Key Points to Keep in Mind



It is **very easy** to know what the blood plasma profile for a once-a-day bupropion product would look like.



It is **very difficult** to create a dosage form that achieves the once-a-day blood plasma profile.



Andrx attempts at making a once-a-day product solely used pellets.



GSK's product doesn't use pellets.

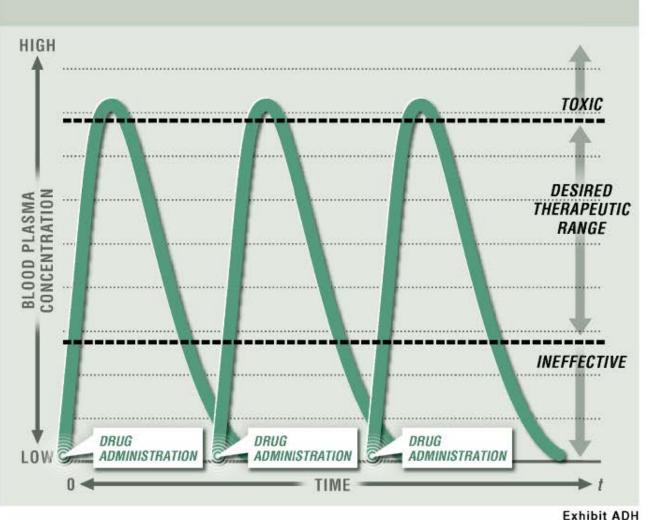
Variability in Blood Plasma Parameters Results from:

- THE DRUG used in testing
- **THE DOSAGE FORM**
- DIFFERENCES BETWEEN different individuals tested
- DIFFERENCES WITHIN the same individual studied at different times
- DIFFERENCES in how the study is designed and carried out
- **DIFFERENCES** in testing conditions
- DIFFERENCES in measurement techniques for blood drug levels

Drug Delivery

Multiple Drug Administration:

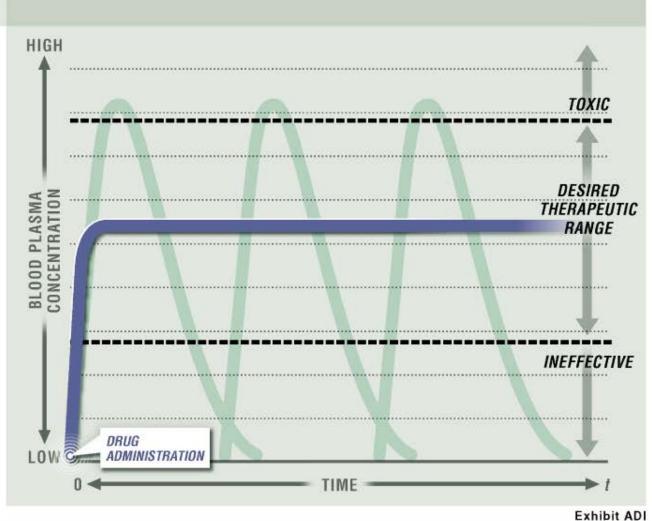
Repeated administration of immediate release dosage form is needed to maintain therapeutic blood plasma levels



Drug Delivery

Single Drug Administration:

Maintain desired drug level for specified time periods



Route of Administration of Drugs

- Oral
- Injection
- Intravenous
- Transdermal
- Inhaled
- Suppository
- Topical

Many Factors Influence the Route of Administration Chosen for a Particular Drug

- The chemical and physical properties of the drug itself
 - solubility
 - permeability
 - stability
- Location of the target organs or tissues
- Ability to manufacture dosage form
- Ability to control release
- Patient convenience

In General, Oral Administration Is Preferred for Patient Convenience

TYPES OF ORAL DOSAGE FORMS:

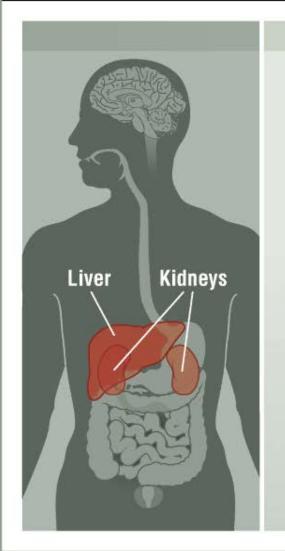
- Tablet
- Capsule
- Gel capsule
- Pellets
- Syrup or solution
- Powder
- Liquid suspension
- Film coated tablet
- Hybrid tablet

In Order for a Drug That Is Given Orally to Work, the Active Ingredient:

- MUST be released from the formulation
- MUST dissolve in the GI tract

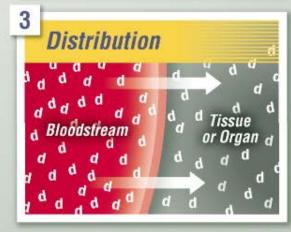
- MUST be absorbed into the bloodstream
- MUST distribute itself to the target organs or tissues

