trial part 2 completion	complete	+
Anatabine Citrate	Psoriasis	United Kingdom	Phase I trial part 3 preliminary results	complete	+
Anatabine Citrate	Psoriasis	United Kingdom	Phase I trial completion (all three parts)	complete	+
Anatabine Citrate	Psoriasis	United Kingdom	Phase I trial part 3 follow up data	YE-2015	+
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Phase 1b/2a trial initiation	1Q16	++
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Phase 1b/2a trial data	2H16	++
Anatabine Citrate	Osteoarthritis	EU/w/ US sites included	Initate phase 2	YE2016	++
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Phase 2b trial initiation (n=150)	1H17	++
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Phase 2b trial top-line data	YE2017	++
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Initiate two parallel phase III pivotal studies	1H18	++
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Phase III topline data and NDA submission	2H19	+++
Anatabine Citrate	Psoriasis	EU/w/ US sites included	Approval and launch	2020-21	+++

Stock Significance Scale: + of moderate importance; ++ higher level; +++ highly

Source: Maxim Forecasts and Company reports.

ANATABINE AND ANATABINE CITRATE

Anatabine is one of the minor alkaloids found in plants in the Solanaceae family, which includes the tobacco plant and tomato. Commercial tobacco plants typically produce alkaloids at levels between 2% and 4% of total dry weight, with nicotine accounting for about 90% of the total alkaloid content, and the related compounds, anatabine, nornicotine, and anabasine, making up nearly all the rest. Anatabine has a similar chemical structure to nicotine and, thus, may have immunomodulatory properties, but it is non-addictive and non-toxic at therapeutic doses.

Anatabine was once marketed and sold as a dietary supplement under the name, Anatabloc, providing anti-inflammatory support for patients suffering from chronic inflammatory diseases, such as arthritis, joint pain, psoriasis, etc., through the company and GNC's franchise network. Since 2013, Anatabloc and other anatabine-based products have been voluntarily removed from the market, and the nutritional supplements are no longer available. Previous user experience suggested that anatabine could ameliorate chronic inflammatory symptoms and was generally well tolerated. Preclinical data also have exhibited the anti-inflammatory effects of anatabine that potentially regulate pro-inflammatory cytokine production by inhibiting NF-kB and STAT3 signaling. NF-kB and STAT3 are transcription factors that control both mutually distinct and overlapping groups of genes during inflammation and tumorigenesis, which means some of these genes overlap and require transcriptional cooperation between the two factors. Therefore, the ability to inhibit both signaling pathways can result in the successful reduction of both NF-kB and STAT3, thus significantly leading to the suppression of inflammatory activities. It is likely that the inhibition of STAT3 and NF-kB is consequent to the inactivation of GSK-3b by anatabine, as both STAT3 and NF-kB activation are highly dependent on GSK-3b.

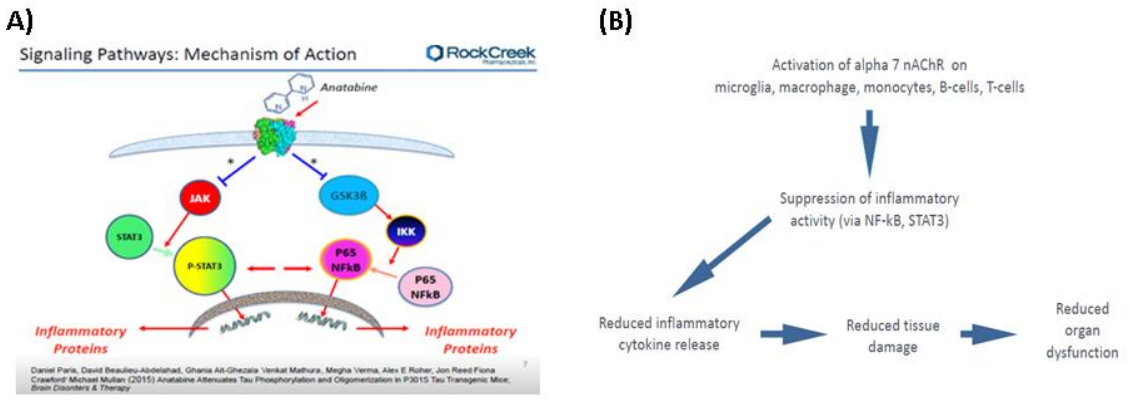
Currently, the company is focusing on developing anatabine citrate for clinical use. Anatabine citrate is a small, molecular, cholinergic agonist that exhibits anti-inflammatory pharmacological characteristics, with a mechanism of action distinct from other anti-inflammatory drugs available, such as biologics and steroids. Anatabine has demonstrated anti-inflammatory activity in vitro and in vivo. Rock Creek Pharmaceuticals has sponsored extensive pre-clinical studies covering models of multiple sclerosis, Alzheimer's disease, and autoimmune thyroiditis, from which anatabine has demonstrated anti-inflammatory effects with excellent bioavailability and the ability to cross the blood-brain barrier. It is shown in the preclinical study and animal model that oral administration of anatabine citrate can down-regulate the NF-kB and STAT3, leading to the suppression and reduction of pro-inflammatory cytokines.

