

NovaBay Pharmaceuticals (NBY)

DOWNGRADE REPORT

November 14, 2011

Rating Target

New: Neutral
Old: Strong
Speculative Buy

New: \$1.25
Old: \$2.50

Analyst

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- ◆ Downgrading to Neutral on Trading Liquidity Risk
- ◆ UCBE First 20 Patients Data Delayed to Q1 2012
- ◆ Impetigo/EKC Trials Begin Q4/Q1-NeutroPhase H1'12

1.) **Lack of Trading Liquidity Increases Risk:** The failed conjunctivitis trial and subsequent loss of the Alcon partnership combined with issuing 4.7M additional shares at \$1.11 has resulted in a significant loss of investor confidence and interest. NovaBay trading volume has decreased >50% over the past 3 months and >80% over the past 6 months resulting in only 15K shares of daily volume with a share price close to \$1.00. The increased risk of only \$15K per day in liquidity for a \$30M market cap company has resulted in an increase from our previous 55% risk discount rate to 60% in our model.

2.) **Reducing Rating to Neutral:** Despite several potential catalysts in 2012 such as UCBE and Impetigo Phase II data (see below), we believe the time and/or cost of the required registration trials will probably mute investor enthusiasm for NovaBay shares until both investor confidence and interest return. We further note that NovaBay's planned H1 2012 re-launch of FDA 510(k)-cleared NeutroPhase® for wound care carries first-year partner sales execution risk as well as adoption risk in the crowded wound care space. **Therefore, we are reducing our recommendation to a Neutral rating with a 12 month Price Target of \$1.25 based on a 30x multiple on projected 2014 earnings now discounted 60% (from 55%) to adjust for risk.**

3.) **UCBE Data Delayed to Q1'12:** NovaBay is currently conducting a Phase II clinical trial for Urinary Catheter Blockage and Encrustation (UCBE) in quadriplegic spinal cord injury patients. NovaBay now expects results for the first 20 patients (Part A) to be available in Q1 2012 with another 20 patient Part B study using a different formulation of NVC-422 expected to have results available in Q1'12. (see Phase II Clinical Trial for Urinary Catheter Blockage and Encrustation UCBE)



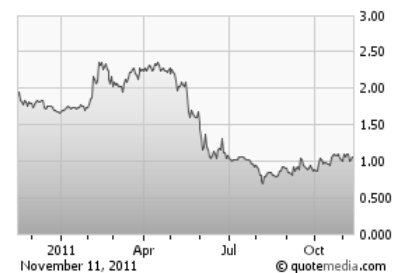
Symbol: NBY

Market: NYSE Amex Equities
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CEO – Dr. Ron Najafi
CFO – Thomas Paulson

Market Data		Share Data		Most Recent Quarter	
Price	\$1.06	Outstanding	28.3M	Revenue	\$2.8M
52-Week	\$0.67-\$2.48	Cash/Share	\$0.52	Net Income	\$0.1M
Market Cap	\$29.9M	Book/Share	\$0.46	EPS	\$0.00
Avg. Daily Vol.	14,333	Price/Book	2.3x	Cash	\$14.8M
% Short	0.1%	Debt/Share	\$0.00	Debt	\$0.1M
Financial Results and Projections					
FYE Dec. 31	2009	2010	2011E	2012E	2013E
Revenue	\$15.7M	\$9.8M	\$12.3M	\$11.8M	\$14.6M
Net Income	\$3.4M	(\$4.3M)	(\$2.5M)	(\$6.5M)	(\$8.0M)
EPS	\$0.12	(\$0.18)	(\$0.10)	(\$0.20)	(\$0.21)



Please see last two pages for important disclosures and analyst certification

4.) **Impetigo Trial to Begin:** On July 21, 2010 NovaBay announced positive data from their Phase IIa proof-of-concept trial of NVC-422 gel for the treatment of the highly contagious skin infection impetigo. Investors should note that there was a 100% response rate for the 10 patients infected with MRSA who completed treatment and there were no recurrences of infections. NovaBay partner Galderma SA is expected to initiate a multi-country 400-patient Phase IIb clinical trial in Q4'11 with data expected in H2'12. (*see Results of Phase IIa Proof-of-Concept Trial for Impetigo*)

5.) **EKC Program:** Although the adenoviral conjunctivitis trial failed, in the 38% of patients with adenovirus serotypes 8, 19, and 37, indicating Epidemic Keratoconjunctivitis (EKC) infection, a post-hoc efficacy analysis suggested a positive effect on sustained clearing of blurred vision in all patients treated with NVC-422 versus placebo. While, these findings require a larger, prospective Phase II clinical trial, we believe that NVC-422 may be more active in the cornea resulting in benefit for EKC patients. We believe that NovaBay will begin Phase II trials in Q1 2012. (*see NovaBay Phase II Results for EKC Subgroup*)

6.) **NeutroPhase® Launching in H1 2012:** NovaBay's NeutroPhase® is an FDA 510(k)-cleared solution containing HOCl (hypochlorous acid) which is rapid-acting but short-lived making it ideal for multiple applications, especially in surface wound care. NeutroPhase has begun FDA validation manufacturing and is expected to be available for sale in H1 2012. NovaBay is currently seeking a commercial partner for NeutroPhase to cover the North American, European and Japanese markets for patients suffering from chronic non-healing wounds such as diabetic, pressure, and venous stasis ulcers.

Company Description

Emeryville, California-based NovaBay Pharmaceuticals (formerly NovaCal Pharmaceuticals) focuses on developing non-antibiotic product candidates for the treatment of a wide range of infections in hospital and non-hospital environments. Their Aganocide® compounds are based upon the naturally-occurring small molecules generated by neutrophils (white blood cells) that defend the human body against invading pathogens. It is believed that bacteria cannot, or will not, develop resistance to these Aganocide compounds. Several strains of antibiotic-resistance bacteria have developed in humans such as MRSA (Methicillin-Resistant *Staphylococcus aureus*) and VRE (Vancomycin-Resistant *Enterococcus*) which have resulted in patient deaths.

NOVABAY CLINICAL DEVELOPMENT TIMELINE							
Indication	Urinary Catheter Infections	Eye Infection (Conjunctivitis)	Impetigo	Acne	Onychomycosis (Nail Fungus)	NeutroPhase®	
Partner	Unpartnered	Unpartnered	Galderma	Galderma	Unpartnered	Unpartnered	
Q4'08	✓ Initiate Phase IIa						
Q1'09		✓ Initiate Phase I					
Q2'09		✓ Complete Phase I					
Q3'09		✓ Initiate Phase IIa	✓ Initiate Phase IIa				
Q4'09				✓ Initiate Phase I			
Q1'10	✓ Complete Phase IIa			✓ Complete Phase I			
Q2'10	✓ Data Phase IIa		✓ Complete Phase IIa	Reformulating			
Q3'10			✓ Data Phase IIa				
Q4'10	✓ Initiate Phase II for Blockage	✓ Complete Phase IIa					
Q1'11							
Q2'11		✓ Data Phase IIa					
Q3'11							
Q4'11			Initiate Phase IIb				
Q1'12	Data Phase II for Blockage (Part A)	Initiate Phase IIb Epidemic Keratoconjunctivitis					

		(EKC)				
Q2'12	Data Phase II for Blockage (Part B)					U.S. Launch
Q3'12			Complete Phase IIb			

Source: NovaBay Pharmaceuticals and LifeTech Capital Estimates

NovaBay Aganocide® Development Strategy

NovaBay is pursuing a dual-track development strategy with indications in large Rx markets along with in-hospital indications. This allows for NovaBay's penetration into both the high-volume low-price market and the low-volume high price market as shown below:

PRODUCT	INDICATION	PATIENTS	STATUS
NOVABAY PARTNERED DEVELOPMENT PROGRAMS			
NVC-422	Dermatology (Impetigo)	1.5M cases / \$800M	Initiate Phase IIb Q4'11
NVC-422	Dermatology (Acne)	\$2B Prescription / \$4B OTC	Reformulating
NOVABAY INTERNAL DEVELOPMENT PROGRAMS			
NVC-422	Urinary Catheter Infection	700K chronic patients (100K quadriplegic blocked/encrusted)	Data Phase II Q1'12 (Part A)
NVC-422	Onychomycosis (Nail Fungus)	6.3M cases diagnosed out of 35M	Unknown
NVC-422	Epidemic Keratoconjunctivitis	5M cases of conjunctivitis	Initiate Phase IIb Q1'12
NVC-101	Wound Healing	Varies by Indication	U.S. Launch Q2'12

Source: NovaBay Pharmaceuticals and LifeTech Capital Estimates

We believe that NovaBay's Aganocides are especially attractive in battling two serious (and potentially fatal) bacterial infection classes:

- ✓ Antibiotic-Resistant Infections
- ✓ Microbial Biofilm Infections

Antibiotic-Resistant Infections

MRSA "Superbug" - More Deadly than AIDS in the U.S.

According to the October 17, 2007 issue of *The Journal of the American Medical Association* (JAMA) in the paper titled "Invasive Methicillin-Resistant *Staphylococcus aureus* Infections in the United States", more people in the U.S. now die from MRSA than from AIDS. MRSA (methicillin-resistant *staphylococcus aureus*) caused 94,000 life-threatening infections and 18,650 deaths in 2005 versus 16,316 AIDS deaths during the same period per the CDC (Centers for Disease Control). According to the JAMA research paper, 85% of MRSA is related to healthcare delivery:

- 58.4% were community-associated infections related to healthcare
- 26.6% were hospital-associated infections related to healthcare
- 13.7% were community-associated infections not related to healthcare
- 1.3% could not be classified

The report concludes "It is a major public health problem primarily related to health care but no longer confined to intensive care units, acute care hospitals, or any health care institution."

Why is MRSA so Deadly?

Although hospital-acquired MRSA was seen as far back as 1961, the first major community-associated MRSA outbreak in the U.S. was reported in 1981 among IV drug addicts in Detroit and by the late 1990's had spread to the general population. Since then, community-associated MRSA has become the most frequent cause of skin and soft tissue infections presenting to emergency rooms in the U.S.

Over time, some of the *Staphylococcus aureus* bacteria survive antibiotic therapy through mutated resistance, multiply and then spread to others. Without an effective antibiotic drug, severe infection with MRSA can be fatal. Additional

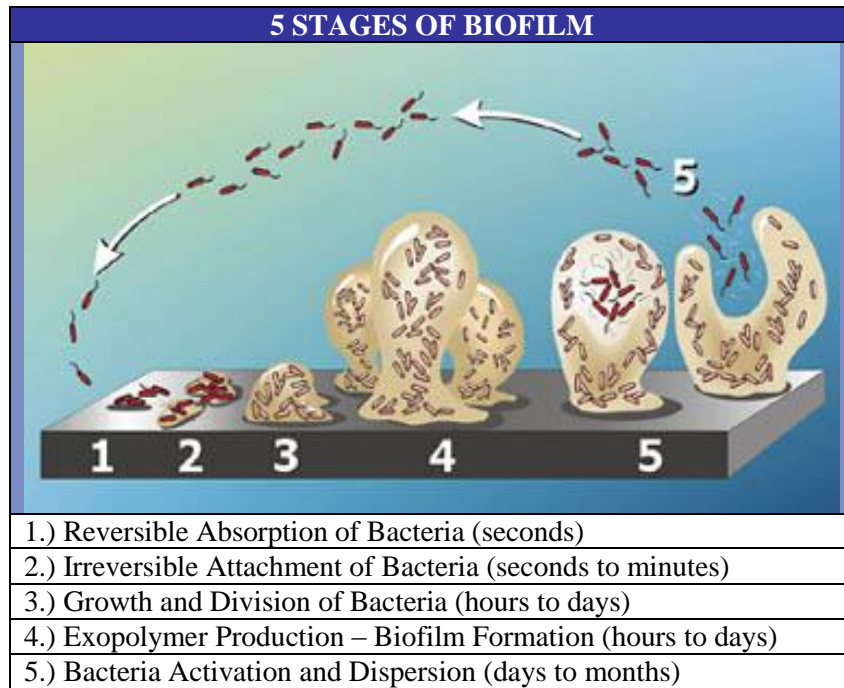
microorganisms have developed resistance as well such as vancomycin-resistant enterococci (VRE) and certain gram-negative bacilli (GNB). Despite new and future antibiotic drugs, the bacteria will eventually mutate and develop resistance, thus potentially creating an even deadlier “Superbug” in the future.