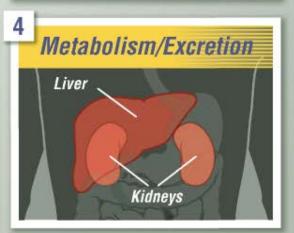
Drug Absorption and Elimination



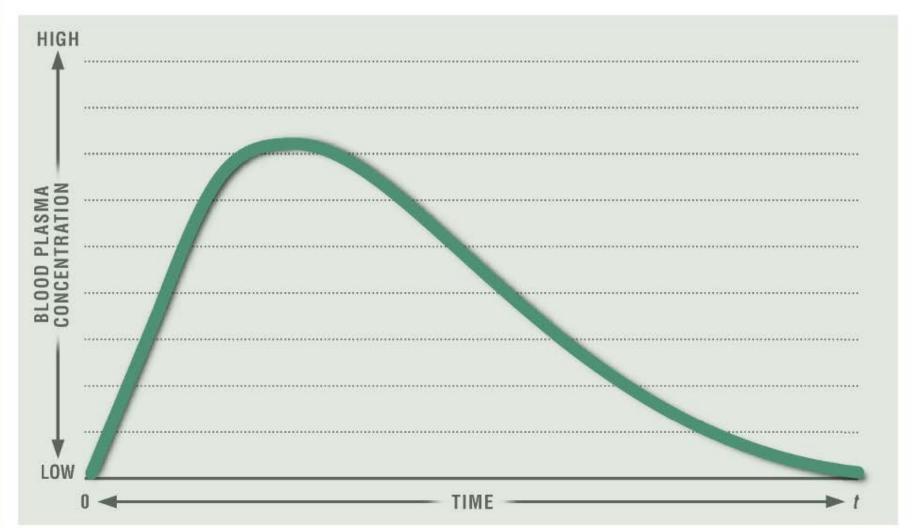








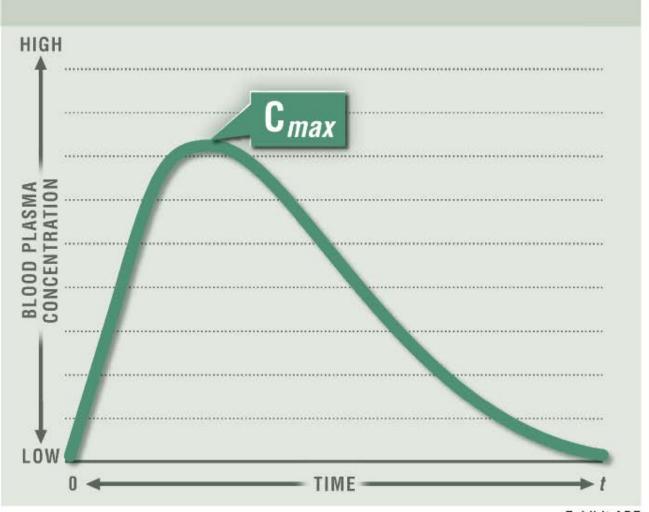
Blood Plasma Profiles Are Used to Measure the Effectiveness of a Drug



Definitions of Pharmacokinetic (PK) Parameters

C_{max}

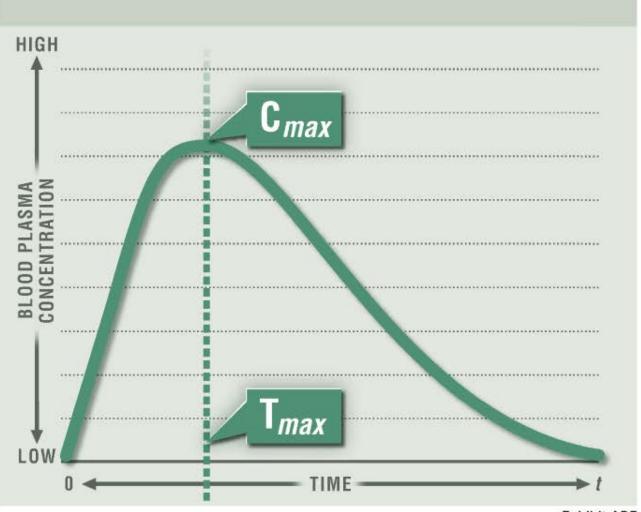
Represents the maximum concentration of drug found in the blood plasma of a patient to whom the dosage form has been administered.



Definitions of Pharmacokinetic (PK) Parameters

T_{max}

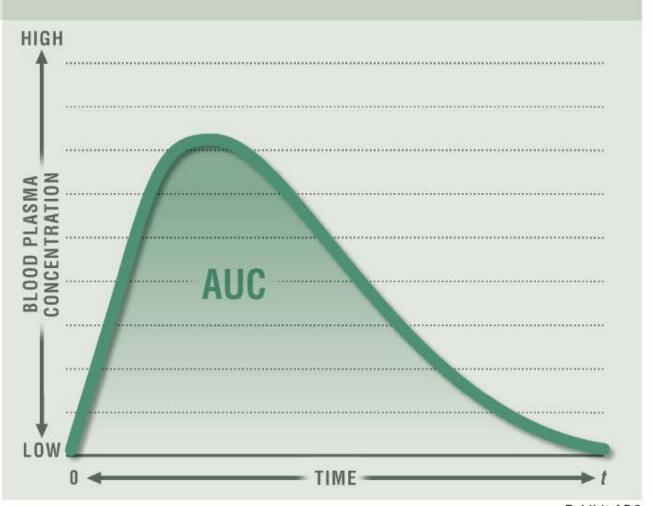
The time from administration at which the plasma concentration achieves C_{max} .



