# CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: 203752Orig1s000

**MEDICAL REVIEW(S)** 



### **CLINICAL REVIEW**

Application Type NDA
Application Number 203752
Priority or Standard Standard

Submit Date December 29, 2012
Received Date December 29, 2012
PDUFA Goal Date October 29, 2012
Division/Office Division of Reproductive and

Urologic Products

(DRUP)/Office of Drug Evaluation III (0DE III)

Reviewer Name Phill H. Price, M.D. Review Completion Date September 24, 2012

Established Name Estradiol transdermal system (Proposed) Trade Name Minivelle Therapeutic Class Estrogen Applicant Noven Pharmaceuticals, Inc.

Formulation Transdermal Patch

Dosing Regimen 0.0375 mg per day twice weekly initially allowing for titration upward (0.05 mg, 0.075 mg, and 0.1 mg of estradiol per day if necessary depending upon relief of



symptoms

Indication Treatment of Moderate to

Severe Vasomotor symptoms

due to menopause

Intended Population(s) Healthy Postmenopausal

Women

Template Version: March 6, 2009



### **Table of Contents**

1	REC	COMMENDATIONS/RISK BENEFIT ASSESSMENT	7
	1.2 1.3 1.4	Recommendation on Regulatory Action	7 7
2	INT	RODUCTION AND REGULATORY BACKGROUND	7
	<ul><li>2.2</li><li>2.3</li><li>2.4</li><li>2.5</li></ul>	Product Information	9 . 11 . 11
3	ETH	IICS AND GOOD CLINICAL PRACTICES	. 12
	3.2	Submission Quality and Integrity	. 13
4		NIFICANT EFFICACY/SAFETY ISSUES RELATED TO OTHER REVIEW CIPLINES	. 13
	4.2 4.3	2 Pharmacodynamics	. 13 . 14 . 14 . 14
P	ATCH	ADHESION	. 36
S	KIN IR	RITATION EVALUATION	. 36
	5.2	Tables of Studies/Clinical Trials	. 47
6		/IEW OF EFFICACY (THIS SECTION WILL PRESENT A HISTORICAL MMARY OF PREVIOUSLY REVIEWED DATA)	. 47
	Effica	cy Summary	. 47
	6.1	Indication	. 48
	6.1.		
	6.1. 6.1.	<b>0</b> 1	
	<b>5</b>		



	6.1		
	6.1		
	6.1	· · · · · · · · · · · · · · · · · · ·	
	6.1	.7 Subpopulations	. 56
7		VIEW OF SAFETY (THIS SECTION WILL PRESENT A HISTORICAL MMARY OF PREVIOUSLY REVIEWED DATA)	57
		•	
	Safet	y Summary	. 57
	Safet	y data from Studies 1003A and study 1003B and Protocol 036 will be	
		summarized separately	. 57
	7.1	Methods	
	7.1	.1 Studies/Clinical Trials Used to Evaluate Safety	
	7.1	.2 Categorization of Adverse Events	
		.3 Pooling of Data Across Studies/Clinical Trials to Estimate and Compare Incidence	
	7.2		
		Adequacy of Safety Assessments	
	7.3	Major Safety Results	. 59
8	PO	STMARKET EXPERIENCE	. 59
	8.1	Literature Review/References	. 59
	8.2	Labeling Recommendations	
	8.3	Advisory Committee Meeting	
0	۸D	DENDICES	64



# DOCKET

# Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## **Real-Time Litigation Alerts**



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## **Advanced Docket Research**



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

### **Analytics At Your Fingertips**



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

#### API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

#### **LAW FIRMS**

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

#### **FINANCIAL INSTITUTIONS**

Litigation and bankruptcy checks for companies and debtors.

#### **E-DISCOVERY AND LEGAL VENDORS**

Sync your system to PACER to automate legal marketing.