Exhibit 2. Upcoming Rock Creek Pharmaceuticals pipeline

Product	Indication	Development	Pre-clinical	Phase I	Phase II	Phase III	Marketed
Anatabine Citrate	Psoriasis						
Anatabine Citrate	Ulcerative Colitis						
Anatabine Citrate	Oesteoarthritis						
Anatabine Citrate	Smoking cessation						
Anatabine Citrate	Hashimoto's thyroiditis						

Source: Maxim research and company reports

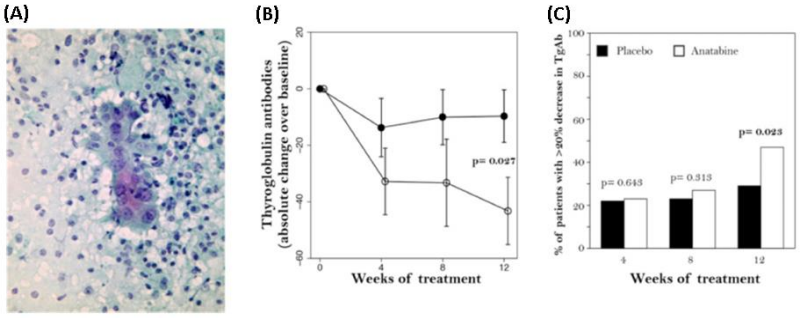
Exhibit 3. Anatabine disrupts the pro-inflammatory transcription factors, NF-kB and STAT3. (A) Anatabine is being investigated as an anti-inflammatory agent that mitigates inflammation by inhibiting both the NF-kB and STAT3 pathways. **(B)** Anatabine's proposed mechanism of action is shown below. Alpha7 nAChRs are a type of nicotinic acetylcholine receptor that binds various chemical stimuli. Anatabine activates alpha7 nAChR receptors on the cell surface, which then leads to both NF-kB and STAT3 suppression, and subsequent reductions in pro-inflammatory cytokine production. Hyper-production of cytokines exacerbates the autoimmune response, causing tissue damage and organ dysfunction.



Source: Daniel Paris, David Beaulieu-Abdelahad, Ghania Ait-Ghezala, Venkat Mathura,, Megha Verma, Alex E Roher, Jon Reed, Fiona Crawford1, Michael Mullan, (2015) Anatabine Attenuates Tau Phosphorylation and Oligomerization in P301S Tau Transgenic Mice; Brain Disorders & Therapy and Rock Creel Pharmaceuticals presentation.

Exhibit 4. Anatabine supplement (Anatabloc) reduced inflammation in Hashimoto's thyroiditis. Hashimoto's thyroiditis is an autoimmune disease in which the thyroid gland is attacked by the patient's own immune system. The resulting inflammation from Hashimoto's disease often leads to an underactive thyroid gland (hypothyroidism) that does not produce enough hormones for the body's needs. Hashimoto's disease is the most common cause of hypothyroidism in the US, and it primarily affects middle-aged women. The prevalence of disease is 1 to 1.5 in 1,000.

Prior to clinical development, Anatabine, when sold as Anatabloc, a dietary supplement that reduced inflammation associated with autoimmune disorders, was the subject of a Hashimoto clinical trial, funded by Rock Creek Pharmaceuticals last year (2014). The trial was a double-blind, randomized, and placebo-controlled study (n=146). Anatabine and placebo were both administered orally 3X daily over three months. The conclusion from the study was that anatabine was exerting immunological effects on TgAb (anti-thyroid antibodies) levels. **(A)** Hashimoto's thyroiditis cytology shows lymphocytes and Hurthle cell metaplasia. **(B and C)** Anatabine reduces anti-thyroglobulin antibodies (TgABs) in thyroiditis patients.