Definitions of Pharmacokinetic (PK) Parameters

AUC AREA UNDER THE CURVE

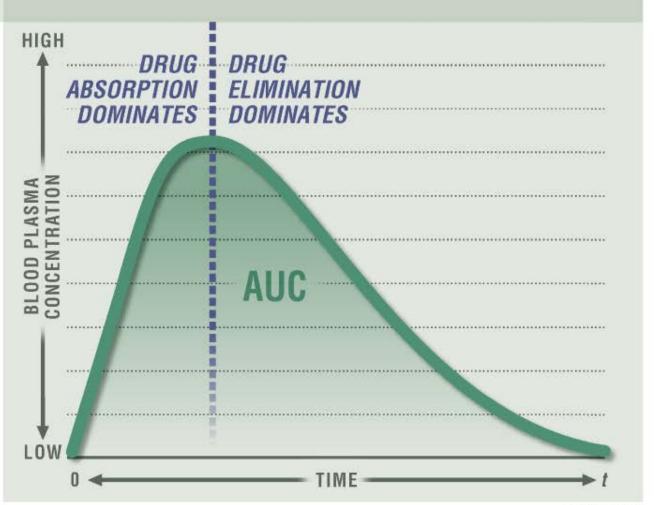
The total amount of drug available over time in the blood to achieve the desired therapeutic effect.



Bioavailability

AUC AREA UNDER THE CURVE

A measure of the bioavailability of the active drug from the dosage form.



pH in the Digestive (GI) Tract

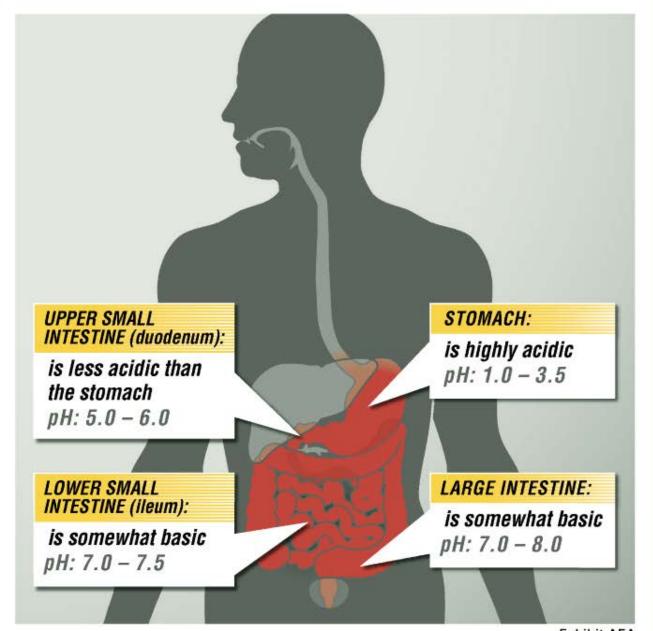
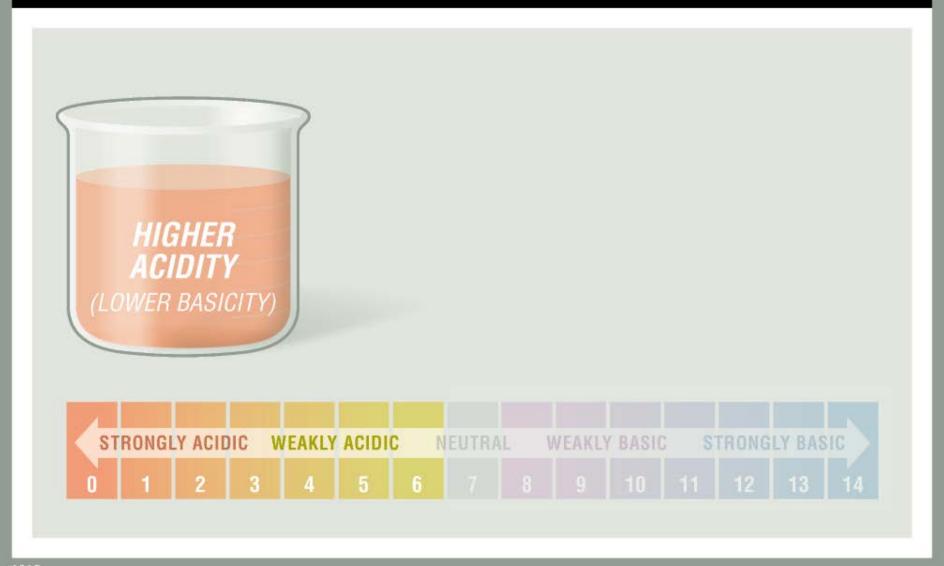


Exhibit AEA

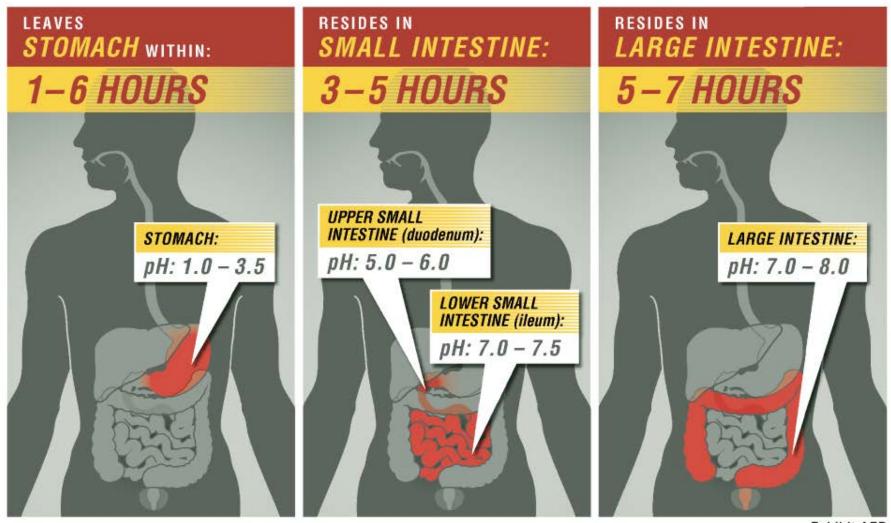








GI Tract Transit Time GENERALLY TAKES 24 HOURS



Dosage Form Disclosed in the Andrx '708 Patent

ANDRX '708 PATENT

A multi-pellet dosage form comprised of two or three types of pellets designed to be released into a different region of the digestive tract at a different time as a function of pH.