Timeline of <i>Staphylococcus aureus</i> Infection & Resistance	
Year	Event
1940	Penicillin Introduced
1942	Penicillin-resistant <i>Staphylococcus aureus</i> appears
1959	Methicillin Introduced (Most <i>S aureus</i> strains in both hospital & community now Penicillin-resistant)
1961	Methicillin-resistant <i>S. aureus</i> appears
1963	First hospital outbreak of Methicillin-resistant <i>S. aureus</i> (MRSA)
1968	First MRSA strain in United States hospitals
1970s	Spread of MRSA globally with very high MRSA rates in Europe
1982	4% MRSA rate in United States
1996	Vancomycin-resistant <i>S aureus</i> (VRSA) reported in Japan
1997	Approximately 25% MRSA rate in US hospitals. Vancomycin-intermediate <i>S aureus</i> (VISA) appears. Community-acquired MRSA (CA-MRSA) infections reported. Pediatric deaths reported in Midwestern U.S.
2002	First clinical infection with VRSA in the United States
2003	60% MRSA rate in intensive care units. Outbreaks of CA-MRSA in numerous community settings and implicated in hospital
2006	>50% of staphylococcal skin infections seen in emergency room caused by CA-MRSA. HA-MRSA rate continues to increase. Distinction between HA-MRSA and CA-MRSA on epidemiological basis becomes increasingly difficult.
2007	MRSA research estimates 94,000 invasive MRSA infections and 18,650 deaths from MRSA per year. Continued medical and mass-media reports about severe CA-MRSA infections. Several states pass or consider legislation controlling MRSA and public reporting of MRSA rates. Strategies to control MRSA, including public reporting of MRSA infections, are hotly debated “staph” and MRSA become household words.

Source: P. Sampathkumar, MD; Division of Infectious Diseases, Mayo Clinic, Rochester, MN; “Methicillin-Resistant *Staphylococcus aureus*: The Latest Health Scare” *Mayo Clin Proc.* 2007;82:1463-1467

Microbial Biofilm Infections

Biofilm is created as a defense mechanism by microorganisms in the human body by creating a protective mucopolysaccharide (gel-like) layer. Bacteria encased in biofilm are dormant and can survive for a long period of time as antibiotics are not effective against dormant bacteria. In addition, the biofilm itself blocks the neutrophils (white blood cells) from attacking the bacteria. Finally, many common antiseptics are neutralized by biofilm and rendered ineffective.



Source: Peg Dirckx and David Davies

Bacterial biofilm is associated with diseases such as sinus infections (sinusitis), ear infections, chronic wounds and infections related to cystic fibrosis. Bacterial biofilms are also frequently found on the surfaces of medical devices, such as catheters and implants, and can cause severe chronic or acute infections.

BIOFILM-RELATED INFECTIONS WITH MEDICAL DEVICES		
CATHETERS	DEVICES	IMPLANTS
Arterial catheters	Biliary stents	Arteriovenous shunts
Central venous catheters	Contact lens	Breast implants
Endotracheal tubes	Coronary stents	Cochlear implants
Enteral feeding tubes	Fracture fixation devices	Dental implants
Gastrostomy tubes	Intracranial pressure devices	Implanted defibrillators
Hemodialysis catheters	Intraocular lens	Implanted monitors
Nasogastric tubes	Intrauterine devices	Middle ear implants
Peritoneal dialysis	Joint prosthesis	Neurosurgical stimulators
Pulmonary artery catheters	Mechanical heart valves	Orthopedic prosthesis
Tracheostomy tubes	Ommaya reservoirs	Pacemaker and leads
Umbilical catheters	Suture material	Penile implants
Urinary catheters	Vascular assist devices	Spinal implants
	Vascular grafts	Voice prostheses
	Vascular shunts	

Source: M. Ryder, PhD, MS, RN, "Catheter-Related Infections: It's All About Biofilm"; Topics in Advanced Practice Nursing eJournal. 2005;5(3)

BIOFILM-RELATED CHRONIC DISEASES		
Otitis media	Legionnaire's disease	Periodontitis
Chronic wounds	Myeloidosis	Prostatitis
Cystic fibrosis	Necrotizing fasciitis	Tonsillitis
Dental caries	Osteomyelitis	
Endocarditis	Biliary tract infection	

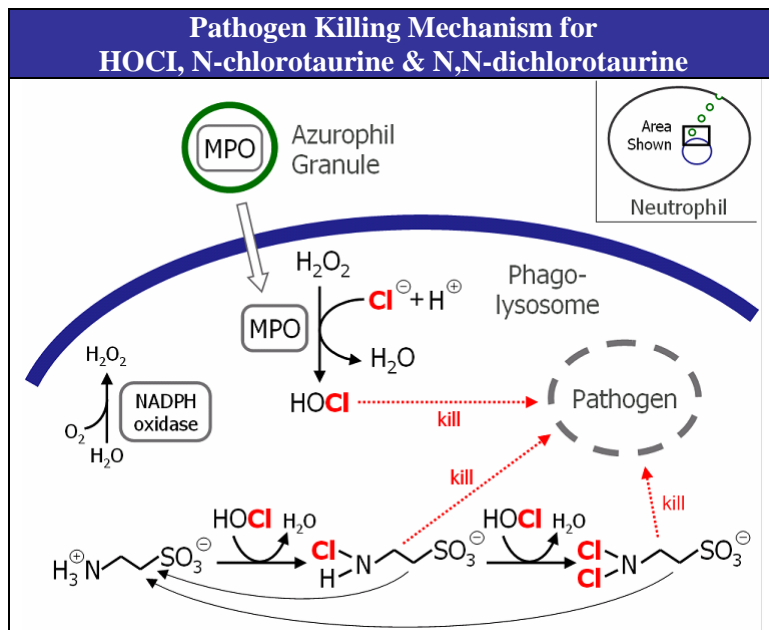
Source: M. Ryder, PhD, MS, RN, "Catheter-Related Infections: It's All About Biofilm"; Topics in Advanced Practice Nursing eJournal. 2005;5(3)

NovaBay's Aganocide® Technology

What are NovaBay's Aganocides® and how do they kill pathogens?

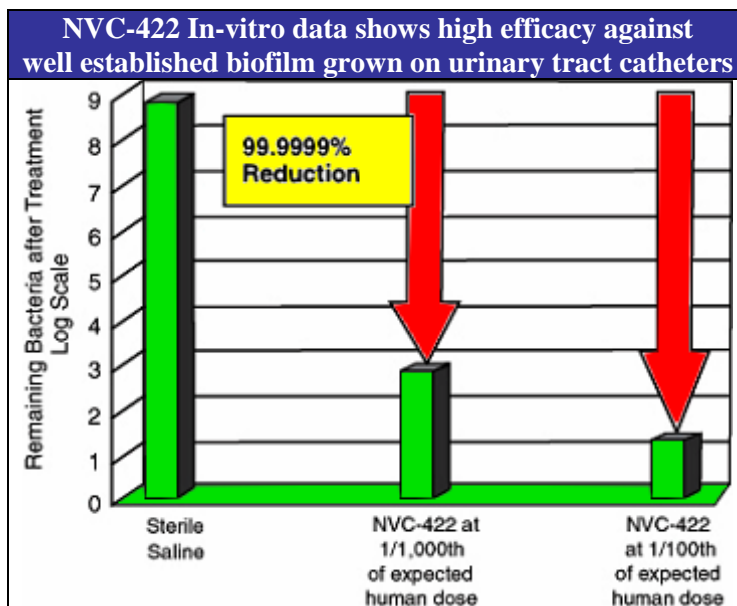
NovaBay's Aganocides mimic the human body's way of killing pathogens. When white blood cells (neutrophils) encounter foreign bacteria, they surround it and generate an oxidative burst process which destroys it. The oxidative burst creates hypochlorous acid (HOCl) molecules which are highly reactive and kill bacteria in seconds. NovaBay's NeuroPhase NVC-101 is a stable preparation of HOCl.

The HOCl then reacts with taurine to create two antimicrobial molecules, N-chlorotaurine (NCT) and N,N,-dichlorotaurine (NNDCT). While both NCT and NNDCT are antimicrobial, NNDCT is significantly more effective. However, both are chemically unstable. NovaBay's NVC-422 is a stable analog of NNDCT and we believe that NovaBay's NVC-612 is a stable analog of NCT.



Source: NovaBay Pharmaceuticals

In addition, NovaBay's Aganocides have already had successful in-vitro experiments demonstrating efficacy in destroying bacteria resident in biofilm as shown:



Source: NovaBay Pharmaceuticals

How do NovaBay's Aganocides® Avoid Bacterial Resistance?

Bacterial resistance to Aganocides is unlikely as Aganocides are analogs of molecules already used by the human immune system. The antimicrobial activity of NovaBay's NVC-101 and Aganocides is based on active chlorine. Similar forms of chlorine have been used for over 100 years to purify drinking water supplies, having been first used in 1850 in London and in 1908 in the U.S., with no known chlorine resistance ever developing in humans.

In contrast, the antibiotic methicillin was introduced in 1959 to treat infections caused by penicillin-resistant *Staphylococcus aureus* and by 1961 there were already reports in the U.K. of *S. aureus* isolates that had acquired resistance to methicillin.

We believe the NovaBay’s Aganocide development strategy is valid considering their characteristics. Below is a table indicating the broad spectrum of activity for Aganocides seen in preclinical experiments:

Pathogen	AGANOCIDE®	Vancomycin	Mupirocin	Ciprofloxacin
Gram Positive Bacteria				
<i>Staphylococcus aureus</i>	✓	✓	✓	✓
<i>Staphylococcus aureus</i> (MRSA)	✓	✓	✓	
<i>Enterococcus faecium</i> (VRE)	✓			
Gram Negative Bacteria				
<i>Escherichia coli</i>	✓			✓
<i>Pseudomonas aeruginosa</i>	✓			✓
<i>Acinetobacter calcoaceticus</i>	✓			✓
Yeast				
<i>Candida albicans</i>	✓			
Virus				
Adenovirus: 9 serotypes	✓			
Herpes Simplex Virus: 1 & 2	✓			

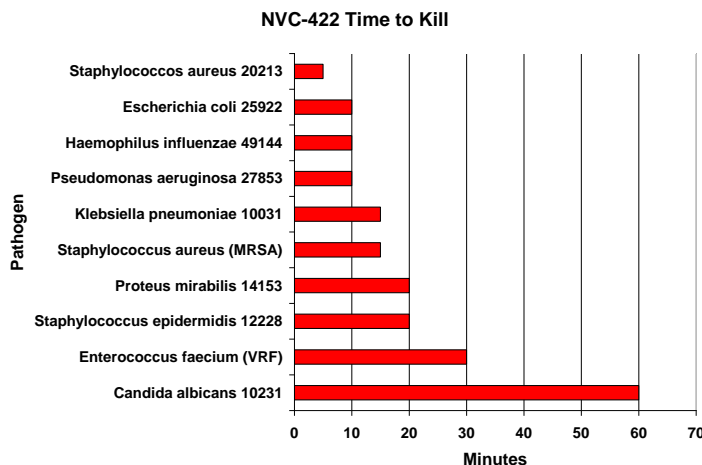
Source: NovaBay Pharmaceuticals

MULTI-DRUG RESISTANT (MDR) BACTERIA						
	NVC-422	Tetracycline	Moxifloxacin	PolymyxinB	Ciprofloxacin	Trimethoprim
<i>Acinetobacter junii</i>	✓			✓		
<i>E. coli</i>	✓			✓		
<i>P. Aeruginosa</i>	✓			✓		
<i>S. pneumoniae</i>	✓		✓			
<i>S. epidermidis</i>	✓	✓				
<i>E. faecalis</i>	✓	✓				
<i>H. influenzae</i>	✓	✓	✓	✓	✓	
<i>S. aureus</i>	✓	✓			✓	✓

Source: NovaBay Pharmaceuticals

It also appears from preclinical testing that NVC-422 has a faster kill time than antibiotics:

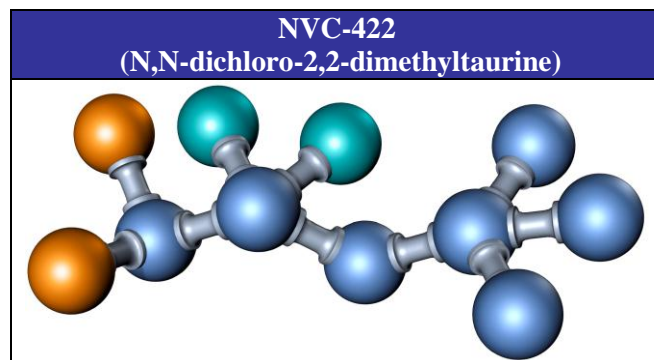
NVC-422 Time to Kill at Minimum Bactericidal Concentrations



Source: NovaBay Pharmaceuticals

NovaBay Aganocide® NVC-422 (Lead Drug Candidate)

NVC-422 is NovaBay’s lead drug candidate and is a stable analog of NNDCT (N,N,-dichlorotaurine) which has the advantage of very rapidly killing a wide range of bacteria as well as certain yeasts, fungi and viruses at concentrations much lower than the concentrations which would harm human cells. Specifically, NVC-422 is N,N-dichloro-2,2-dimethyltaurine which overcomes the inherent instability of naturally-occurring N,N,-dichlorotaurine.