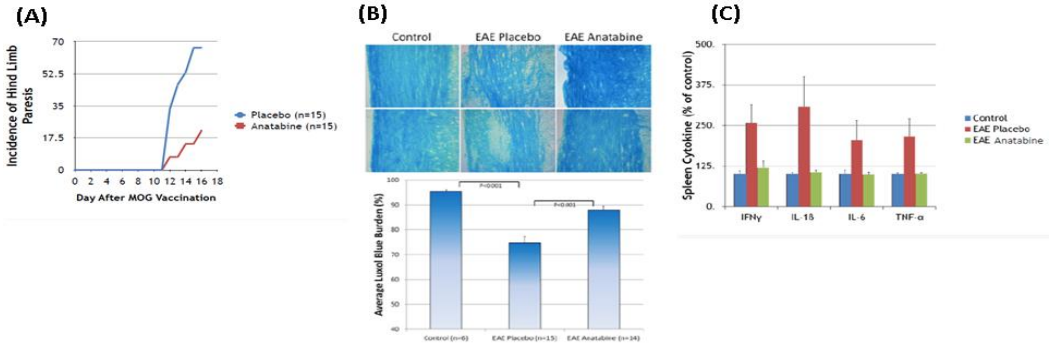
Source: Lowell R. Schmeltz et al, (2014) Anatabine Supplementation Decreases Thyroglobulin Antibodies in Patients with Chronic Lymphocytic Autoimmune (Hashimoto's) Thyroiditis: A Randomized Controlled Clinical Trial. J Clin Endocrinol Metab, January 2014, 99(1): E137-E142

DEVELOPMENT OF ANATABINE AS A CLINICAL DRUG: ANATABINE CITRATE

Rock Creek Pharmaceuticals is developing anatabine citrate as an anti-inflammatory drug. A three-part phase I study of anatabine citrate is taking place in the United Kingdom and New Zealand. Data are expected in 4Q15. Anatabine has been studied extensively in preclinical models of autoimmune diseases, including multiple sclerosis and psoriasis (described below).

Multiple sclerosis (MS) is a chronic inflammatory demyelinating autoimmune disorder of the central nervous system. Clinical symptoms of MS not only include motor disabilities, but also cognitive deficits. The preclinical model was designed to determine whether anatabine had beneficial effects on the development of experimental autoimmune encephalomyelitis (EAE) in mice and to precisely determine its underlying mechanism of action in the mouse model of MS. The EAE model was tested in 30 mice, with a placebo group (n=15) and an anatabine group (n=15) receiving 20 mg/kg of anatabine diluted in drinking water. Mice were evaluated daily for clinical signs. The study result showed that orally administered anatabine significantly suppressed neurological deficits associated with EAE. Anatabine, as previously studied, appeared to suppress STAT and NF-kB phosphorylation in the spleen and the brain of EAE mice. Both transcription factors regulate a large array of inflammatory genes, including cytokines.

Exhibit 5. Multiple sclerosis model. Graphic **(A)** exhibits a preclinical model of multiple sclerosis in which the incidence of hind limb paresis is much lower in the anatabine group (red line) than the one in placebo (blue line) after the 11th day of the study. Graphic **(B)** shows reduced nerve damage in an anatabine-treated EAE mouse spinal cord. Graphic **(C)** compares the normalization of inflammatory spleen cytokines in EAE mice in three different study groups.

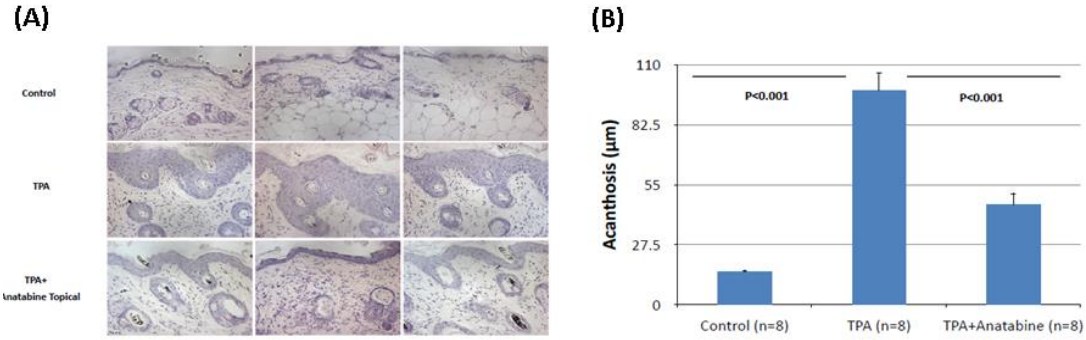


Source: Paris D, Beaulieu-Abdelahad D, Mullan M, Ait-Ghezala G, Mathura V, et al. (2013) Amelioration of Experimental Autoimmume Encephalomyelitis by Anatabine. PLoS ONE 8(1): e553392. Doi:10.1371/journal.pone.0055392