See '708 Patent Col. 6: 37 - 49

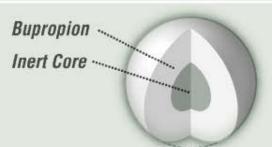
Sustained Release Pellets Bupropion
Inert Core
Water
Insoluble
Polymer
Coating

Drug released at pH of about 4.8 and lower

Enteric Coated Pellets Bupropion
Inert Core
Enteric
Coating

Drug released at pH of about 7.0 and above

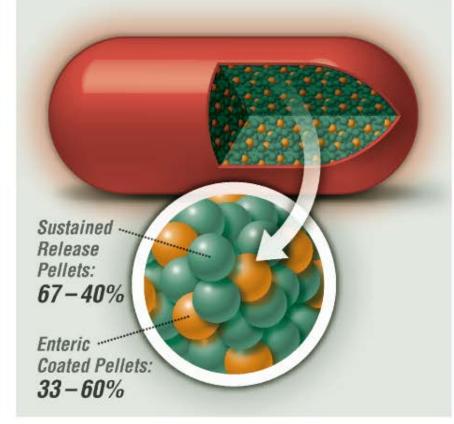
Instant Release Pellets



No coating — Drug released immediately

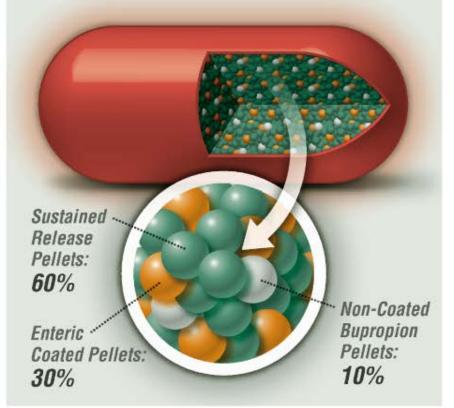
ANDRX '708 PATENT

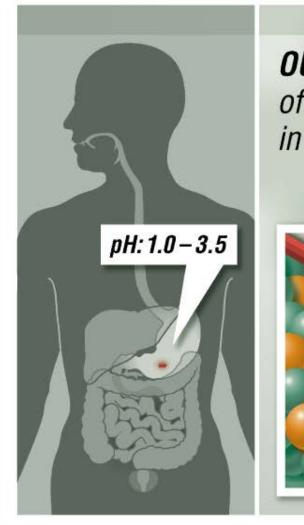
Preferred Embodiment

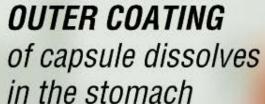


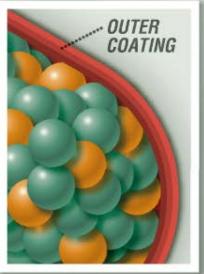
ANDRX '708 PATENT

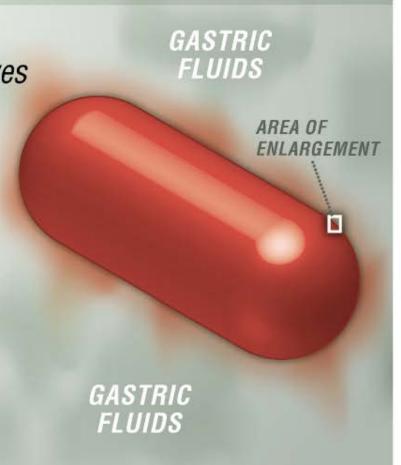