Source: NovaBay Pharmaceuticals

NovaBay FDA-Approved Products

NeutroPhase® (NVC-101) – FDA 510(k) Cleared for Sale

NeutroPhase® is an FDA-cleared solution containing HOCl (hypochlorous acid) which is rapid-acting but short-lived making it ideal for multiple applications, especially in surface wound care. **NeutroPhase has begun FDA validation manufacturing and expects it to be available for sale in H1 2012.** NovaBay is currently seeking a commercial partner for NeutroPhase to cover the North American, European and Japanese markets for patients suffering from chronic non-healing wounds such as diabetic, pressure, and venous stasis ulcers.

Product	510(k) Ref #	Decision Date	References Documents for FDA 510(k) Clearance
Neutrophase	K081009	05/20/2008	http://www.accessdata.fda.gov/cdrh_docs/pdf8/K081009.pdf
Indications for Use	The device is intended for moistening absorbent wound dressings and cleaning minor cuts, minor burns, superficial abrasions and minor irritations of the skin. It is also intended for moistening and debriding acute and chronic dermal lesions, such as Stage I-IV pressure ulcers, stasis ulcers, leg ulcers, diabetic foot ulcers, post-surgical wounds, first and second degree burns, abrasions and minor irritations of the skin.		
Neutrophase Wound Cleanser	K071056	09/28/2007	http://www.accessdata.fda.gov/cdrh_docs/pdf7/K071056.pdf
Indications for Use	The device is intended for moistening absorbent wound dressings and irrigating and cleaning minor cuts, minor burns, superficial abrasions and minor irritations of the skin. It is also intended for moistening, debriding and irrigating acute and chronic dermal lesions, such as Stage I-IV pressure ulcers, stasis ulcers, leg ulcers, diabetic foot ulcers, post-surgical wounds, first and second degree burns, abrasions and minor irritations of the skin.		

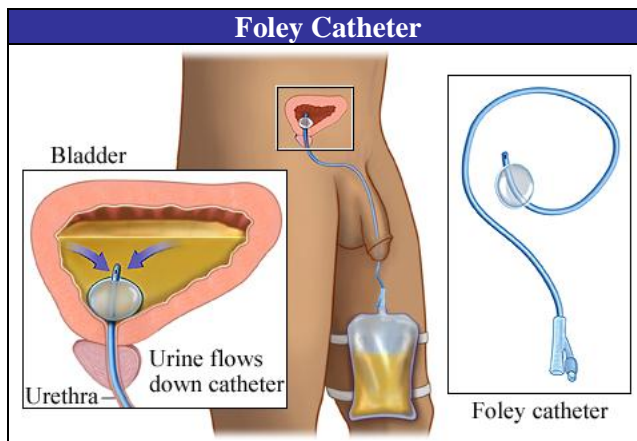
Source: United States Food & Drug Administration

Novabay Internal Pipeline Candidates

Catheter-Associated Urinary Tract Infections (CAUTI)

According to the U.S. Centers for Disease Control (CDC), the urinary tract is the most common site of nosocomial (hospital-acquired) infection, accounting for more than 40% of the total number reported by acute-care hospitals and affecting an estimated 600,000 patients annually. Approximately 66% to 86% of these infections are a result of instrumentation of the urinary tract, mainly urinary catheterization. An estimated 5M patients undergo urinary catheterization annually.

- Accounts for approximately 40% of all hospital acquired infections.
- Almost 100% of patients catheterized for 30 days or longer will develop bacteriuria.
- 10% to 20% of these patients will develop a symptomatic CAUTI.
- In 1%-4% the infection will spread into the kidneys or bloodstream, leading to potentially lethal bacteremia.
- Currently, there is no bladder irrigation solution that can reduce or eliminate CAUTI.



Source: Healthwise Inc.

Catheter-associated urinary tract infections are caused by a variety of pathogens, including *Proteus mirabilis*, *Escherichia coli*, *Klebsiella*, *Proteus*, *Enterococcus*, *Pseudomonas*, *Enterobacter*, *Serratia*, and *Candida* with reported infection rates from 1%-5% after a single brief catheterization to virtually 100% of patients with indwelling urethral catheters draining into an open system longer than 4 days. For patients who require indwelling urethral catheterization, adherence to the sterile continuously closed system of urinary drainage is the current standard of care. For short-term catheterization, this may reduce the rate of infection from 100% when open drainage is employed to less than 25%, which is still an extremely high rate of infection. It should be noted that bacterial Biofilm is visible by the second day.

Phase II Clinical Trial for Urinary Catheter Blockage and Encrustation (UCBE)

NovaBay is conducting a Phase II clinical trial in urinary catheter blockage and encrustation with data expected in Q4 2011. A 0.2% concentration of NVC-422 in a new formulation is being used versus a saline control arm in quadriplegic spinal cord injury patients. Recruitment began in December 2010 for proof-of-concept clinical trial comparing NVC-422 to the use of a saline irrigation, the most commonly used option for treating UCBE, in patients with a history of chronic episodes of UCBE. The trial design is a crossover study in which the patient serves as his/her own control. Patients will receive either NVC-422 or saline solution for a 2-week period delivered every other day via catheter irrigation. After a 2-week "washout" period, the patients will then receive a treatment with the other solution to complete the crossover design.

Phase 2 UCBE trial has commenced in permanently catheterized spinal cord injury (SCI) patients at multiple clinical centers in the US; results are expected in the second half of 2011. To date, 16 of the planned 20 patients in a Part A study have completed treatment. The clinical protocol is a double-blind, randomized crossover study in which patients serve as their own control. The primary endpoint is the prevention of UCBE.

NovaBay now expects results for the first 20 patients (Part A) to be available in Q1 2012 with another 20 patient Part B study using a different formulation of NVC-422 expected to have results available in Q2'12. NovaBay intends to file a medical device PMA for NVC-422 as a catheter irrigation solution with the target label claim of "maintenance of catheter patency." More information on the trial design can be found at: <http://clinicaltrials.gov/ct2/show/NCT01243125>

PHASE II HUMAN CLINICAL TRIAL PROTOCOL	
Title	A Multicenter, Double-blind, Crossover Design, Pilot Study to Evaluate the Effect of NVC-422 Catheter Irrigation on Urinary Catheter Patency
# of Patients	20 patients (male and female)
Trial Design	Randomized, Double Blind, Placebo Control, Crossover, Safety/Efficacy Study
Ages	18 years and older

Primary Endpoint	<ul style="list-style-type: none"> • Catheter patency following treatment at 15 days - Cross sectional area (percent of open area that is not encrusted) will be determined at pre-selected loci on the catheter
Secondary Endpoints	<ul style="list-style-type: none"> • Incidence of catheter blockage requiring early removal at 1-15 days - Catheters removed prior to completion of treatment regimen will be assessed for each treatment group • Assessment of biofilm of catheter at 15 days • Assessment of encrustation of catheter at 15 days • Qualitative and quantitative assessment of encrustation of catheter will be determined for all catheters removed
Arm 1:	NVC-422 (N,N-dichloro-2,2-dimethyltaurine), 0.2% NVC-422 (sterile), 25 ml instilled and retained in catheter for 15 min, 2x/day; 7 treatments administered over a 15 day period
Arm 2:	Sterile normal saline (0.9% Sodium chloride for injection) 25 ml instilled and retained in catheter for 15 min, 2x/day; 7 treatments administered over a 15 day period
Inclusion	Spinal Cord Injury (SCI) patient requiring a chronic indwelling urinary catheter with history of catheter blockage and/or encrustation Screening within 21 days of first treatment
Exclusion	Systemic antibiotics within 7 days of first treatment Investigational drug or device within 30 days of enrollment Current infection that requires treatment with systemic antibiotics Recent history of significant autonomic dysreflexia (requiring intervention or treatment)
Centers	The Michael E. DeBakey VA Medical Center, Houston, TX Kessler Institute for Rehabilitation Recruiting, West Orange, NJ McGuire Veterans Affairs Medical Center, Richmond, VA
Principal Investigator	Rabih O. Darouiche, MD - Michael E. DeBakey VAMC

Source: ClinicalTrials.gov NCT01243125

Approximately 700,000 patients suffer from chronic medical conditions requiring long-term urinary tract catheter use such as spinal cord injuries, stroke, spina bifida and multiple sclerosis. According to the University of Alabama National Spinal Cord Injury Statistical Center, there are approximately 250,000 spinal cord injury patients in the U.S. with approximately 44% being paraplegics (or approximately 110,000 patients). These patients suffer from chronic catheter encrustation and blockages, which we expect to be NovaBay's initial market. We are assuming these patient's catheters are maintained 3.5 times per week (every other day) resulting in approximately 18.2M total treatments per year (100,000 x 3.5x/week x 52 weeks). For this difficult high-risk patient population, we believe the price per treatment will be approximately \$12 per treatment representing a 3x increase over the current \$4 per treatment cost of triclosan and saline and yielding sales of approximately \$200M per year. We also believe that it may then be adopted for use as a prophylactic in the remaining patient population, however we have not yet included this in our financial model. For more information see the National Spinal Cord Injury Statistical Center at <https://www.nscisc.uab.edu>

On March 25, 2010 we interviewed Dr. David Stickler of Cardiff University, a Key Opinion Leader on Biofilms and Catheter-Associated Urinary Tract Infections (CAUTI) with a focus on catheter encrustation and blockage in permanently catheterized patients. In the interview, he discusses patient populations, biofilms and CAUTI, prevention and treatment for catheter encrustation and blockage as well as his opinions on NovaBay Pharmaceuticals Aganocide® program for CAUTI. Investors can listen to the interview at <http://www.lifetechcapital.com/novabay.htm>

Results of Phase IIa Proof of Concept Clinical Trial

On April 15, 2010 NovaBay announced positive results of the open-label Phase IIa trial of NVC-422 in chronically catheterized patients with significant bacteriuria, or bacteria in the urine. The study showed that NVC-422 was well tolerated and reduced or eliminated certain pathogens in the urine.

Enrollment: included a condition requiring chronic transurethral catheterization for at least one month prior to enrollment, documented high levels of bacteriuria, and no treatment with antimicrobial agents during the preceding week.

Methods: Following baseline urine cultures, 25 to 100mL of a sterile solution of NVC-422, depending on bladder capacity, was instilled through the catheter into the bladder. The drainage tube was clamped for 1 hour and then allowed to drain. Urine specimens were collected before and following each instillation and daily during post-treatment follow-up.

- Part 1: 5 patients were treated with a single administration of 0.1% NVC-422.
- Part 2a: 5 patients were treated with 0.1% NVC-422 daily for 7 days

- Part 2b: 5 patients were treated with a higher NVC-422 concentration of 0.2% daily for 7 days.

Safety: No significant adverse events related to NVC-422 were observed.

Results: Despite the presence of high urinary concentrations (greater than 100,000 colony-forming units per mL) of multiple uropathogens at baseline, a number of these were eradicated by the end of the treatment. These effects were more pronounced in subjects treated with the higher concentration of NVC-422.

Additional trial design details can be found at: <http://clinicaltrials.gov/ct2/show/NCT00781339>

Rationale: Based on previous data from the Center for Biofilm Engineering, treatment with NovaBay’s NVC-422 Aganocide® resulted in a 7 log reduction of *E. coli* biofilm on Urinary Tract Catheters. This compares favorably against the 1 to 3 log reduction by the antibiotic Neosporin® (bacitracin, neomycin, polymixin B) manufactured by Johnson & Johnson (NYSE: JNJ).

