



# Corporate Fact Sheet

## About Vitae Pharmaceuticals

Vitae Pharmaceuticals is a clinical-stage biopharmaceutical company building a portfolio of novel, small molecule, best-in-class compounds that address large markets, including chronic kidney disease (CKD), diabetes, Alzheimer's disease and atherosclerosis. Vitae's pipeline of programs focuses on high-value, hard-to-drug targets, integrating a proprietary, structure-based drug design platform with the experience and insights of a world-class R&D team to enhance the novelty, speed and capital efficiency of small molecule discovery and development.

Program	Preclinical	Phase 1	Phase 2	Phase 3
Chronic Kidney Disease VTP-27999				
Diabetes/Obesity 11 $\beta$ -HSD-1				
Alzheimer's disease $\beta$ -secretase	<i>Progress Confidential</i>			
Atherosclerosis LXR Modulator				

## About VTP-27999

Preservation of kidney function is a primary treatment goal in large patient populations within specialty care markets, including CKD, hypertension and diabetes. Vitae's lead compound, VTP-27999, is a novel, potent and selective renin inhibitor designed to offer a best-in-class therapeutic profile - most importantly, improved reno-protection. In preclinical, *in vivo* studies, VTP-27999 demonstrated significant reno-protective effects, including survival benefit, as well as sustained reductions in blood pressure.

VTP-27999 has completed Phase 1 and will proceed directly to Phase 2b in 4Q 2011. VTP-27999 was found to be generally safe and well-tolerated and showed exceptional bioavailability and a PK profile supporting once-daily dosing. In addition, clinical biomarker data has demonstrated that VTP-27999 has significantly better renin inhibition in the kidney vs. ACE inhibitors, ARBs and aliskiren.

## About Renin Inhibition

Renin is the first and rate-limiting step in the renin-angiotensin system (RAS), the primary biochemical pathway for regulating blood volume, blood pressure and vascular function. In addition to systemic activity, RAS impacts critical organs at a tissue level throughout the body, such as the kidney, heart and brain. Therefore, drugs that directly inhibit renin are expected to offer improved kidney protection and improved patient outcomes.

## About CKD

CKD is a worldwide health problem that is the result of the progressive loss of kidney function over a period of months to years. CKD is significantly under diagnosed at the early stages of the disease especially when there are no overt symptoms. The prevalence of CKD has risen more than 25% over the last decade and is currently estimated at 27 million people in the United States. Currently, the Centers for Disease Control and Prevention (CDC) lists CKD as the 9th leading cause of death in the United States. The progressive damage to the kidney in CKD patients leads to complications such as high blood pressure, abnormal heart rhythm, anemia, nerve damage and weak bones. Most current treatment regimens for CKD are focused on controlling blood pressure by administering anti-hypertensive drugs and by controlling diet and glucose levels in patients with oral drugs or insulin. Although this treatment can slow the progression of CKD, patients still progress to end stage renal disease (ESRD). There is still a clear need for additional strategies to block RAS more effectively to provide better kidney protection or even prevent CKD.

## Pipeline Overview

### 11beta-hydroxysteroid dehydrogenase (HSD)-1 program

Vitae is rapidly advancing its 11beta-HSD-1 inhibitor program focused on once-a-day drug candidates with *in vivo* activity favorable for the treatment of diabetes and associated metabolic diseases. 11beta-HSD-1 represents a highly attractive therapeutic target as clinical evidence shows its inhibition has a positive effect on body weight and can reduce blood glucose and lipids in diabetic patients. Vitae's 11beta-HSD-1 program is partnered with Boehringer Ingelheim and is currently undergoing Phase I clinical trials.

### Beta-secretase (BACE) program

Vitae's beta-secretase (BACE) program has identified potent and bioavailable inhibitors that have demonstrated the ability to cross the blood-brain barrier and lower brain amyloid-beta (A $\beta$  or Abeta) peptide, following a single oral dose, in preclinical, *in vivo* models of Alzheimer's disease. Inhibition of BACE, an enzyme involved in the formation of Abeta plaques that accumulate in the brains of patients with Alzheimer's disease, may offer the potential to slow or even halt disease progression. Vitae's BACE program is partnered with Boehringer Ingelheim.

### Atherosclerosis program

Atherosclerosis is a condition in which the artery wall thickens as a result of the build-up of fatty materials such as cholesterol, resulting in coronary artery disease—the leading cause of death worldwide. Vitae has identified compounds that modulate the Liver X Receptor (LXR) thereby increasing Reverse Cholesterol Transport and decreasing inflammation. This approach has the potential to offer atherosclerosis patients a novel alternative to current lipid lowering therapies.

## Financing History

Vitae is well-financed and expects to achieve collaborative milestones that would lengthen its runway indefinitely.

Vitae completed its last round of venture-led financing in 2004 and has since financed its operations through corporate collaborations.

## Upcoming Milestones

- **2011:** Present top-line VTP-27999 Phase 1 data.
- **2011:** Initiate additional discovery program.
- **2011:** Achieve important milestones in 11beta-HSD-1 program.
- **2011:** Achieve important milestones in BACE program.
- **4Q 2011:** Begin Phase 2b clinical trial of VTP-27999 in CKD.

## Technology Platform and Process

Vitae Pharmaceuticals integrates a proprietary, structure-based drug design platform, CONTOUR®, with the experience and insights of a world-class R&D team. CONTOUR® structure based design delivers unprecedented precision, accuracy, speed and efficiency, enabling the company to create potent, bioavailable compounds active against hard-to-drug yet validated and highly promising therapeutic targets. The CONTOUR® platform helps to design and meet pre-defined physiochemical characteristics, such as size, shape, binding affinity, polarity and water solubility, in order to generate multiple, diverse high-quality leads. CONTOUR® structure based design contributes throughout the medicinal chemistry and lead optimization processes, enhancing appropriate drug-like characteristics related to bioavailability, potency and pharmacokinetics.

## Management Team

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Chief Scientific Officer

**Tina L. Fiumenero**  
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**Christine Brennan, Ph.D.**  
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**Gerard M. McGeehan, Ph.D.**  
Vice President, Biology

## Board of Directors

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