Alternate Embodiment

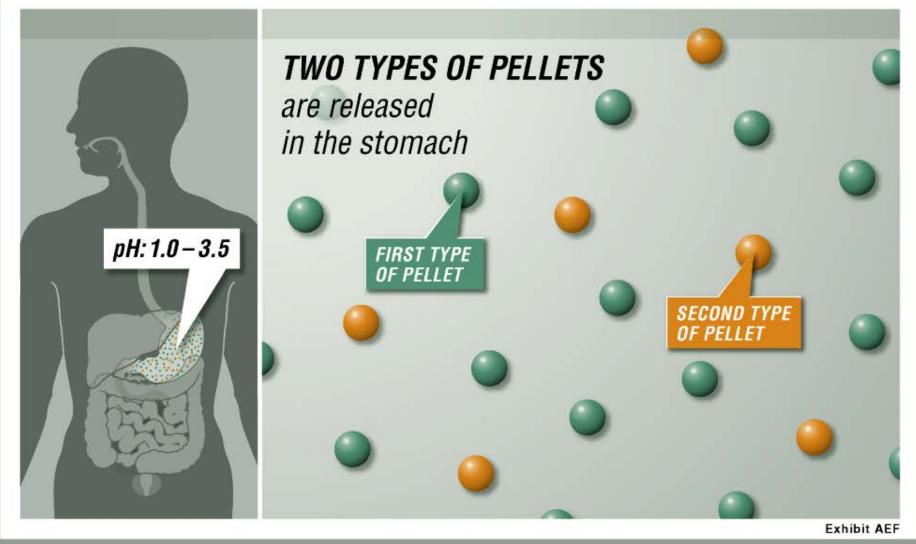


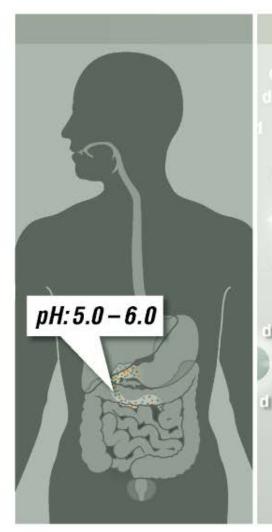


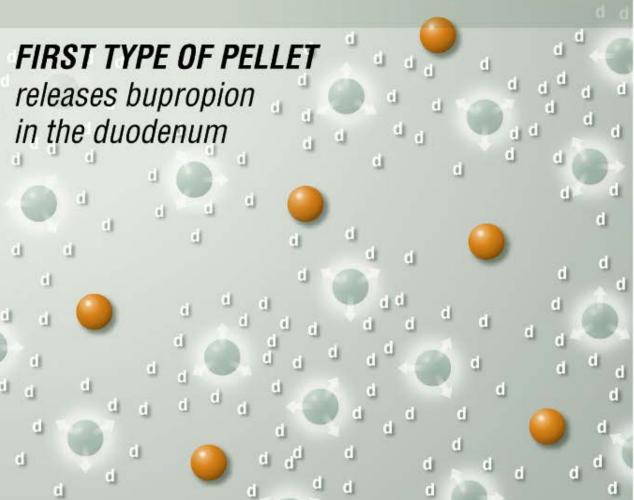


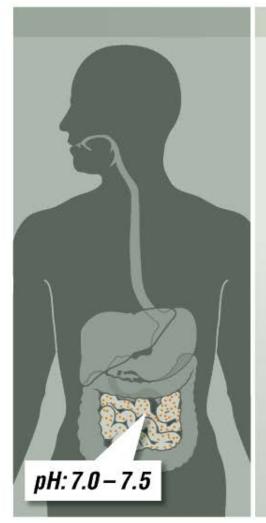


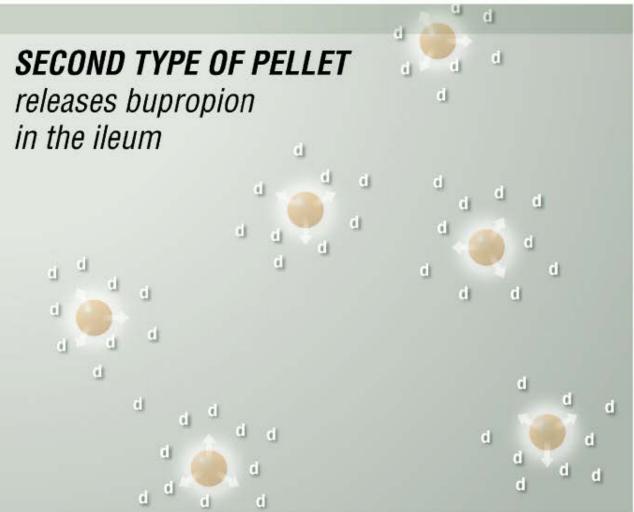












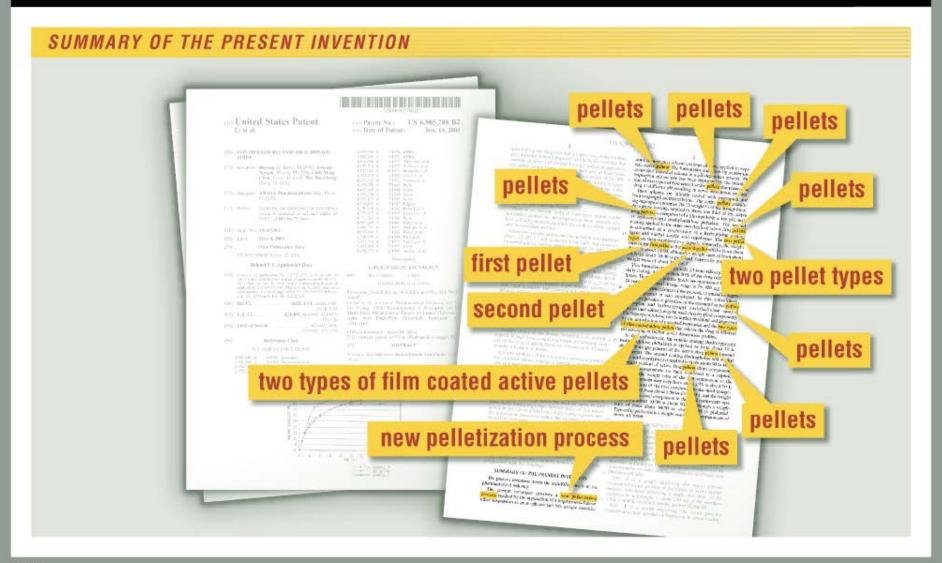
ANDRX '708 PATENT	
CLAIM 1	OBVIOUS OVER PRIOR ART?
A once daily dosage form comprising 150 mg of an [sic] bupropion or salt of bupropion,	?
said dosage form providing an in vivo plasma profile selected from: (a) Mean T _{max} of about 5 or more hours	?
(b) Mean C _{max} of less than about 90 ng/ml, and	?
(c) Mean AUC _{0-120h} of more than about 350 (ng-h)ml.	?