Psoriasis. Psoriasis is an inflammatory skin disease that is often characterized by itchy or soar patches of thick, red skin with silvery scales. The patches usually develop on the elbows, knees, scalp, back, face, palms, and feet, though they can show up on other body parts too. Psoriasis arises from defects in the immune system. More specifically, psoriasis is a T-cell medicated autoimmune disorder leading to keratinocyte hyperproliferation. In a process called "cell turnover," skin cells that grow deep in the skin rise to the surface. This is a natural process that usually takes a month, but, in psoriasis, it can occur in days. Psoriasis has a genetic predisposition that is further aggravated by various stimuli, including stress. Initially, treatments focused on agents that hydrated the skin to dry and remove the scaly skin. Later, treatments focused on mitigating the effects of T cells (steroids and other immune suppressing agents). The original anatabine supplement was used by many with psoriasis to alleviate the inflammation associated with the disease. As discussed above, Rock Creek is now pursuing clinical development.

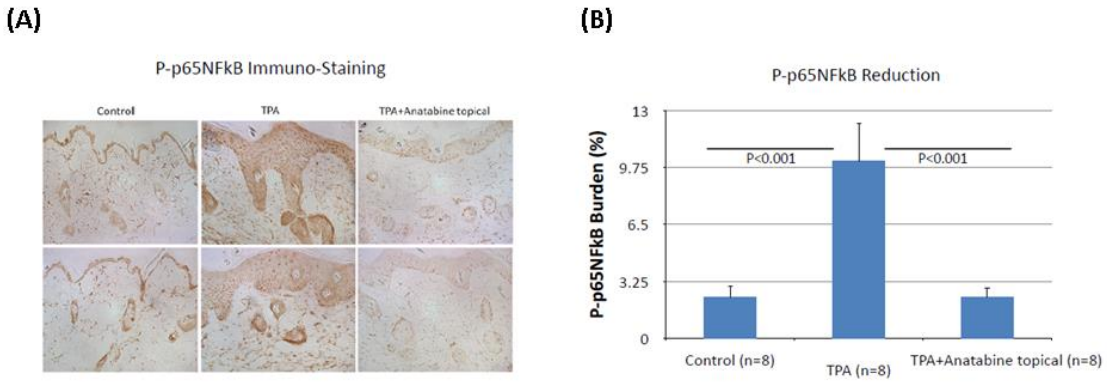
Rock Creek first examined the effect of topical anatabine citrate on a TPA-induced epidermal hyperplasia mouse model. TPA treatment in mice will induce various inflammatory changes, including increased epidermal thickness (hyperplasia). Epidermal hyperplasia is the overdevelopment or increased size of the skin layers, usually due to an increased number of cells in the epidermis. The study model aimed to replicate a similar pathology to psoriasis in order to evaluate the efficacy of topical anatabine citrate on the skin of mice.

Exhibit 6. Psoriasis model. (A) Anatabine citrate applied topically improved inflamed lesions. **(B)** Acanthosis size, the diffuse epidermal hyperplasia (increased thickness of skin), was significantly lower in the mice treated with topical anatabine citrate. The reduction in psoriasis lesions was statistically significant (P<0.001).