Log Reduction in <i>E. coli</i> Biofilm infections on Urinary Tract Catheters		
	Mean	Std.Dev.
High Dose NVC-422	7.56	1.83
Low Dose NVC-422	6.14	2.14
Antibiotic (Neosporin)	1 to 3	---

Source: NovaBay and Center for Biofilm Engineering

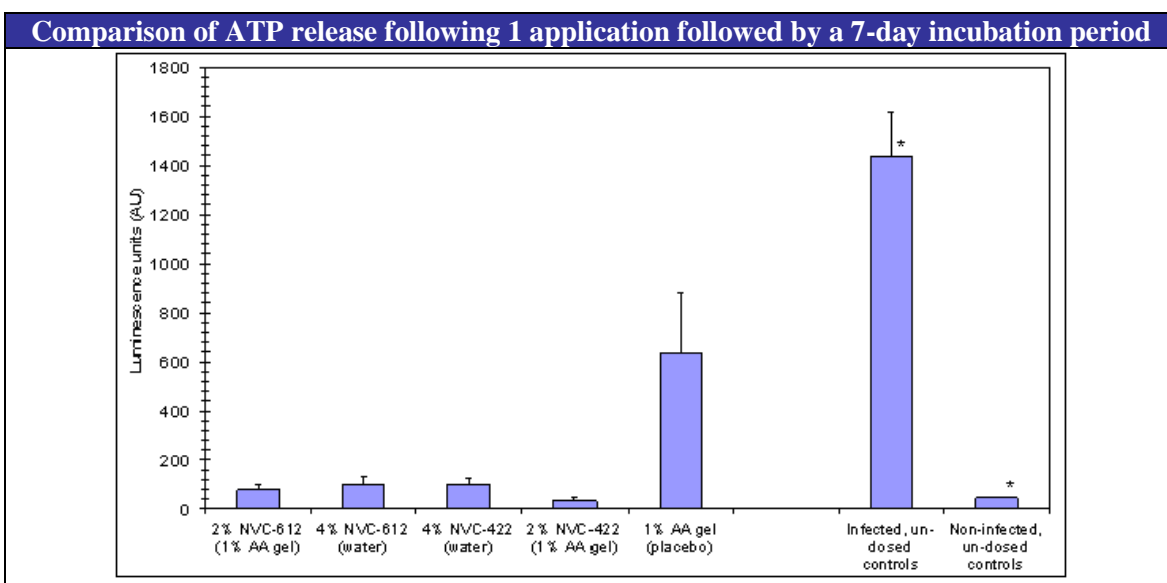
Onychomycosis (Nail Fungus)

Onychomycosis is fungal infection of the nail plate and/or nail bed affecting approximately 10% of the population. Risk factors include *tinea pedis*, preexisting nail dystrophy, older age, male sex, and circulatory disease. Toenails are 10x more commonly infected than fingernails. About 60 to 80% of cases are caused by dermatophytes (*Trichophyton rubrum*) and dermatophyte infection of the nails is called *tinea unguium*. The remaining cases are caused by nondermatophyte molds (*Aspergillus*, *Scopulariopsis*, *Fusarium*). **Based upon preclinical studies, NovaBay is expected to initiate a pilot study for the treatment of onychomycosis in Q4 2011.**



Source: Merck Manual

Preclinical Results: On October 30th, preclinical results were presented at the 47th Annual Meeting of the Infectious Diseases Society of America (IDSA) titled “*In Vitro Evaluation of Stable Derivatives of the Chlorotuarines on Infected Human Nail Model as Potent Antifungal Agents for the Treatment of Onychomycosis*”. The results of a single 2 µL dosage of each formulation to the surface of human toenails infected on the ventral layer with *T. rubrum* demonstrated that 2% NVC-422 in Noveon gel was the most effective formulation and was statistically more effective than 2% NVC-612 in Noveon gel (p = 0.025), 4% NVC-612 (p = 0.004) and 4% NVC-422 (p = 0.0002). In addition, complete mycological kill was suggested for 2% NVC-422 in Noveon gel since it was not statistically significant from the non-infected controls (p = 0.290).



Source: Memarzadeh Ph.D B., et al., “*In Vitro Evaluation of Stable Derivatives of the Chlorotuarines on Infected Human Nail Model as Potent Antifungal Agents for the Treatment of Onychomycosis*” Infectious Diseases Society of America (IDSA), October 2009

Previous results were presented at the American Academy of Dermatology (AAD) 67th Annual Meeting in Abstract #2405 titled "Efficacy of NVC 422 in the Topical Treatment of Dermatophytosis in a Guinea Pig Model". The author stated "The significant clinical and mycological efficacy rates shown in this study demonstrate that topical NVC-422 penetrates the skin and hair at the infection site indicating that it has the potential to target and eliminate skin infections, including onychomycosis, tinea pedis, and tinea capitis. Importantly, these data provide strong support for continuing to develop NVC-422 for fungal infections."

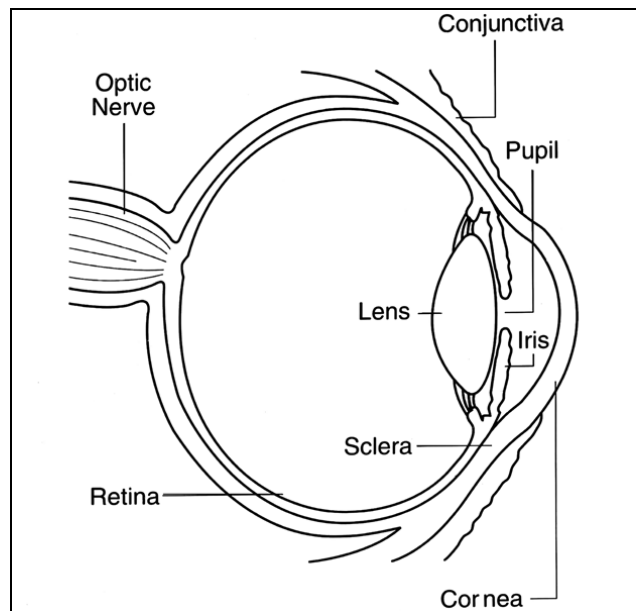
- The purpose of the study was to identify the optimal dosage and delivery of NVC-422 for treating Trichophyton mentagrophytes dermatophyte based on an established animal model previously used in the preclinical evaluation of terbinafine (Lamisil®) and itraconazole (Sporanox®).
- Guinea pigs were randomized to either placebo or doses of NVC-422 of 0.5%, 1.0%, 1.5%, or 2.0% applied to infected skin three times a day for seven days.
- Evaluation of clinical and mycological efficacies was performed three days after completion of treatment. Skin biopsies were performed for analysis.
- Clinical efficacy rates of NVC-422 ranged from 23.7% for the lowest dose to 36.6% for the highest dose compared to 3.6% for placebo.
- Mycological efficacy rates ranged from 86.0% for the lowest dose to 97.9% for the highest dose compared to 53.8% for placebo.
- When compared to a previous clinical study, high dose NVC-422 showed superior clinical and mycological efficacy rates in this animal model compared to ciclopirox (Penlac®), a well-established topical antifungal agent (36.6% and 97.9% versus 7.2% and 85.0%, respectively).

Epidemic Keratoconjunctivitis (EKC)

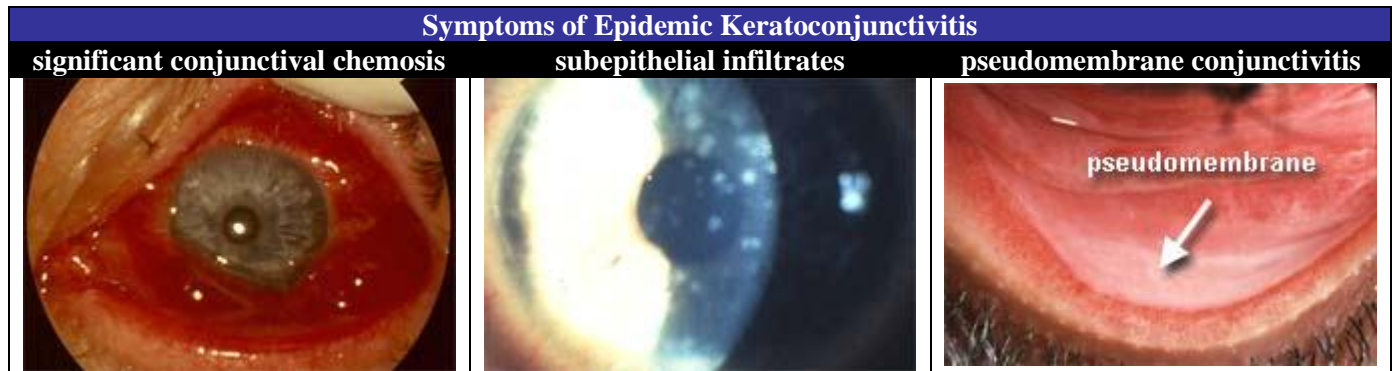
Epidemic Keratoconjunctivitis (EKC), a form of "pink eye", is an adenovirus infection where the conjunctiva becomes inflamed (conjunctivitis) followed by inflammation of the cornea (keratitis). EKC is highly contagious and has the tendency to occur in epidemics around the world. It results in a sudden onset of irritation and red eyes with a watery discharge. Sensitivity to light (photophobia) with severe itching is also common. Vision impairment can range from mild (20/30) to severe with keratitis (20/100), which in rare cases results in scarring and becomes a permanent vision loss.

The incubation period for EKC is between 2 and 14 days but the person may remain infectious for 10-14 days after symptoms develop. The second eye (fellow eye) tends to become infected over 50% of the times within 7 days. It is typically caused by adenovirus serotypes 8/D (most common), 19/D, and 37/D but EKC has been documented in 19 different serotypes in actual human infections. EKC epidemics tend to occur in institutional setting such as schools, work and medical facilities where people remain in close contact for an extended period of time where it is transmitted via direct contact with eye secretions (hand to eye) and possibly air droplet suspension. It is highly contagious as the virus can remain viable for up to 5 weeks, the virus is also resistant against standard disinfectants and the virus sheds from 3 days prior to 14 days after symptoms develop.

While EKC tends to resolve spontaneously within 1-3 weeks, it can result in significant complications. A typical evolution of epithelial and subepithelial keratitis occurs in 80% and in approximately 20%-50% of cases, corneal opacities can persist for a few weeks to months (and up to 2 years in rare cases) which can significantly decrease visual acuity and cause glare symptoms. Also in rare cases, conjunctival scarring can result in permanent vision loss.



Source: National Eye Institute, National Institutes of Health



Source: Indiana University School of Optometry

Current supportive treatments may include artificial tears, cycloplegic drugs for severe photophobia, topical corticosteroids such as dexamethasone, fluorometholone, prednisolone and rimexolone, which can all cause elevated intraocular pressure and cataracts with some studies showing an increase in viral shedding. Surgery may be required for rare severe cases. Gilead’s (Nasdaq:GILD) antiviral drug Vistide® (cidofovir), which has been approved for cytomegalovirus (CMV) retinitis in AIDS patients, has been tried in EKC but at 1% concentration resulted in local toxicity. Research is ongoing at lower concentrations.

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NovaBay Phase II Results for EKC Subgroup

On May 18, 2011, NovaBay announced the results of the Phase II study of NVC-422 for adenoviral conjunctivitis conducted by partner Alcon, now part of Novartis (NYSE:NVS). 452 patients were randomized 1:1 for treatment with NVC-422 ophthalmic solution or its vehicle as placebo and 81 patients were confirmed to have adenoviral conjunctivitis but the primary endpoint of sustained microbiological success of >20% over placebo was not met.

However, in the 38% of patients with adenovirus serotypes 8, 19, and 37, indicating epidemic keratoconjunctivitis (EKC) infection, a post-hoc efficacy analysis suggests a positive effect on sustained clearing of blurred vision in all patients treated with NVC-422 versus placebo. While, these finding require a larger, prospective Phase II clinical trial, we believe that NVC-422 may be more active in the cornea resulting in benefit for EKC patients. **We believe that NovaBay will begin Phase II trials, possibly in India and other countries, in Q1 2012.** The following are the results for the EKC patient subset:

Improved Blurred Vision Clearing Rate: In the subset of patients infected by adenovirus types 8, 19 and 37 (EKC patients), 21 of the 30 patients reported blurred vision at entry.

