

**CENTER FOR DRUG EVALUATION AND RESEARCH**

**APPROVAL PACKAGE FOR:**

**APPLICATION NUMBER**

**NDA 21-525  
NDA 20-451/S-012**

**Chemistry Review(s)**



**NDA/ANDA 21-525**

**Photofrin® (porfimer sodium)  
For Injection (75 mg vial)**

**Axcan Scandipharm, Inc.**

**Marie Kowblansky, Ph.D.  
DIVISION OF GASTROINTESTINAL AND COAGULATION  
DRUG PRODUCTS**

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# Chemistry Review Data Sheet

1. NDA 21-525
- 2.
2. REVIEW #: 1
3. REVIEW DATE: October 1, 2002
4. REVIEWER: Marie Kowblansky, Ph.D.
5. PREVIOUS DOCUMENTS:

Previous Documents

None

Document Date

6. SUBMISSION(S) BEING REVIEWED:

Submission(s) Reviewed

Original

Document Date

24-05-2002

7. NAME & ADDRESS OF APPLICANT:

Name: Axcam Scandia, Inc.

Address: 22 Inverness Center Parkway  
Birmingham, AL

Representative: Dr. Francois Martin

Telephone: (905) 689-3980 ext.232

8. DRUG PRODUCT NAME/CODE/TYPE:

- a) Proprietary Name: PHOTOFRIN
- b) Non-Proprietary Name (USAN): porfimer sodium
- c) Code Name/# (ONDCS only): NA
- d) Chem. Type/Submission Priority (ONDC only):
  - Chem. Type: 6
  - Submission Priority: P

## Chemistry Review Data Sheet

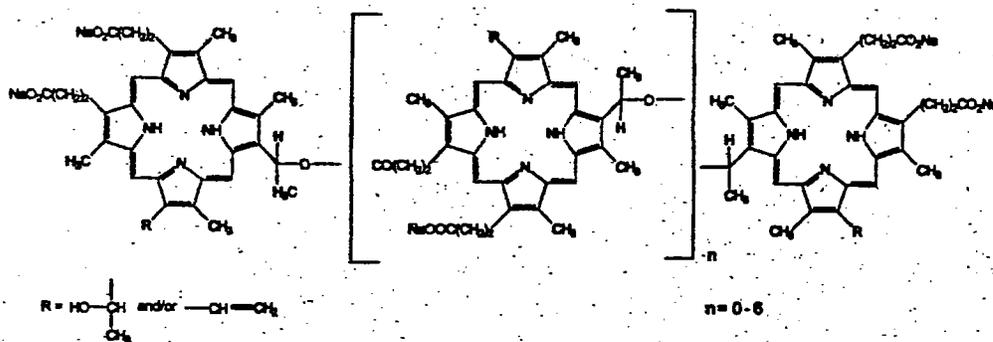
9. LEGAL BASIS FOR SUBMISSION:
10. PHARMACOL. CATEGORY: ablation of high-grade dysplasia in Barrett's esophagus
11. DOSAGE FORM: freeze-dried powder (drug-device combination product)
12. STRENGTH/POTENCY: 75 mg
13. ROUTE OF ADMINISTRATION: intravenous injection
14. Rx/OTC DISPENSED:  Rx  OTC
15. SPOTS (SPECIAL PRODUCTS ON-LINE TRACKING SYSTEM)[Note27]:

SPOTS product – Form Completed

Not a SPOTS product

16. CHEMICAL NAME, STRUCTURAL FORMULA, MOLECULAR FORMULA, MOLECULAR WEIGHT:

CHEMICAL NAME: Porfimer sodium (USAN)



MOLECULAR FORMULA: mixture of monomeric and oligomeric forms of porphyrin, with the oligomers ranging from dimers to octomers and the majority being dimers.

MOLECULAR WEIGHT: 1178-4659 daltons

**CHEMISTRY REVIEW**

## Chemistry Review Data Sheet

**17. RELATED/SUPPORTING DOCUMENTS:**

A. DMFs: None.

B. Other Documents:

DOCUMENT	APPLICATION NUMBER	DESCRIPTION
NDA	20-451	Drug-device combination product (identical to current application) Approved 12/27/95

**18. STATUS:**

CONSULTS/ CMC RELATED REVIEWS	RECOMMENDATION	DATE	REVIEWER
Biometrics	Not required		
EES	Not required		
Pharm/Tox	Not required		
Biopharm	Not required		
LNC	Not required		
Methods Validation	Not required		
OPDRA	Not required		
EA	Not required*		
Microbiology	Not required		

\*See executive summary, section II.C

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# The Chemistry Review for NDA 21-525

## The Executive Summary

### I. Recommendations

- A. From the chemistry perspective, APPROVAL is recommended for this application.
- B. Recommendation on Phase 4 (Post-Marketing) Commitments, Agreements, and/or Risk Management Steps, if Approvable –

No post-approval commitments are required.

### II. Summary of Chemistry Assessments

#### A. Description of the Drug Product(s) and Drug Substance(s)

PHOTOFRIN® is manufactured as a lyophilized powder of porfimer sodium, currently approved for use in the photodynamic therapy of esophageal tumors. Aside from the addition of hydrochloric acid or sodium hydroxide for pH adjustment, there are no other additives to the lyophilized product. Porfimer sodium is a mixture of monomeric and oligomeric forms of porphyrin, with the oligomers ranging from dimers to octomers. The marketed product has an expiration of 36 months, with storage at RT. The reconstituted solution is stable for up to 24 hours, but since it contains no antimicrobial preservatives, the applicant recommends use within 3-4 hours of reconstitution.

#### B. Description of How the Drug Product is Intended to be Used

Following reconstitution of the lyophilized product with 5% Dextrose or 0.9 % Sodium Chloride solution, it is injected intravenously. This is followed by illumination of the tumor with laser light (630 nm). The illumination device is being reviewed by CDRH.

#### C. Basis for Approvability or Not-Approval Recommendation

This drug-device combination product is currently approved under NDA 20-451. The current application proposes use of the same product for a new indication. With this application, no CMC changes have been made to the approved drug substance, the drug product, or the manner in which the drug is used.

The applicant appropriately claims categorical exclusion on the basis that the concentration of the active moiety will not exceed 1 ppb at the point of entry into the aquatic environment.



**Executive Summary Section**

In view of the approved status of this product, it should also be approved under the current application.

**III. Administrative**

**A. Reviewer's Signature**

**B. Endorsement Block**

Chemistry Reviewer: Marie Kowblansky, Ph.D.  
ChemistryTeamLeader: Lian Zhou, Ph.D.  
ProjectManager: Brian Stronging

**C. CC Block**



# CHEMISTRY REVIEW TEMPLATE



Chemistry Assessment Section

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This is a representation of an electronic record that was signed electronically and  
this page is the manifestation of the electronic signature.  
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/s/

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Marie Kowblansky  
10/3/02 02:26:25 PM  
CHEMIST

Liang Zhou  
10/3/02 02:34:21 PM  
CHEMIST