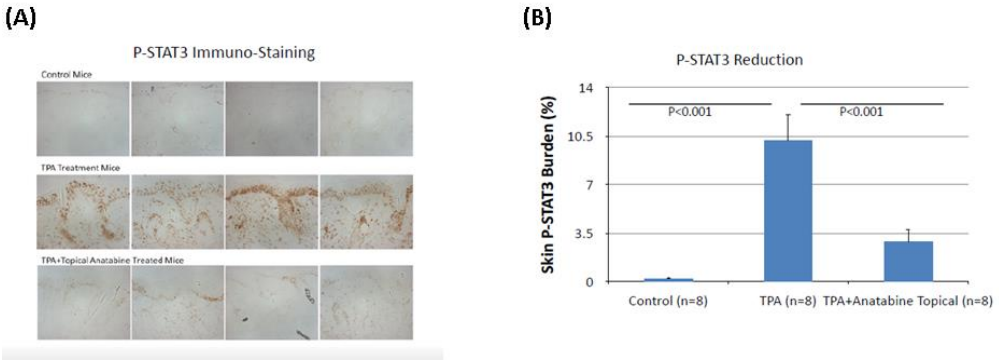
Source: Rock Creek Pharmaceuticals presentation

Exhibit 7. Reduced NF-kB in psoriasis model. (A) Mice treated with anatabine citrate have reduced expression of NF-kB (brown staining); **(B)** Histological images were scored to quantify the reduction in NF-kB expression following treatment with anatabine citrate. The improvement was statistically significant.



Source: Rock Creek Pharmaceuticals presentation

Exhibit 8. Reduced STAT3 expression in psoriasis model. (A) Similar to the results showing reduced NF-kB expression following anatabine citrate treatment, STAT3 (brown staining) was also significantly reduced. **(B)** Histological images were scored to quantify the reduction in NF-kB expression following treatment with anatabine citrate. The improvement was statistically significant. Combined, the mouse model of psoriasis shows that anatabine citrate reduces both NF-kB and STAT3, thus inhibiting multiple signaling pathways that lead to the production of pro-inflammatory cytokines, the cause of the inflammation associated with psoriasis.



Source: Rock Creek Pharmaceuticals presentation

CLINICAL DEVELOPMENT STRATEGY

In 1Q15, the company commenced a phase I clinical trial in the United Kingdom to determine the pharmacokinetic profiles of selected modified release formulation prototypes of anatabine citrate, and to evaluate safety and tolerability in healthy subjects. The UK phase I study consists of three parts, with part two being optional. The objectives of the first two parts are to evaluate the safety and pharmacokinetic profiles, and to identify an optimal formulation for multiple days of dosing in part three. The company announced the successful completion of the three-part study just recently (10.15.2015). The overall objective of the phase I trial was to evaluate safety, tolerability, and pharmacokinetic (PK) profiles of different formulations of the company's lead compound, anatabine citrate, in healthy volunteers.

- In part one of the phase I trial, subjects took six different oral formulations of the company's experimental medication, while safety and tolerability were assessed. The formulations differed in dose and time release profile, which produced a range of PK outcomes. All formulations were generally well tolerated with no serious adverse events or safety issues leading to study withdrawal.
- Part two of the trial examined the effects of food on PK profiles produced by single oral doses of the medication. There were no safety concerns with these "food effect" studies, and the medication was again well tolerated.
- Part three of the phase I trial was a randomized, double-blind, placebo-controlled study design consisting of seven days of oral dosing of the study medication (or placebo), which demonstrated that the company's compound was safe and well tolerated.

All active treatment parts of the phase I trial were conducted with the healthy volunteers as inpatients in a clinical trial unit. Although the company expects to have a formal analysis at a later time, the conclusions from the clinical research organization conducting the studies were that there were no clinically significant changes in any safety assessments, including clinical lab tests, vital signs, and ECGs in any of the parts of the phase I trial. With the completion of the phase I oral dosing trial, the company is now poised to conduct a proof-of-concept clinical trial to investigate the safety and efficacy of topical formulations of its lead compound in patients suffering from mild to moderate psoriasis. The company currently anticipates that a safety and efficacy clinical trial for mild to moderate psoriasis will commence in the first half of 2016.

In parallel, the company also reported results from the single-site, open-label study in New Zealand that a single oral dose of anatabine citrate can significantly inhibit the activation of inflammatory proteins in the blood of human subjects. Rock Creek is expecting to complete the phase I trial, with follow-up data analysis by year end. Rock Creek intends to pursue phase Ib/II studies under either a US investigational New Drug Application (IND) or European Clinical Trial Application (CTA), or both. It has filed the IND and is now on clinical hold to prepare additional data. The company plans to respond to the FDA in the near future in context of overall strategy, and the ongoing acquisition of preclinical and human clinical data. The company continues to explore additional therapeutic targets for anatabine citrate to treat chronic inflammatory diseases, including osteoarthritis, ulcerative colitis, thyroiditis, and potentially Alzheimer's disease and multiple sclerosis.