- On Day 11 for the EKC population sustained blurred vision clearing rate was 85% (11/13) for the active group, compared to 38% (3/8) for the placebo group, a difference of 47%.
- On Day 18 for the EKC population sustained blurred vision clearing rate was 92% (12/13) for the active group, compared to 50% (4/8) for the placebo group, a difference of 42%.

Clearing Rate for Sustained Blurred Vision		
EKC	NVC-422	Placebo
Patients	n=13	n=8
Day 3	4 (30.8%)	0 (0%)
Day 5	6 (46.2%)	1 (12.5%)
Day 7	8 (61.5%)	1 (12.5%)
Day 9	9 (69.2%)	2 (25.0%)
Day 11	11 (84.6%)	3 (37.5%)
Day 18	12 (92.3%)	4 (50.0%)

Source: NovaBay Pharmaceuticals

Sustained Microbiological Success: Sustained microbiological success is defined as eradication of adenovirus at an indicated visit that remained eradicated at all subsequent visits.

In the EKC population (30 patients), the sustained microbiological success rate increased throughout the 18 days of the study to 77% (13/17) for the active group and 62% (8/13) for the placebo at Day 18, a difference of 15%. Throughout the study, the difference in success rates between active and placebo for the EKC population was always positive and ranged from approximately 6% to 18%, starting at Day 3.

Sustained Microbiological Success		
EKC	NVC-422	Placebo
Patients	n=17	n=13
Day 3	1 (5.9%)	0 (0%)
Day 5	3 (17.7%)	0 (0%)
Day 7	5 (29.4%)	3 (23.8%)
Day 9	7 (41.2%)	4 (23.8%)
Day 11	10 (58.8%)	7 (53.9%)
Day 18	13 (76.5%)	8 (61.5%)

Source: NovaBay Pharmaceuticals

Sustained Clinical Cure: Sustained clinical cure is defined as a zero score of symptoms (sum of bulbar conjunctival injection and foreign body sensation) that remained zero for all subsequent visits. Evaluable patients are those who entered the study with a non-zero score for these clinical indicators.

For the 29 evaluable patients, the clinical cure rate increased throughout the 18 days to 69% (11/16) for the active group and 54% (7/13) for the placebo group, a difference of 15%. The cure rate of the active group for the EKC patients was always greater than the placebo treatment group and ranged from approximately 7% to 15%, starting at Day 3.

Severity of Subepithelial Infiltrates (SEIs): SEIs or superficial corneal inflammatory deposits are an immune-mediated reaction that can persist from a few weeks to months. These infiltrates can cause decreased visual acuity, foreign body sensation, glare and light sensitivity.

By Day 11 in the EKC population, mean scores for severity of SEIs in the placebo group increased to 0.9 (scale of 0-3), and there was a treatment effect of up to 0.4 in favor of NVC-422.

Safety and Tolerability: The treatment was considered to be well-tolerated and safe, with the most frequent treatment-related adverse event being eye irritation (14.2% NVC-422, 1.3% placebo). Most of these events were assessed as mild or moderate in intensity and the majority resolved without treatment. Approximately 5% of patients discontinued for both treatment and non-treatment-related adverse events in the 452 treated patients. No severe adverse events were reported.

The summary of the trial and results was published in the August 2011 issue of *Cataract & Refractive Surgery Today* and can be accessed at http://bmctoday.net/crstoday/pdfs/CRST0811_therapeutics.pdf

NovaBay Partnered Pipeline Candidates

Dermatology:

In March 2009, NovaBay partnered with Galderma for Dermatology indications. NovaBay expects to receive up to \$50M upon development and regulatory milestones related to the acne and impetigo indications and escalating double-digit royalties on net sales of products. The exclusive agreement is worldwide in scope, with the exception of certain Asian markets, and covers all major dermatological conditions, excluding onychomycosis (nail fungus) and orphan drug indications.

- Galderma will be responsible for the development costs, except in Japan, and for the ongoing development program for impetigo, upon the achievement of a specified milestone.
- Galderma will reimburse NovaBay for the use of its personnel in support of the collaboration.
- NovaBay retains the right to co-market products resulting from the agreement in Japan.
- NovaBay retains all rights in other Asian markets outside Japan, and has exclusive rights to promote the products developed under the agreement in the hospital and other healthcare institutions in North America.

Galderma was created in 1981 as a joint venture between Nestle and L'Oreal, and is a global leading pharmaceutical company in dermatology in 65 countries with over 1,000 sales representatives. Galderma has research and development facilities located in Sophia Antipolis (France), Princeton, New Jersey (USA), and Tokyo (Japan). Leading worldwide dermatology brands include Differin[®], Epiduo[®], Oracea[®], MetroGel[®] 1%, Rozex[®], Clobex[®], Tri-Luma[®], Loceryl[®] and Cetaphil[®]. (see <http://www.galderma.com>)

Impetigo: Impetigo is a common bacterial skin infection affecting +1M people (mostly ages 2-6) in the U.S. primarily caused by *Staphylococcus aureus* and *Streptococcus pyogene*. Currently treatment is with antibiotic ointments, to which bacteria develop resistance in the same way as to oral antibiotics. Types of Impetigo are:

Impetigo Contagiosa: The most common form of impetigo and starts as a red sore on around the nose and mouth. The sore ruptures quickly, oozing either fluid or pus that forms a crust. The crust then disappears, leaving a red mark that heals without scarring. The sores may be itchy, but they aren't painful. It is highly contagious, just touching or scratching the sores can spread the infection to other parts of the body.



Source: Mayo Clinic

Bullous Impetigo: This affects children younger than 2 years. It causes painless, fluid-filled blisters on the trunk, arms and legs. The skin around the blister is usually red and itchy but not sore. The blisters break and scab over with a yellow-colored crust, may be large or small, and may last longer than sores from other types of impetigo.

Ecthyma: A more serious form of impetigo penetrates deeper into the skin's second layer (dermis). Symptoms include painful fluid- or pus-filled sores that turn into deep ulcers on the legs and feet. The sores break open and scab over with a hard, thick, gray-yellow crust. Scars can remain after the sores heal. Ecthyma can also cause swollen lymph glands in the affected area.

Results of Phase IIa Proof-of-Concept Trial for Impetigo

On July 21, 2010, NovaBay Pharmaceuticals announced positive data from their Phase IIa proof-of-concept trial of NVC-422 for the treatment of the highly contagious skin infection impetigo. The results also showed a positive dose response with the treatment being well tolerated. On October 25, 2011, additional data was presented at the Infectious Diseases Society of America (IDSA). Of particular interest were the additional details on NovaBay's NVC-422 129 patient dose-ranging Phase IIa clinical trial for the treatment of impetigo, a highly contagious skin infection affecting over 1.3 million patients in the U.S. annually. Based on these results, NovaBay intends to submit development plans for NVC-422 for the treatment of impetigo to the FDA. NovaBay also plans to evaluate this drug for the treatment of additional superficial skin and skin structure infections, including atopic dermatoses, secondarily infected lesions and simple abscesses, which represent large market opportunities. **Galderma is expected to commence a multi-country 400-patient Phase IIb clinical trial in Q4 2011 with data expected in H2'12.**

- Trial Design:** Double-blind, randomized, dose-ranging study
- Endpoints:** Safety and clinical efficacy of NVC-422
- Indication:** Topical treatment of impetigo due to Staphylococci, including methicillin-resistant *Staphylococcus aureus* (MRSA) and infections due to Group A beta-hemolytic streptococci (*Streptococcus pyogenes*).
- Sites:** The trial was conducted at two experienced clinical centers in the Dominican Republic.
- Treatment:** Low, medium or high doses of NVC-422 gel three times a day for seven days.
- Methodology:** Clinical response and bacteriological efficacy were evaluated after one week of treatment and during a follow-up visit one week later. Clinical response was evaluated using the Skin Infection Rating Scale (SIRS), a widely used numerical scale.

RESULTS OF NVC-422 IMPETIGO PROOF-OF-CONCEPT STUDY					
Dose	<i>S aureus</i> (n=89)	MRSA (n=9)	<i>S. pyogenes</i> (n=7)	<i>S. aureus</i> + <i>S. pyogenes</i> (n=11)	MRSA + <i>S. pyogenes</i> (n=1)
0.1%	81% (22/27)	100% (4/4)	100% (4/4)	75% (3/4)	n/a
0.5%	85% (29/34)	100% (2/2)	100% (3/3)	n/a	n/a
1.5%	93% (26/28)	100% (3/3)	n/a	86% (6/7)	100% (1/1)
<i>n/a Organisms were not present in these groups at baseline</i>					
<i>Source: Iovino S., et al., "A Pilot Study to Evaluate the Safety and Efficacy of NVC-422 Topical Gel in Impetigo, Including MRSA" 48th Annual Meeting of the Infectious Diseases Society of America (IDSA) October 2010</i>					

Impetigo Study Highlights:

- ✓ **Response rates for MRSA infections were 100%** (10/10) across all treatment groups in the PPC population, whether MRSA was the sole organism or in a mixed infection.
- ✓ These response rates compare favorably to published results of topical antibiotics and the **results are substantially higher than the historical placebo response rates of 30-50%**.
- ✓ All subjects that were Clinical Responders at Day 8 that returned for the follow-up visit at Day 15 were clinical successes with a SIRS score of 0 (n=103). **There were no recurrences of infection at the follow-up visit (Day 15) in any treatment groups.**
- ✓ Adverse events of 5.4% (7/129) were mild to moderate in severity and predominantly were local reactions at the application site. All adverse events resolved after the end of treatment.

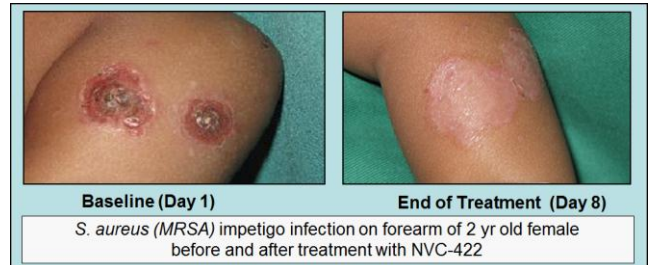
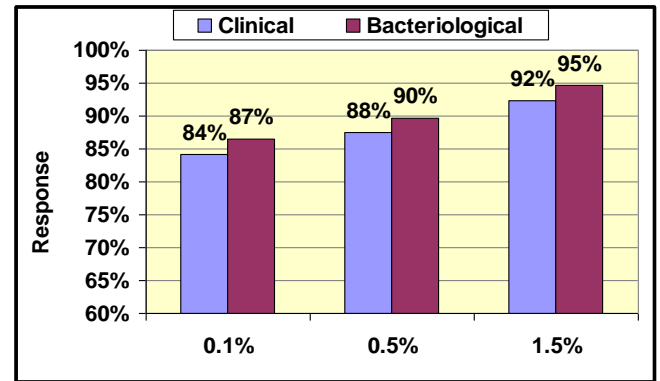
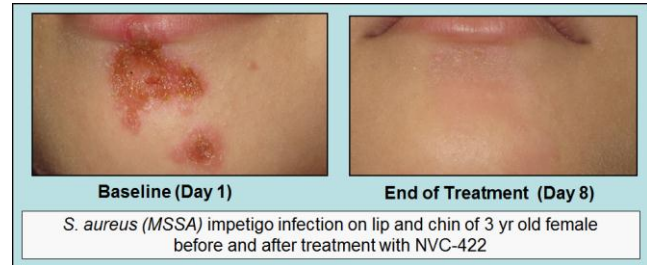
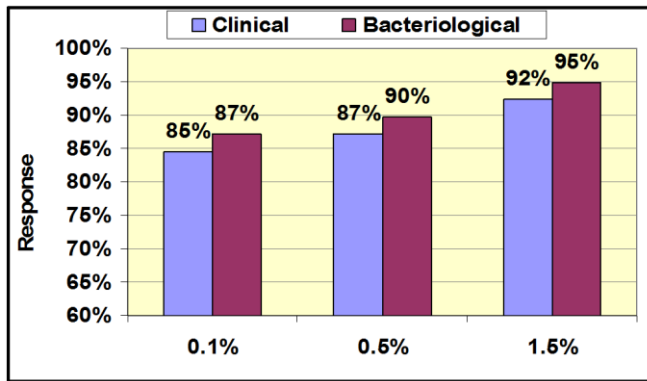
Study Populations		
ITT	<i>Intent-to-Treat</i> is all subjects who received at least 1 treatment. Safety analysis was performed on this group	n=129
mITT	<i>Modified-ITT</i> is the ITT population who had a positive baseline culture and at least 1 post-baseline visit	n=125
PPC	<i>Per-Protocol</i> is the mITT population who completed the study per protocol for clinical and bacteriological evaluations	n=117

NOTES:

Clinical Response = Success + improvement

Bacteriological Response = Success (eradication)

End of Treatment (Day 8) Response (PPC population, n=117) Follow-up (Day 15) Response (PPC population, n=117)



Source: Iovino S., et al., "A Pilot Study to Evaluate the Safety and Efficacy of NVC-422 Topical Gel in Impetigo, Including MRSA" 48th Annual Meeting of the Infectious Diseases Society of America (IDSA) October 2010

Impetigo is a highly contagious skin infection affecting over 1M people annually in the U.S., primarily children and infants. Impetigo is primarily caused by *Streptococcus pyogenes* or *Staphylococcus aureus* (staph). However, community-acquired staph skin infections such as impetigo are increasingly caused by *methicillin-resistant Staphylococcus aureus* (MRSA). MRSA infections are resistant to certain antibiotics and can be difficult to treat. Complications resulting from impetigo, although rare, include cellulitis and abscesses, deeper soft tissue infections that can spread into the bloodstream. When these infections are caused by community-acquired MRSA, they can be potentially life-threatening and often require IV antibiotic treatment.