ANDRX '708 PATENT	200000000000000000000000000000000000000	
CLAIM 1 A once daily dosage form comprising 150 mg of an [sic] bupropion or salt of bupropion,	VES GSK's '798 Patent: "With the tablets of this invention it is now possible to dose onetimes per day" Col 1: 60 - 62	
said dosage form providing an in vivo plasma profile selected from: (a) Mean T _{max} of about 5 or more hours	?	
(b) Mean C _{max} of less than about 90 ng/ml, and	?	
(c) Mean AUC _{0-120h} of more than about 350 (ng-h)ml.	?	

ANDRX'708 PATENT		
CLAIM 1	OBVIOUS OVER PRIOR ART?	
A once daily dosage form comprising 150 mg of an [sic] bupropion or salt of bupropion,	YES	GSK's '798 Patent: "With the tablets of this invention it is now possible to dose onetimes per day" Col 1: 60 - 62
said dosage form providing an in vivo plasma profile selected from: (a) Mean T _{max} of about 5 or more hours	YES	It was obvious to one skilled in the art to increase T _{max} from the 2.5 hours claimed in GSK's '798 patent to achieve a one-a-day dosage form. See Cheng Dep. Tr. at 141: 8 - 21
(b) Mean C _{max} of less than about 90 ng/ml, and	?	
(c) Mean AUC _{0-120h} of more than about 350 (ng-h)ml.	?	

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(b) Mean C _{max} of less than about 90 ng/ml, and	YES	Figure 6 of GSK's '798 patent discloses a mean C_{max} of about 85 ng/ml.
(c) Mean AUC _{0-120h} of more than about 350 (ng-h)ml.	?	

ANDRX '708 PATENT CLAIM 1	OBVIOUS OVER PRIOR ART?	
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(b) Mean C _{max} of less than about 90 ng/ml , and	YES	Figure 6 of GSK's '798 patent discloses a mean C_{max} of about 85 ng/ml.
(c) Mean AUC _{0-120h} of more than about 350 (ng-h)ml.	YES	Figure 6 of GSK's '798 patent discloses a mean AUC_{0-120h} of about 560 (ng-h)ml.



DETAILED DESCRIPTION OF THE PRESENT INVENTION

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INVESTIGES.

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(i) a pH depoking upon. (b) a photodoxe, ran) (c) a fabricare and

(2) a second pollet comprising:

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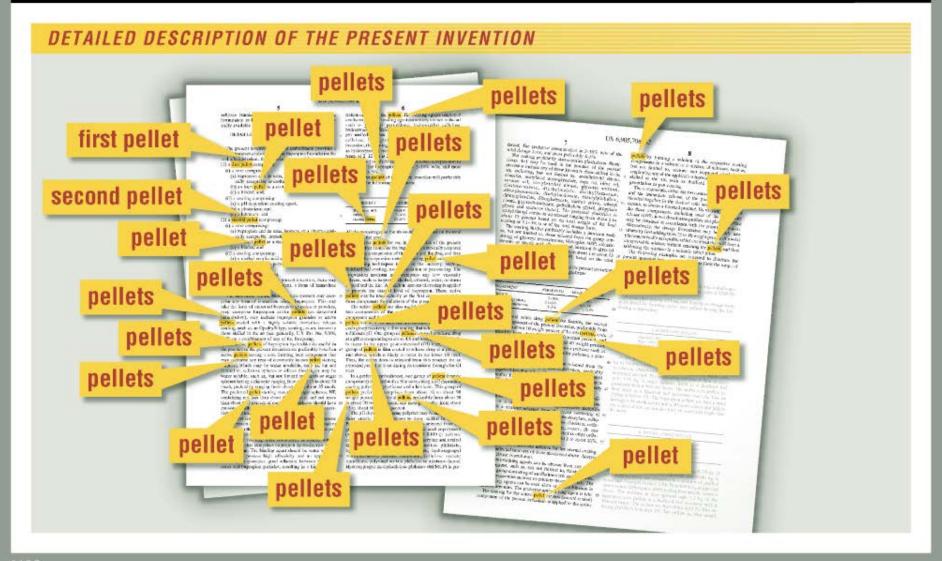
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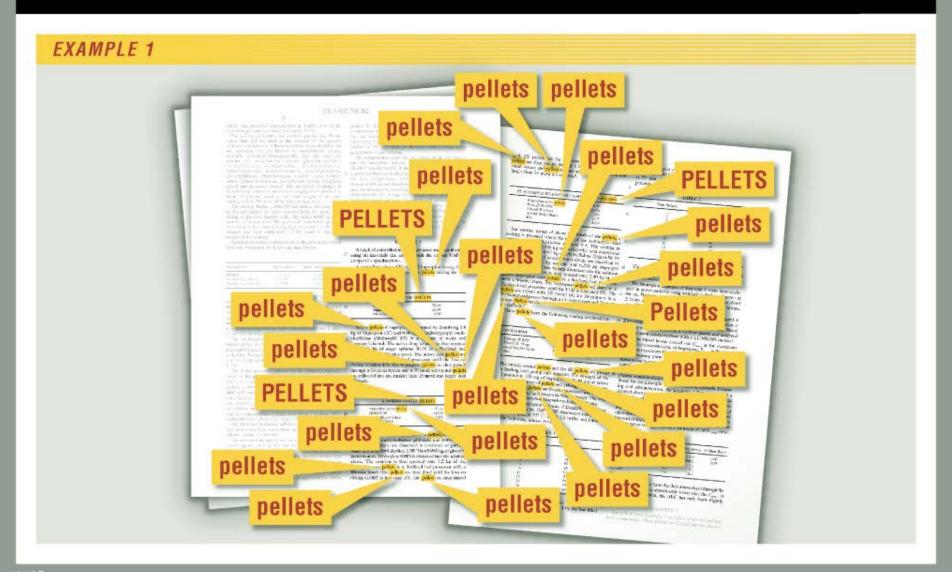
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Alternatively, the dosage formulation may be made into tablets by first adding from 25 to 40 weight percent of a solid pharmaceutically acceptable tablet excipient that will form a compressible mixture without crushing the pellets, and then tabletting the mixture in a suitable tablet press.