MODELING ASSUMPTIONS

1. We assume that anatabine citrate will be approved and launch in 2020 with an initial indication in psoriasis.
2. Pricing will be $5,000 per year for the treatment of psoriasis.
3. Modest market penetration, though a launch ramp could be more rapid given familiarity of the compound as a supplement.
4. We assume that primarily patients with mild to moderate symptoms will be eligible for treatment.
5. We apply a 30% risk adjustment based on the early stage of development.

Exhibit 9. Rock Creek Pharmaceuticals product model, anatabine citrate – EU

Anatabine Citrate (EU) ($'000)	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
EU population	510,461,788	514,035,020	517,633,265	521,256,698	524,905,495	528,579,834	532,279,892	536,005,852	539,757,893	543,536,198	547,340,951
Patients with Psoriasis (adults) 0.8% of EU populations	4,083,694	4,112,280	4,141,066	4,170,054	4,199,244	4,228,639	4,258,239	4,288,047	4,318,063	4,348,290	4,378,728
Mild to moderate disease (80%)	3,266,955	3,289,824	3,312,853	3,336,043	3,359,395	3,382,911	3,406,591	3,430,437	3,454,451	3,478,632	3,502,982
Patients with insurance (80%)	2,613,564	2,631,859	2,650,282	2,668,834	2,687,516	2,706,329	2,725,273	2,744,350	2,763,560	2,782,905	2,802,386
Market penetration						1.00%	1.25%	1.50%	1.75%	2.00%	2.25%
Total patients receiving treatment						27,063	34,066	41,165	48,362	55,658	63,054
Cost of therapy						$ 5,000	$ 5,100	$ 5,202	$ 5,306	$ 5,412	$ 5,520
Change in cost of therapy						2%	2%	2%	2%	2%	2%
Sales						$ 135,316	$ 173,736	$ 214,142	$ 256,612	$ 301,231	$ 348,082
Risk Adjustment						30%	30%	30%	30%	30%	30%
Revenue						**$ 94,722**	**$ 121,615**	**$ 149,899**	**$ 179,629**	**$ 210,861**	**$ 243,657**

Source: Maxim Group LLC estimates

VALUATION

Our therapeutic model assumes that anatabine citrate is approved and launched in 2020. We expect the initial indication to be for mild to moderate psoriasis. Our model assumes a risk adjustment due to the early stage of clinical development. We then apply a 30% discount to our free-cash-flow, discounted-EPS, and sum-of-the-parts models, which are equally weighted to arrive at a $4.00 price target.

Exhibit 10. Free-cash-flow model

Average	$	4

Price Target	$	3
Year		2015

DCF Valuation Using FCF (mln):

units ('000)	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
EBIT	(2,736)	(13,456)	(15,625)	(18,642)	(19,015)	59,522	81,962	110,072	137,593	167,054	196,115
Tax Rate	0%	0%	0%	0%	0%	0%	0%	5%	10%	15%	20%
EBIT(1-t)	(2,736)	(13,456)	(15,625)	(18,642)	(19,015)	59,522	81,962	104,568	123,834	141,996	156,892
CapEx	(250)	(300)	(330)	(363)	(399)	(439)	(483)	(531)	(585)	(643)	(177)
Depreciation	97	101	107	112	117	123	129	136	143	150	157
Change in NWC											
FCF	(2,889)	(13,654)	(15,848)	(18,893)	(19,297)	59,206	81,608	104,173	123,392	141,502	156,873
PV of FCF	(2,889)	(10,503)	(9,378)	(8,600)	(6,756)	15,946	16,907	16,602	15,127	13,344	11,379

Discount Rate	30%	
Long Term Growth Rate	1%	
Terminal Cash Flow	546,350	
Terminal Value YE2025	39,631	
NPV	90,809	
NPV-Debt	-	
Shares out (thousands)	32,324	2025E
NPV Per Share	$ 3	

Source: Maxim estimates

Exhibit 11. Discounted-EPS model

Current Year		2015
Year of EPS		2025
Earnings Multiple		15
Discount Factor		30%
Selected Year EPS	$	4.85
NPV	$	5