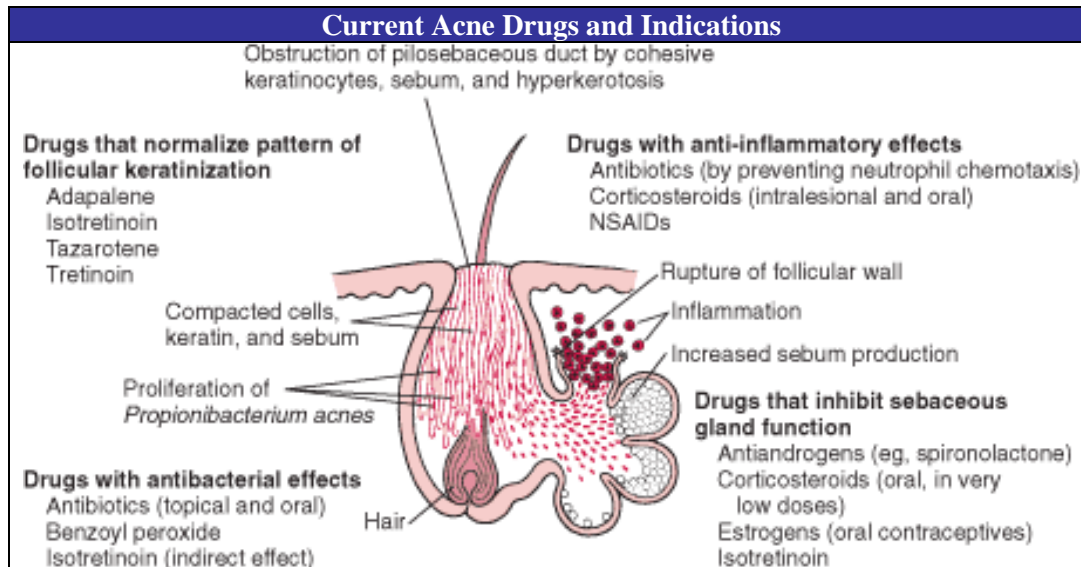
Impetigo is currently treated with topical antibiotics such as generic Bactroban™ (mupirocin) or GlaxoSmithKlines' (NYSE:GSK) Altabax™ (retapamulin), and with oral antibiotics when topical treatments fail or in cases of larger areas of skin infection. Unfortunately, bacteria have developed resistance to some topical antibiotics in the same way they have to some oral antibiotics. For example, mupirocin resistance has been identified on the epidemic community-acquired MRSA strain USA300, suggesting that mupirocin use may select for more resistant strains. The oral treatment options for community-acquired MRSA skin infections are unfortunately very limited and some strains are now resistant to all but a few antibiotics.

Acne: *Propionibacterium acnes* (*P. acnes*) occurs when pores become engorged with excess oil and dead skin cells, it creates an anaerobic environment where *P. acnes* can thrive. *P. acnes* triggers inflammation within the pore, creating a papule, pimple, or cyst. Reducing the *P. acnes* population is an important step in controlling acne.

Current acne treatments includes topical antibiotics such erythromycin and clindamycin as well as oral antibiotics such as tetracycline, minocycline, doxycycline and erythromycin. However, drug resistance to these antibiotics may develop over time, rendering them ineffective.

Classification of Acne Severity	
Mild	< 20 comedones (blackheads) or < 15 inflammatory lesions or < 30 total lesions
Moderate	20 to 100 comedones or 15 to 50 inflammatory lesions or 30 to 125 total lesions
Severe	> 5 cysts or total comedone count > 100 or total inflammatory lesion count > 50 or > 125 total lesions

Source: Merck Manual



Source: Merck Manual

Sinusitis Pre-Clinical Data for NVC-422

A study of NVC-422 in sheep with *Staphylococcus aureus* biofilm sinusitis was presented at the 2011 meeting of the American Rhinologic Society in San Francisco on September 10, 2011. The study was conducted by Professor P.J. Wormald of the University of Adelaide in Australia with NovaBay.

Title: Efficacy of NVC-422 Against *S. aureus* Biofilms in Sheep Biofilm Model of Sinusitis

Authors: Deepti Singhal, MD, Andreas Jekle, MD, Lu Wang, MD, Peter Wormald, MD

Background: Bacterial biofilms are a recognised torment in management of recalcitrant chronic rhinosinusitis. NVC-422 is a fast-acting, broad-spectrum antimicrobial effective against biofilm bacteria in in-vitro conditions.

Aim: Investigate safety and efficacy of NVC-422 as a local anti-biofilm treatment in sheep model of rhinosinusitis.

Methods: After accessing and occluding frontal sinus ostia in 24 merino sheep via staged endoscopic procedures, a *Staphylococcus aureus* clinical isolate was instilled in frontal sinuses to simulate biofilm associated sinusitis. Following biofilm formation, ostial obstruction was removed, sinuses irrigated with 0.1% and 0.5% NVC-422 in 5 mM Acetate/Saline. Sheep were monitored for adverse effects and euthanized 24 hrs after treatment. Frontal sinus mucosa was assessed for changes after treatment. Biomass of *S.aureus* biofilms identified with Baclight-Confocal scanning Microscopy protocol was assayed using COMSTAT 2 program to recorded image stacks.

Results: After only two irrigations with 0.1% NVC-422, *S. aureus* biofilm biomass reduced to 0.71 ± 0.8 m³/m² compared to 1.94 ± 1.1 m³/m² in control sinuses ($P=0.0001$). 0.5% NVC-422 irrigations reduced biofilm more significantly to 0.11 ± 0.11 m³/m² and consistently over all samples ($P<0.0001$). 0.5% NVC-422 was also more effective than the vehicle control and normal saline in reducing biofilm ($P<0.05$ for all subgroups). No adverse events were observed in sheep after sinus irrigations with 0.1% and 0.5% NVC-422.

Conclusion: NVC-422 is safe and effective topical agent against *S.aureus* biofilms, with 0.5% solution concentration being more efficacious in this animal study. This study exemplifies a new treatment opportunity for sinusitis using a solution of NVC-422.

Financial Model Assumptions

Royalty Revenue: Our sales model reflects a traditional biotechnology company with all product candidates eventually being partnered for marketing and distribution. Our current royalty assumptions are as follows:

Indication	Launch	Peak Sales	Partner	Royalty
NeutroPhase	Q1'12	\$100M	---	15% Assumed
Impetigo	Q3'13	\$80M	Galderma	10%-30%
Urinary Catheters	Q1'14	\$200M (\$500M if prophylactic)	---	20% Assumed
Epidemic Keratoconjunctivitis	Q2'14	\$200M - \$300M	---	15% Assumed

Source: LifeTech Capital Estimates

Partnerships

Galderma

On March 25, 2009, the NovaBay announced that it entered into an agreement with Galderma S.A. to develop and commercialize Aganocide compounds, which covers acne and impetigo and potentially other major dermatological conditions, excluding onychomycosis (nail fungus) and orphan drug indications. NovaBay amended this agreement on December 17, 2009. This agreement is exclusive and worldwide in scope, with the exception of Asian markets where NovaBay has commercialization rights, and North America, where the NovaBay has an option to exercise co-promotion rights. Galderma will be responsible for the development costs of the acne and other indications, except in Japan, in which Galderma has the option to request that we share such development costs, and for the ongoing development program for impetigo, upon the achievement of a specified milestone. Galderma will also reimburse NovaBay for the use of its personnel in support of the collaboration. NovaBay retains the right to co-market products resulting from the agreement in Japan. In addition, NovaBay has retained all rights in other Asian markets outside Japan, and has the right to co-promote the products developed under the agreement in the hospital and other healthcare institutions in North America. Upon the termination of the agreement under certain circumstances, Galderma will grant NovaBay certain technology licenses which would require NovaBay to make royalty payments to Galderma for such licenses with royalty rates in the low- to mid-single digits. Galderma will pay to NovaBay certain upfront fees, ongoing fees, reimbursements, and milestone payments related to achieving development and commercialization of its Aganocide compounds. If products are commercialized under the agreement, NovaBay's royalties will escalate as sales increase. The Company received a \$1.0 million upfront technology access fee payment in the first quarter of 2009. The upfront fee is being amortized into revenue on a straight-line basis over the 20 month funding term of the agreement, through October 2010. Upon the termination of the agreement under certain circumstances, Galderma will grant NovaBay certain technology licenses which would require NovaBay to make royalty payments to Galderma for such licenses with royalty rates in the low-to-mid single digits.

On December 2, 2010, based on positive Phase IIa data of NVC-422 in impetigo, Galderma S.A. agreed to exercise its option to advance the clinical development program. The new agreement contains the following terms:

Development Stage

- Galderma paid NovaBay a continuation fee of \$3.25 million for an exclusive license to the covered indications.
- Galderma will fund costs for collaboration activities for \$1.3 million in 2010 and \$1.6 million in 2011.
- Galderma defers the reimbursement for the Phase IIa impetigo proof of concept study until after successful Phase IIb study in 2011.
- Galderma will be financially responsible for all the development and clinical costs, and will reimburse NovaBay for the costs incurred in support of the collaboration.
- NovaBay has the potential to receive up to \$62 million in milestones from Galderma.

Commerical Stage

- NovaBay will receive escalating double-digit royalties on net sales of products.

- NovaBay retains the right to co-market products resulting from the agreement in Japan.
- NovaBay retains the rights in certain Asian markets outside of Japan.
- NovaBay has exclusive rights to promote the products developed under the agreement in hospital and other healthcare institutions in North America.

Intellectual Property

NovaBay has a number of patents and patent applications as shown below. We expect additional patent applications will be filed in the future as development progresses.