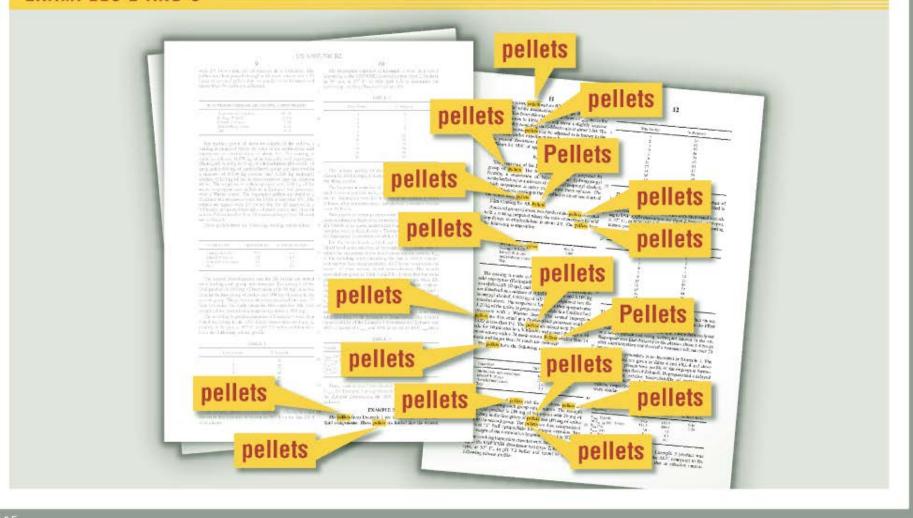
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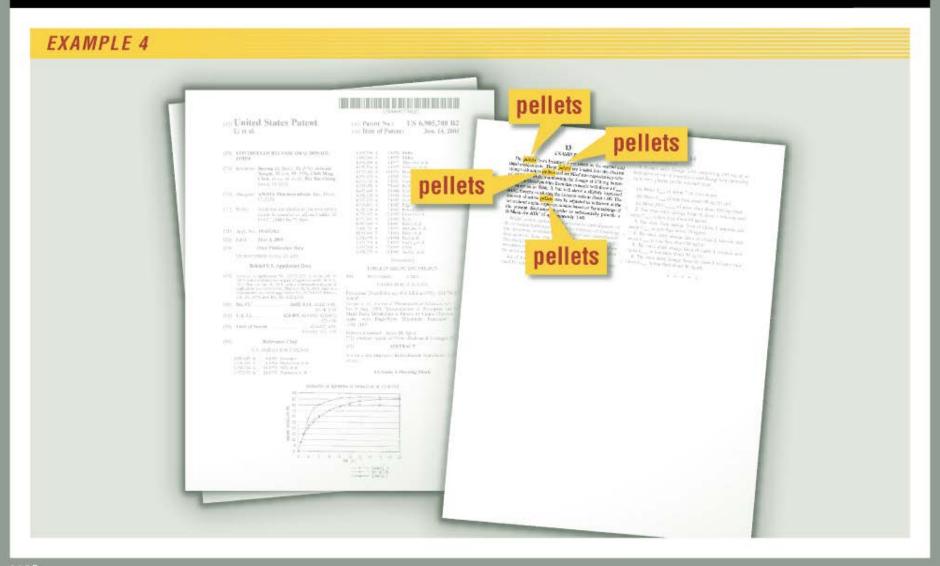




EXAMPLES 2 AND 3



The Andrx '708 Patent Specification Limits the Dosage Form Structure to Pellets



EFFECT ON **ROYALTY RATE:** FACTOR #1: OBSERVATION: Royalty Received NO EFFECT Andrx has NEVER licensed by Andrx the '708 patent. on '708 Patent

FACTOR #2:

Comparable Rates Paid by GSK EFFECT ON ROYALTY RATE:

DECREASE



OBSERVATION:

PARTY

AGREEMENT

Biovail:

Agreement includes significant benefits to GSK beyond a naked patent license, thereby limiting its relevance to the determination of a reasonable royalty in a hypothetical negotiation.

Skye Pharma:

Agreement to license a controlled release antidepressant formulation for 3.0 to 4.0% of net sales plus an upfront fee of \$2 million and a "Back Payment" of \$10 million.

FACTOR #3: OBSERVATION: ROYALTY RATE: Scope of the NO EFFECT Andrx attempted to make the product itself, which implies a non-exclusive license. License GSK would not want to pay extra for an exclusive license since it already paid Biovail for a de facto exclusive license. Neither GSK nor Andrx would wish the license to be restricted in any way since it is in both parties' interests to have GSK sell Wellbutrin XL® to as many customers as possible.