Source: Maxim estimates

	Discount Rate and Earnings Multiple Varies, Year is Constant 2025 EPS					
Earnings Multiple	5.3	5%	10%	15%	20%	25%	30%
	0	$0.00	$0.00	$0.00	$0.00	$0.00	$ -
	5	$14.90	$9.36	$6.00	$3.92	$2.61	$ 1.76
	10	$29.80	$18.71	$12.00	$7.84	$5.21	$ 3.52
	15	$44.70	$28.07	$18.00	$11.76	$7.82	$ 5.28
	20	$59.60	$37.43	$24.00	$15.68	$10.42	$ 7.04
	25	$74.49	$46.78	$29.99	$19.60	$13.03	$ 8.80
	30	$89.39	$56.14	$35.99	$23.52	$15.64	$ 10.56
	35	$104.29	$65.50	$41.99	$27.44	$18.24	$ 12.32

Exhibit 12. Sum-of-the-parts model

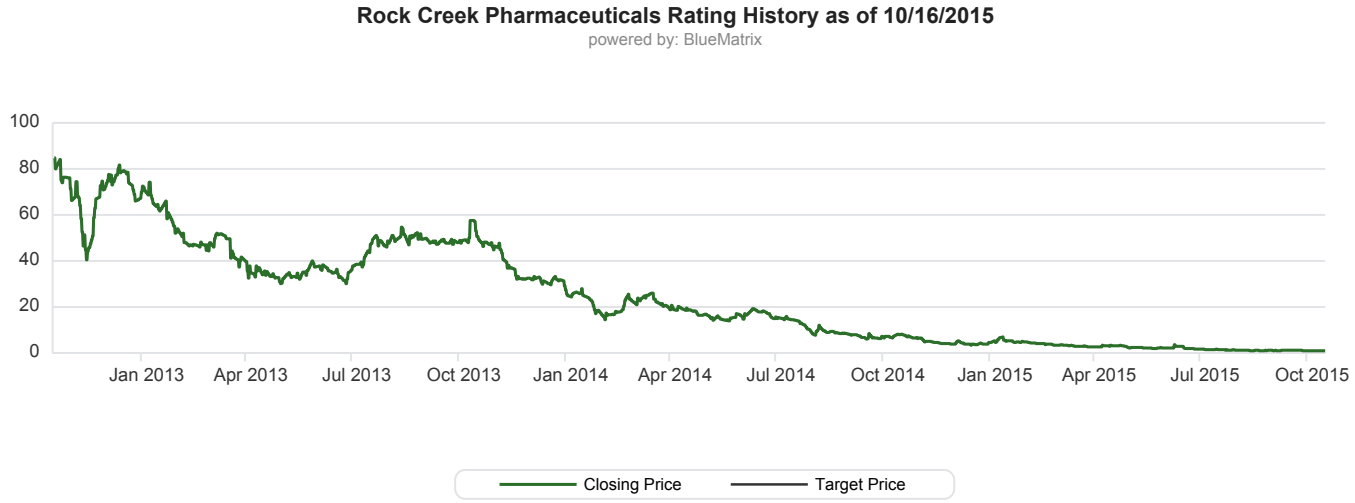
Rock Creek Pharmaceuticals, Inc.	LT Gr	Discount Rate	Yrs. to Mkt	% Success	Peak Sales MM's	Term Val
Anatabine Citrate, psoriasis (EU)	1%	30%	5	70%	$244	$840
NPV						$2.45
Pipeline	1%	30%	5	50%	$100	$345
NPV						$0.72
Net Margin						50%
MM Shrs OS (2025E)						32
Total						$4