SELECTED NOVABAY U.S. INTELLECTUAL PROPERTY FILINGS			
NUMBER	DESCRIPTION	FILED	ISSUED
7,893,109	N,N-dihalogenated amino acids and derivatives	September 11, 2008	February 22, 2011
7,846,971	N-halogenated amino acids, N,N-dihalogenated amino acids and derivatives; compositions and methods of using them	January 25, 2006	December 7, 2010
7,462,361	N,N-dihalogenated amino acids and derivatives	March 24, 2005	December 9, 2008
7,393,522	Physiologically balanced, ionized, acidic solution and methodology for use in wound healing	July 15, 2004	July 1, 2008
6,426,066	Use of physiologically balanced, ionized, acidic solution in wound healing	January 12, 2000	July 30, 2002
20110020474	Methods of Treating Infections of the Nail or Skin Using Hypohalite	July 26, 2010	Pending
20100272783	Methods of Treating Infections of the Nail	April 23, 2010	Pending
20100158818	Antimicrobial N-Chlorinated Compositions	November 6, 2009	Pending
20100137349	Antimicrobial Oxazolidinone, Hydantoin And Imidazolidinone Compositions	November 4, 2009	Pending
20100076089	Antimicrobial Gel Formulations	March 25, 2010	Pending
20090221989	System And Method For The Prevention And Treatment Of Bacterial And Fungal Infections Including Urinary Tract Infections (UTI) Using A Hypohalous Acid Composition	September 3, 2009	Pending
20090023812	N,N-Dihalogenated Amino Acids and Derivatives	January 22, 2009	Pending
20080279963	Physiologically Balanced, Ionized, Acidic Solution And Methodology For Use In Wound Healing	November 13, 2008	Pending
20070244449	System and method for the prevention of bacterial and fungal infections including Urinary Tract Infections (UTI) using N-halogenated amino acids	October 18, 2007	Pending
20060247209	N-halogenated amino acids, N,N-dihalogenated amino acids and derivatives; compositions and methods of using them	November 2, 2006	Pending

Source: U.S. Patent and Trademark Office

Recent Financing Activity

On July 5, 2011, NovaBay Pharmaceuticals issued 4,650,675 units through a registered direct offering consisting of (i) one share of common stock and (ii) one warrant to purchase 0.75 of a share of common stock (3,488,005 shares), at a purchase price of \$1.11 per unit resulting in \$5.2M in gross proceeds. The warrants will be exercisable 180 days after issuance at \$1.33 per share and will expire five years from the date of issuance. The shares of common stock and warrants are immediately separable and will be issued separately. There is not expected to be a public trading market for the units or the warrants.

On August 26, 2009, NovaBay Pharmaceuticals issued 1,225,000 units for \$2.00 per unit (gross proceeds of \$2.45 million) with each unit containing one share of common stock and a warrant to purchase one share of common stock. The warrants are exercisable 180 days after issuance at \$2.75 per share and expire in five years.

As of September 30, 2011, there were outstanding warrants to purchase 4,863,005 shares of common stock at a weighted-average exercise price of \$1.77 per share plus 3,450,000 exercisable options at a weighted-average exercise price of \$1.71 per share. As of November 1, 2011, NovaBay had 28,316,797 shares outstanding.

Management

Ron Najafi, Ph.D., Chairman and CEO: Ramin (“Ron”) Najafi is the founder and Chairman of NovaBay. He has served as President since July 2002, and as Chief Executive Officer since November 2004. Previously, Dr. Najafi served in various management positions within NovaBay including as Chief Scientific Officer. Prior to founding NovaBay, Dr. Najafi was the President and CEO of California Pacific Labs, Inc., a chemical laboratory safety devices company. He has also held scientific roles at Rhone Poulenc Rorer (now Sanofi-Aventis), Applied Biosystems, a division of PerkinElmer, Inc., and Aldrich Chemical. Dr. Najafi received a B.S. and M.S. degree in Chemistry from the University of San Francisco and a Ph.D. in Organic Chemistry from the University of California at Davis.

Thomas Paulson, CFO: Thomas Paulson was named CFO in January 2008. Before joining NovaBay Pharmaceuticals, Mr. Paulson was a partner at Tatum LLC, an executive services and consulting firm. Mr. Paulson was also President and CEO of The Paulson Group, a management consulting company whose clients included high-technology and biotechnology companies. Immediately prior to forming the consulting firm, Mr. Paulson was Vice President-Finance, Chief Financial Officer and Secretary of Avigen. From 1996 to 2006, Mr. Paulson was responsible for Avigen’s financial activities, including SEC reporting and Sarbanes-Oxley compliance, and various equity financing totaling 200 million dollars. From 1994 to 1996, Mr. Paulson was a consultant to high-technology and biotechnology companies in several strategic areas. As an early addition to the founding management team of Neurogen, Mr. Paulson served as Chief Financial Officer, Secretary and Treasurer from 1989 to 1994, helping to lead the company through its IPO.

Behzad (“Bez”) Khosrovi, M.A., Ph.D., Vice President, Research & Development: Behzad Khosrovi, M.A., Ph.D. has served as NovaBay’s Vice President, Research & Development since November 2003. Prior to his role at NovaBay, Dr. Khosrovi was a consultant to the biotechnology industry, working with start-up companies in the San Francisco Bay Area. His prior positions include senior management positions at Neurobiological Technologies, Inc. and Cetus Corporation. Dr. Khosrovi received a M.A. in natural sciences from Cambridge University and a Ph.D. in applied microbiology and biochemical engineering from Manchester University.

Ken Krantz, MD, Ph.D., Vice President, Medical Affairs: Ken Krantz, MD, Ph.D., has served as NovaBay's Vice President, Medical Affairs since 2003. Dr. Krantz brings over 30 years of related experience to his position of Vice President, Medical Affairs at NovaBay. He has held senior management roles at Searle, Schering-Plough, Ayerst, and Johnson & Johnson as well as at numerous start-up and biotech companies including ImClone, Neurocrine and NaPro. Dr. Krantz received his doctoral degrees in medicine and pharmacology from the University of Chicago.

Mark Anderson, Ph.D., Chief Scientific Officer: Mark Anderson, Ph.D. has over 17 years of successfully leading research and development programs. He holds numerous patents, patent applications and publications to his credit. Prior to joining NovaBay, he has held senior positions at Myriad Genetics, Elitra Pharmaceuticals, Pfizer-Agouron and Ligand-Glycomed. Dr. Anderson holds a doctorate from Purdue University, and completed postdoctoral studies in chemical biology at Harvard University.

David W. Stroman, Ph.D., Senior Vice President, Ophthalmic Drug Development: Dr. Stroman previously worked for 21 years at Alcon, most recently as Therapeutic Unit Head for Anti-Infectives. Dr. Stroman joined Alcon in 1990 to create and lead the Anti-Infective program and starting in 1995 led the Clinical Microbiology group. Prior to Alcon, he served for 9 years with the Infectious Disease Research Unit of The Upjohn Company, and 10 years in the biotechnology industry leading Phillips Petroleum Company’s biotechnology program and its joint ventures with The Salk Institute, Bissendorf Peptide, GmbH, and Baylor College of Medicine.

Russell Hoon, Vice President Advanced Wound Care: Previously he served as President of Hoon Consulting assisting biomedical and medical device manufacturers with strategies for bringing new products to market. From 1998 to 2008 he served initially as VP Business Development and subsequently as President and COO of Xylos Corporation where he directed the company from initial start-up through revenue production, conception and design of the surgical products platform, coordination of preclinical and clinical trials and leading the development and launch of the Company's advanced wound care product line and has also been awarded a patent related to the processing of microbial cellulose which led to the realization of the surgical products platform at Xylos. Mr. Hoon earlier served in a range of positions at various companies including Director of Marketing/Sales Business Development at Tutogen Medical Inc., and as Marketing Manager at Integra LifeSciences.

Roy Wu, M.B.A., Senior Vice President, Business Development: Roy Wu has over 30 years of highly successful experience in the pharmaceutical industry. Prior to joining NovaBay, Mr. Wu was Vice President of Business Development at Genelabs Technologies where he completed numerous licensing agreements and research collaborations with companies including Novartis, Gilead Sciences, Tanabe Seiyaku and Affymetrix. Mr. Wu also has served as Vice President of Kissei Pharma USA, Director of Business Development for Quintiles-BRI and Director of Research & Development and Program Planning & Management, Japan at Syntex Corporation rising to. Mr. Wu received his MBA in International Finance from the University of San Francisco, School of Business.

BOARD OF DIRECTORS

Charles J. Cashion: Charles J. Cashion is a co-founder, Senior Vice President and Chief Financial Officer of Conatus Pharmaceuticals Inc. From 2001 to July 2005, Mr. Cashion was the Executive Vice President, Chief Financial Officer and Secretary of Idun. Mr. Cashion's prior experience also includes serving as the Senior Vice President, Chief Financial Officer and Secretary of Quidel Corporation, a publicly owned, medical diagnostics company, and as the Senior Vice President, Finance, Chief Financial Officer, Secretary, and Treasurer of The Immune Response Corporation, a publicly owned biopharmaceutical company. Mr. Cashion received his B.S. in accounting and M.B.A. in finance from Northern Illinois University.

Anthony Dailley, DDS: Anthony Dailley, DDS, has been involved in a number of start-up companies, including the 1-800-DENTIST referral service. Dr. Dailley received his B.S. in cell and molecular biology at San Francisco State University and dental degree at the University of the Pacific School of Dentistry in San Francisco.

Paul E. Freiman: Paul E. Freiman is the President and CEO of Neurobiological Technologies, Inc. Prior to this role, he held the position of Chairman and CEO at Syntex Corporation, which was sold to The Roche Group for \$5.3 billion during his tenure. Mr. Freiman currently serves as Chairman of Penwest Pharmaceutical Co., and serves on the Boards of Calypte Biomedical Corporation, NeoPharm, Inc., Otsuka America Pharmaceuticals, Inc., and SciGen Ltd. Mr. Freiman holds a B.S. degree in pharmacy from Fordham University and an honorary doctorate from the Arnold & Marie Schwartz College of Pharmacy.

Gail Maderis: Ms. Maderis currently serves as President and CEO of BayBio, an independent, non-profit trade association serving the life science industry in Northern California. Ms. Maderis was previously President and CEO of FivePrime Therapeutics, Inc., a biotechnology company that is focused on the discovery and development of innovative protein and antibody drugs, and prior to that, held general management positions at Genzyme Corporation, including founder and president of Genzyme Molecular Oncology, a publicly traded division of Genzyme, and corporate vice president of Genzyme Corporation. Ms. Maderis has been a member of several boards, and currently serves on The Mayor's Biotech Advisory Council of San Francisco, as well as the HBS Healthcare Initiative board. Ms. Maderis received a B.S. degree in business from the University of California at Berkeley and an M.B.A. from Harvard Business School.

T. Alex McPherson, MD, Ph.D.: T. Alex McPherson, MD, Ph.D., has served as a director since July 2006. Dr. McPherson was President and Chief Executive Officer of Biomira, Inc., a biotechnology company specializing in the development of products for the treatment of cancer, from 1991 until his retirement in May 2006. He is a Fellow of the Australasian, Canadian and American Colleges of Physicians and is a past President of both the Alberta and Canadian Medical Associations. Dr. McPherson was the former Deputy Minister of the Alberta Ministry of Hospitals and Medical

Care and was also Deputy Commissioner and Executive Director of the Premier's Commission on Future Health Care for Albertans. Dr. McPherson is currently a Professor Emeritus in the Faculty of Medicine at the University of Alberta.

Robert R. Tufts, JD: Robert R. Tufts is a founding law partner of Tufts Stephenson & Kasper, LLP and was formerly a partner with Jackson Tufts Cole and Black, LLP for over 35 years. Mr. Tufts specializes in corporate representation for start-up and emerging businesses, business financings, mergers and acquisitions, and in corporate taxation. Mr. Tufts received his B.A. in history from New York University and received his law degree from Harvard Law School.

Tony Wicks: Tony Wicks has served as a director since May 2002. He also served as a director of NovaCal LLC from March 2001 to May 2002. Since 1995, Mr. Wicks has been pursuing private investments, venture work and participating in property investments. Prior to that, from 1986 to 1995, Mr. Wicks was the Chief Executive Officer of American Resource Corporation Inc., a public company in the mining industry with activities in North & South America. Prior to that, he served as the Chief Executive Officer of several public and private companies in Europe and the U.S. and was directly involved in company start-up operations, and with public listings. Mr. Wicks received his H.N.C. in electrical engineering from Essex Polytechnic.

SCIENTIFIC ADVISORY BOARD

- Bernard Churchill, MD, Professor, Urology, UCLA
- William Costerton, Ph.D., Director of Biofilm Engineering, University of Southern California
- Fred Hawthorne, Ph.D., Co-Director, International Institute for Nano and Molecular Biology, University of Missouri – Columbia
- John Soderquist, Ph.D., Professor, Department of Chemistry, University of Puerto Rico - Rio Piedras.
- Larry Truesdale, Ph.D., Director of Combinatorial Chemistry, Pfizer, Inc.
- Roger Whiting, Ph.D., President and Chief Scientific Officer, Roxro Pharma, Inc.