FACTOR #4:

Andrx's Established Licensing Policy EFFECT ON ROYALTY RATE:

DECREASE



OBSERVATION:

- Andrx 2005 Annual Report clearly states it seeks agreements with third parties to leverage its formulation capabilities and controlled release technologies.
- In 2004, Andrx generated almost \$50 million in licensing revenues which represents more than 70% of its net income in that year.

FACTOR #5:

Andrx/GSK Relationship EFFECT ON ROYALTY RATE:

DECREASE



OBSERVATION:

- Andrx does not sell a product based on a once-a-day bupropion formulation.
- Andrx's attempts at producing a once-a-day bupropion product were unsuccessful.
- The relationship between GSK and Andrx is one of inventor and promoter.

FACTOR #6:

Wellbutrin XL®
Effect on Sales
of Related
Products

EFFECT ON BOYALTY BATE:

DECREASE



OBSERVATION:

- No other products are associated with the sale of Wellbutrin XL[®].
- When Wellbutrin XL® launched in 2003, 50% of its sales came at the expense of Wellbutrin SR®.
- In February 2004, 39% of Wellbutrin XL[®] sales came from Wellbutrin SR[®].

GSKAND026903, GSKAND028734

FACTOR #7:

Term of the License

EFFECT ON ROYALTY RATE:

DECREASE



OBSERVATION:

- As of the hypothetical negotiation date, the '708 patent had more than 17 years of patent life remaining.
- Long term licenses tend to have lower rates so as not to provide incentives to design around the patented technology.

FACTOR #8:

Commercial Success EFFECT ON ROYALTY RATE:

INCREASE



OBSERVATION:

- Wellbutrin XL® allowed GSK to extend the Wellbutrin® brand beyond Wellbutrin SR®.
- Wellbutrin XL® has been a commercial success for GSK.
- Wellbutrin XL[®] has been unaffected by Wellbutrin SR[®] generics due to its superior clinical profile.

GSKAND028594, GSKAND028742

FACTORS #9 and #10:

Utility, Nature, Benefits and Advantages of the '708 Patent EFFECT ON ROYALTY RATE:

INCREASE



OBSERVATION:

- Wellbutrin XL® provides an advantage over Wellbutrin SR® and other twice-daily antidepressant formulations
 - Increases patient compliance
 - Decreases probability that the medication will interrupt a patient's sleep cycle
- Side effects are reduced due to steadier plasma drug level throughout the day

GSKAND012061, GSKAND011672

FACTOR #11:

Extent of GSK's Use of the '708 Invention EFFECT ON ROYALTY RATE:

INCREASE



OBSERVATION:

- GSK utilized Wellbutrin XL® to extend its Wellbutrin® brand beyond Wellbutrin SR®.
- Based on actual and projected GSK sales data, the company anticipates it will have sold more than \$1 billion of accused product as of the trial date.
- In 2005, Wellbutrin XL® accounted for approximately 4% of GSK's worldwide profits.

FACTOR #12:

Customary Royalty Rates in the Industry EFFECT ON ROYALTY RATE:

DECREASE



OBSERVATION:

- Review of 10 licensing agreements involving controlled release pharmaceuticals.
 - 5 were instances of large pharmaceutical companies licensing a controlled release technology from a smaller development and/or generic pharmaceutical company.
 - 1 agreement specifically relates to GSK licensing a controlled release antidepressant formulation from Skye Pharma.
- Conclusion: A starting point for a hypothetical negotiation would range from 1% to 10% with a strong influence toward a more defined range of 2.8% to 4.6%.

EFFECT ON **ROYALTY RATE:** FACTOR #14: OBSERVATION: The Opinion NO EFFECT To date I have considered of Qualified the expert report **Experts** of Scott Hampton.

FACTOR #15:

Willing Buyer/ Willing Seller Hypothetical Negotiation EFFECT ON ROYALTY RATE:

DECREASE



OBSERVATION:

- GSK and Andrx are assumed to have an understanding of each other's position.
- Hypothetical negotiation presumes the '708 patent is valid and infringed.
- Royalty rate must be such that both licensor and licensee are allowed to make reasonable expected economic profits.
- Georgia-Pacific analysis suggests a royalty rate at the mid to lower end of the initial range of 0.8% to 8.25%.

Georgia-Pacific Factors Analysis

	INITIAL RANGE BASED ON QUANTITATIVE FACTORS 0.08% TO 8.25%	
	GEORGIA-PACIFIC FACTOR	EFFECT
Factors Tending to DECREASE Royalty Rate:	Comparable rates paid by GSK	•
	Andrx's established licensing policy	•
	GSK/Andrx relationship	0
	Wellbutrin XL* effect on sales of related products	•
	Term of the license	•
	Customary royalty rates in the industry	0
	Portion of the Wellbutrin XL° profit credited to the '708 patent	0
	Willing buyer/willing seller hypothetical negotiation	0
Factors Having NO EFFECT on Royalty Rate:	Royalties received by Andrx on '708 patent	
	Scope of the license	
	Opinion of qualified experts	
Factors Tending to INCREASE Royalty Rate:	Commercial success of Wellbutrin XL°	0
	Utility and advantages of the '708 patent	0
	Nature and benefits of the '708 patent	0
	Extent of GSK's use of the '708 invention	0
CONCLUSION:	3.5% OF NET SALES WOULD BE A REASONABLE ROYALTY RATE	