Source: Maxim estimates

Rock Creek Pharmaceuticals.: Income Statement ($000)												
RCPI: YE December 31	**2014A**	**2015E**	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**
Product sales												
Anatabine Citrate, Psorisis (EU)							94,722	121,615	149,899	179,629	210,861	243,657
Total Product Sales	**1,219**						**94,722**	**121,615**	**149,899**	**179,629**	**210,861**	**243,657**
Expenses												
Cost of Goods Sold	457						14,208	18,242	17,988	19,759	21,086	24,366
%COGS							15%	15%	12%	11%	10%	10%
Research and Development	3,611	1,601	5,000	7,000	10,000	10,200	12,000	12,240	12,485	12,734	12,989	13,249
%R&D												
General expenses	28,968	8,290	8,456	8,625	8,642	8,815	8,991	9,171	9,355	9,542	9,732	9,927
%SG&A												
Total expenses	**33,036**	**9,891**	**13,456**	**15,625**	**18,642**	**19,015**	**35,200**	**39,653**	**39,827**	**42,035**	**43,808**	**47,542**
Operating Income (Loss)	(31,817)	(9,891)	(13,456)	(15,625)	(18,642)	(19,015)	59,522	81,962	110,072	137,593	167,054	196,115
Derivative gain	22	3,672										
	(1)											
Other income(expense)	(558)	3,483										
Total other income (expense)	**(537)**	**7,155**										
Pretax Income	**(32,354)**	**(2,736)**	**(13,456)**	**(15,625)**	**(18,642)**	**(19,015)**	**59,522**	**81,962**	**110,072**	**137,593**	**167,054**	**196,115**
Income Tax Benefit (Provision)									5,504	13,759	25,058	39,223
Tax Rate									5%	10%	15%	20%
Net loss from continuing operations	(32,354)	(2,736)	(13,456)	(15,625)	(18,642)	(19,015)	59,522	81,962	115,575	123,834	141,996	156,892
Discontinued Operations												
(Loss)/gain on disposal	(3618)											
Loss on discontinued operations	(1,783)	(131)										
Total discontinued operations	(5,401)	(131)										
Comprensive Loss	**(37,755)**	**(2,867)**	**(13,456)**	**(15,625)**	**(18,642)**	**(19,015)**	**59,522**	**81,962**	**115,575**	**123,834**	**141,996**	**156,892**
GAAP-EPS	**(0.20)**	**(0.28)**	**(0.60)**	**(0.62)**	**(0.63)**	**(0.64)**	**1.97**	**2.67**	**3.72**	**3.93**	**4.45**	**4.86**
GAAP EPS (dil)												
Wgtd Avg Shrs (Bas) - '000s	184,482	10,957	22,358	25,178	29,512	29,897	30,287	30,681	31,081	31,486	31,897	32,312
Wgtd Avg Shrs (Dil) - '000s	184,482	10,957	22,358	25,178	29,512	29,897	30,287	30,681	31,081	31,486	31,897	32,312

Source: Company reports and Maxim

DISCLOSURES



Maxim Group LLC Ratings Distribution		As of: 10/18/15	
		% of Coverage Universe with Rating	% of Rating for which Firm Provided Banking Services in the Last 12 months
Buy	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to outperform its relevant index over the next 12 months.	**87%**	**49%**
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Sell	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months.	**1%**	**0%**
	**See valuation section for company specific relevant indices*		

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The research analyst(s) primarily responsible for the preparation of this research report have received compensation based upon various factors, including the firm's total revenues, a portion of which is generated by investment banking activities.

Maxim Group makes a market in Rock Creek Pharmaceuticals

Maxim Group managed/co-managed/acted as placement agent for an offering of the securities for Rock Creek Pharmaceuticals in the past 12 months.

Maxim Group received compensation for investment banking services from Rock Creek Pharmaceuticals in the past 12 months.

Maxim Group expects to receive or intends to seek compensation for investment banking services from Rock Creek Pharmaceuticals in the next 3 months.

RCPI: For RockCreek we use the BTK as the relevant index

Valuation Methods

RCPI: Our therapeutic model assumes that anatabine citrate is approved and launched in 2020. We expect the initial indication to be for mild to moderate psoriasis. Our model assumes a risk adjustment due to the early stage of clinical development. We then apply a 30% discount to our free-cash-flow, discounted-EPS, and sum-of-the-parts models, which are equally weighted to arrive at our price target.

Price Target and Investment Risks

RCPI: RockCreek faces multiple risks associated with the company. These include but are not limited to: The pace and success of drug development activities; The possible out-licensing of any product candidates developed; obtaining regulatory approvals for any product candidates developed; the pace of development of new intellectual property for any product candidates developed; The company's ability to market and sell their products; and the ability to secure financing necessary to operate and grow the business. There can be no assurance that an IND filed with the FDA in the U.S. will result in the actual initiation of clinical trials in the U.S. or that the company's products will ultimately be approved or achieve or maintain expected levels of market acceptance in the U.S. or anywhere else.

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Risk ratings take into account both fundamental criteria and price volatility.

Speculative – Fundamental Criteria: This is a risk rating assigned to early-stage companies with minimal to no revenues, lack of earnings, balance sheet concerns, and/or a short operating history. Accordingly, fundamental risk is expected to be significantly above the industry. Price Volatility: Because of the inherent fundamental criteria of the companies falling within this risk category, the price volatility is expected to be significant with the possibility that the investment could eventually be worthless. Speculative stocks may not be suitable for a significant class of individual investors.

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