OPHTHALMIC ADVISORY COMMITTEE

- Stephen Wilmarth, MD, Board-Certified Eye Surgeon, Private Practice
- Kathryn K. Najafi-Tagol, M.D., Medical Director of the Eye Institute of Marin

Risks

Some of the operational and financial risks to NovaBay Pharmaceuticals are:

- FDA and Regulatory risks: All of NovaBay Pharmaceuticals' products are ultimately reliant on approvals by the U.S. FDA and other national regulatory bodies. There can be no guarantee of timely or definite FDA or other national regulatory body approvals for any of their pipeline products.
- Need to Raise Additional Funds: Although it is possible that NovaBay Pharmaceuticals may turn cash flow positive due to NeutroPhase[®] sales, partnership fees, milestone payments and exercised warrants, we believe that NovaBay may be required to raise additional funds to fund development operations in 2012 and beyond. This would be dilutive to existing shareholders and could potentially affect the share price. We have included our estimate of future share issuance in our financial model but there can be no guarantee that our estimates are accurate.
- Partnerships: NovaBay Pharmaceuticals is reliant on partners to successfully market some its products as well as partners for development, clinical trials and regulatory filings for some of its products. Failure of NovaBay Pharmaceuticals existing or future partners to perform satisfactorily or in a timely fashion could adversely impact the company's financial position.
- Patent Litigation: Third-party claims of infringement of intellectual property could require NovaBay Pharmaceuticals to spend time and money on defending their intellectual property rights up to and including adverse judgments against Access.
- Small-Capitalization and Liquidity: Investors should note that small-cap stocks have additional risks that may result in trading at a discount to their peers. Liquidity risk, caused by small trading floats and very low trading volume can lead to large spreads and high volatility in stock price. Small-cap stocks may also have significant company-specific risks that contribute to lower valuations. Investors should note the higher probability of financial default and higher degree of financial distress inherent in the small-cap segment of the market.
- Sector Rotation: NovaBay Pharmaceuticals is a small biotechnology development company often kept in a portfolio with similar companies. In such cases, a significant event for one company may have a material impact on the valuation of all similar companies regardless of their unique qualities.

NovaBay Pharmaceuticals
Consolidated Income Statement
(in \$000, except EPS)

FYE December 31st

	2007	2008	1Q09	2Q09	3Q09	4Q09	2009	1Q10	2Q10	3Q10	4Q10	2010	1Q11	2Q11	3Q11	4Q11E	2011E	2012E	2013E	2014E
NeuroPhase Royalty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,000	3,500	5,000
NVC-422 Urinary Catheter Royalty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,000
NVC-422 Impetigo Royalty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,200	5,000
NVC-422 Conjunctivitis Royalty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,000
NVC-422 Acne Royalty	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
License, Collab. & Milestones [1]	5,913	6,722	2,611	2,357	3,224	7,492	15,684	2,084	2,548	2,086	3,036	9,754	2,490	4,527	2,772	2,495	12,284	9,827	7,862	5,503
Net Sales	5,913	6,722	2,611	2,357	3,224	7,492	15,684	2,084	2,548	2,086	3,036	9,754	2,490	4,527	2,772	2,495	12,284	11,827	14,562	38,503
Cost of Sales (Partners @ mfg. cost)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Profit	5,913	6,722	2,611	2,357	3,224	7,492	15,684	2,084	2,548	2,086	3,036	9,754	2,490	4,527	2,772	2,495	12,284	11,827	14,562	38,503
Research & Development	7,422	9,595	1,361	1,444	2,004	2,528	7,337	2,233	2,129	2,245	2,009	8,616	2,920	2,769	2,023	2,063	9,775	11,242	12,928	14,867
General & Administrative	4,368	5,636	1,579	1,191	1,309	1,528	5,607	1,469	1,611	1,487	1,087	5,654	1,515	1,318	1,097	1,130	5,060	5,566	6,122	6,735
Sales & Marketing (Partner support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,000	3,000	4,500
Total Operating Expenses	11,790	15,231	2,940	2,635	3,313	4,056	12,944	3,702	3,740	3,732	3,096	14,270	4,435	4,087	3,120	3,193	14,835	18,808	22,051	26,102
Income from Operations	(5,877)	(8,509)	(329)	(278)	(89)	3,436	2,740	(1,618)	(1,192)	(1,646)	(60)	(4,516)	(1,945)	440	(348)	(699)	(2,552)	(6,981)	(7,489)	12,401
Other Income	489	397	11	(11)	(22)	(14)	(36)	(11)	(6)	4	271	258	(31)	(11)	6	(10)	(46)	20	20	20
Derivatives Gain (Loss) (Non-Cash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	453	(300)	153	500	(500)	(1,500)
Total Other Income/Expense	489	397	11	(11)	(22)	(14)	(36)	(11)	(6)	4	271	258	(31)	(11)	459	(310)	107	520	(480)	(1,480)
Income Before Tax	(5,388)	(8,112)	(318)	(289)	(111)	3,422	2,704	(1,629)	(1,198)	(1,642)	211	(4,258)	(1,976)	429	111	(1,009)	(2,445)	(6,461)	(7,969)	10,921
Provision for Income Taxes	12	2	0	0	0	7	7	0	0	0	50	50	12	4	5	0	21	0	0	0
Net Income	(5,400)	(8,114)	(318)	(289)	(111)	3,415	2,697	(1,629)	(1,198)	(1,642)	161	(4,308)	(1,988)	425	106	(1,009)	(2,466)	(6,461)	(7,969)	10,921
EPS - Diluted	(\$0.60)	(\$0.38)	(\$0.01)	(\$0.01)	(\$0.00)	\$0.14	\$0.12	(\$0.07)	(\$0.05)	(\$0.07)	\$0.01	(\$0.18)	(\$0.08)	\$0.02	\$0.00	(\$0.04)	(\$0.10)	(\$0.20)	(\$0.21)	\$0.27
Shares Outstanding - Diluted	8,974	21,312	21,620	21,931	23,251	23,935	23,115	23,300	23,315	23,335	23,352	23,326	23,428	23,480	27,902	28,739	25,887	31,613	37,936	39,832

Balance Sheets
(in \$Millions)

	12/31/06	12/31/07	12/31/08	12/31/09	12/31/10	9/30/11
Assets:						
Cash and Marketable Securities	\$11,086	\$22,353	\$12,099	\$11,292	\$12,806	\$14,671
Accounts Receivable	0	0	0	3,801	500	1,825
Prepaid Expenses	226	419	414	513	448	289
Assets Available for Sale	0	0	0	0	0	0
Other Current	0	0	0	0	0	0
Total Current Assets	\$11,312	\$22,772	\$12,513	\$15,606	\$13,754	\$16,785
Property & Equip, net	554	1,150	1,456	1,812	1,588	1,372
Other Assets	0	0	0	105	174	144
TOTAL ASSETS	\$11,866	\$23,922	\$13,969	\$17,523	\$15,516	\$18,301
Liabilities:						
Accounts Payable	\$365	\$1,283	\$406	\$272	\$406	\$320
Accrued Liabilities	521	256	1,166	1,228	726	631
Deferred Revenue ST	2,500	3,039	2,500	2,167	1,485	1,813
Equipment Loan ST	0	0	366	364	106	0
Capital Lease Obligation ST	0	0	42	7	0	0
Warrant Liability	0	0	0	0	0	1,221
Total Current Liabilities	\$3,386	\$4,578	\$4,480	\$4,038	\$2,723	\$3,985
Deferred Revenue LT	6,667	4,478	1,667	0	2,204	1,260
Equipment Loan LT	0	497	470	106	0	0
Capital Lease Obligation LT	0	49	7	0	0	0
Other Long-Term Liabilities	0	0	0	34	99	113
Stockholders' Equity	1,813	14,320	7,345	13,345	10,490	12,943
TOTAL LIAB. & EQ	\$11,866	\$23,922	\$13,969	\$17,523	\$15,516	\$18,301

NOTES

- Includes \$3.75M Milestone Payments in Q4 2009 from Galderma SA and \$3.25M Continuation Fee in Q4 2010 from Galderma SA also Includes \$3M from Alcon Termination June 2011
- Tax Net Loss Carryforward is \$24.2M as of 12/31/10

DISCLOSURES



Ratings and Price Target Changes over Past 3 Years

Initiated January 26, 2010 – Strong Speculative Buy - Price Target \$4.50
 Updated July 7, 2011 – Strong Speculative Buy - Price Target \$2.50
 Downgrade November 14, 2011 – Neutral - Price Target \$1.25

Analyst Certification: I, Stephen M. Dunn, the author of this research report certifies that a.) All of the views expressed in this report accurately reflect my personal views about any and all of the subject securities or issuers discussed b.) No part of my compensation is directly or indirectly related to the specific recommendations or views expressed in this research report and c.) We may be eligible to receive other compensation based upon various factors, including total revenues of the Firm and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.

DISCLOSURES

Does the Analyst or any member of the Analyst's household have a financial interest in any securities of the Company?	NO
Does the Analyst or any member of the Analyst's household or Firm serve as an officer, director or advisory board member of the Company?	NO
Has the Analyst or any member of the Analyst's household received compensation directly or indirectly from the Company in the previous 12 months?	NO
Does the Firm or affiliates beneficially own ≥1% of the Company's common stock?	NO
Has the Firm or affiliates received investment banking services compensation in previous 12 months?	YES
Has the Firm or affiliates received non-investment banking securities-related services compensation in previous 12 months?	NO
Does the Firm or affiliates expect to receive or intend to seek investment banking compensation in next 3 months?	YES
Has the Firm or affiliates received non-securities services compensation in previous 12 months?	NO
Does the Firm or affiliates make a market in the Company's securities?	NO

The Firm and/or its directors and employees may own securities of the company(s) in this report and may increase or decrease holdings in the future. The Firm, its officers, directors, analysts or employees may effect transactions in and have long or short positions in the securities (or options or warrants with respect thereto) mentioned herein. The Firm may effect transactions as principal or agent in the securities mentioned herein.

Ratings Definitions: 1) **Strong Buy:** the stock is expected to appreciate and produce a total return of at least 40% over the next 12-18 months; 2) **Buy:** the stock is expected to appreciate and produce a total return of at least 20% over the next 12-18 months; 3) **Strong Speculative Buy:** the stock is expected to appreciate and produce a total return of at least 40% over the next 12-18 months but **the volatility and investment risk is substantially higher** than our "Strong Buy" recommendation; 4) **Speculative Buy:** the stock is expected to appreciate and produce a total return of at least 20% over the next 12-18 months but **the volatility and investment risk is substantially higher** than our "Buy" recommendation; 5) **Neutral:** the stock is fairly valued for the next 12-18 months; 6) **Avoid/Sell:** the stock is expected to decline at least 20% over the next 12-18 months and should be avoided or sold if held; 7) **Under Review:** the previous rating and/or price target is suspended due to a significant event which now requires additional analysis and the previous rating and/or price target cannot be relied upon; 8) **Not Rated:** the stock has too much business or financial uncertainty to form an investment conclusion or is currently in the process of being acquired and 9) **Restricted:** coverage cannot be initiated or has been temporarily suspended to comply with applicable regulations and/or firm policies in certain circumstances such as investment banking or an advisory capacity involving the company.

LifeTech Capital Research	Research Coverage	Investment Banking	FINRA RULE 2711	Research Coverage	Investment Banking
Ratings Distribution	% of Total	% of Total	Ratings Distribution	% of Total	% of Total
Strong Buy	17%	50%	Buy	75%	56%
Strong Speculative Buy	58%	57%	Hold/Neutral	17%	50%
Buy	0%	0%	Sell	8%	0%
Speculative Buy	0%	0%	Total	100%	50%
Neutral	17%	50%			
Avoid/Sell	8%	0%			
Under Review	0%	0%			
Not Rated	0%	0%			
Restricted	0%	0%			
Total	100%	50%			

Legal Disclaimer

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Investors are expected to take full responsibility for any and all of their investment decisions based on their own independent research and evaluation of their own investment goals, risk tolerance, and financial condition. Investors are further cautioned that Small-Cap and Micro-Cap stocks have additional risks that may result in trading at a discount to their peers. Liquidity risk, caused by small trading floats and very low trading volume can lead to large spreads and high volatility in stock price. Small-Cap and Micro-Cap stocks may also have significant company-specific risks that contribute to lower valuations. Investors need to be aware of the higher probability of financial default and higher degree of financial distress inherent in the Small-Cap and Micro-Cap segments of the market.

The information, opinions, data, quantitative and qualitative statements contained in this report have been obtained from sources believed to be reliable but have not been independently verified and are not guaranteed as to accuracy nor does it purport to be a complete analysis of every material fact regarding the company, industry, or security. The information, opinions, or recommendations are solely for advisory and informational purposes and are only valid as of the date appearing on the report and are subject to change without notice.

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