



US005603947A

# United States Patent [19]

[11] Patent Number: **5,603,947**

**Wong et al.**

[45] Date of Patent: **Feb. 18, 1997**

[54] **METHOD AND DEVICE FOR PROVIDING NICOTINE REPLACEMENT THERAPY TRANSDERMALLY/TRANSBUCCALLY**

5,004,610	4/1991	Osborne .....	424/448
5,016,652	5/1991	Rose .....	131/270
5,064,654	11/1991	Berner .....	424/448
5,091,186	2/1992	Miranda et al. ....	424/448

[75] Inventors: **Ooi Wong**, Fremont; **Kathleen C. Farinas**, San Francisco; **Gary W. Cleary**, Menlo Park; **Chia-Ming Chiang**, Foster City; **Jun Xia**, Redwood City, all of Calif.

### FOREIGN PATENT DOCUMENTS

0450986	10/1991	European Pat. Off. .
0469745	2/1992	European Pat. Off. .
0481443	4/1992	European Pat. Off. .
0484543	5/1992	European Pat. Off. .
0524776	1/1993	European Pat. Off. .
3438284	10/1984	Germany .
1197-435-A	1/1988	Japan .
04077419-A	7/1990	Japan .
91/03998	4/1991	WIPO .
91/16085	10/1991	WIPO .
WO91/14463	10/1991	WIPO .
93/00057	1/1993	WIPO .

[73] Assignee: **Cygnus Therapeutic Systems**, Redwood City, Calif.

[21] Appl. No.: **278,277**

[22] Filed: **Jul. 21, 1994**

### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 247,520, May 23, 1994, abandoned, which is a continuation of Ser. No. 89,971, Jul. 9, 1993, abandoned.

[51] Int. Cl.<sup>6</sup> ..... **A61F 13/00**

[52] U.S. Cl. .... **424/448; 424/447; 424/449**

[58] Field of Search ..... **424/448, 449, 424/447**

*Primary Examiner*—D. Gabrielle Phelan

*Attorney, Agent, or Firm*—Morrison & Foerster LLP

### [57] ABSTRACT

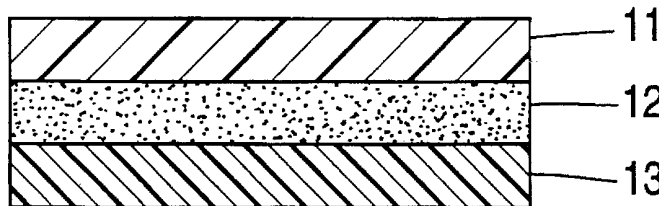
A skin or buccal patch for providing nicotine replacement therapy which comprises a matrix type laminated composite in which the matrix is composed of a mixture of nicotine in a polymer wherein the amount of nicotine in the matrix, diffusion coefficient of nicotine in the matrix and the thickness of matrix are such that the release of nicotine is: (1) controlled by the patch; (2) rapid and at a relatively high flux over the prescribed wearing time of patch; and (3) such that a substantial proportion of the nicotine initially in the patch has been released at the end of the prescribed wearing time.

### [56] References Cited

#### U.S. PATENT DOCUMENTS

4,496,853	8/1985	Bannon .....	326/87
4,758,434	7/1988	Kydonieus et al. ....	424/449
4,839,174	6/1989	Baker .....	424/447
4,877,618	10/1989	Reed, Jr. ....	428/448
4,943,435	7/1990	Baker .....	424/448

**9 Claims, 13 Drawing Sheets**



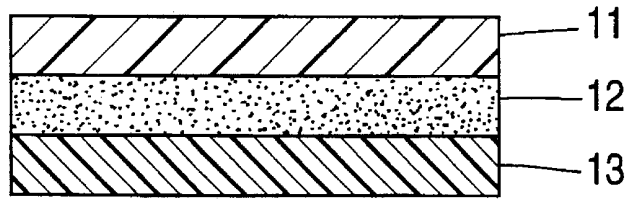


FIG. 1

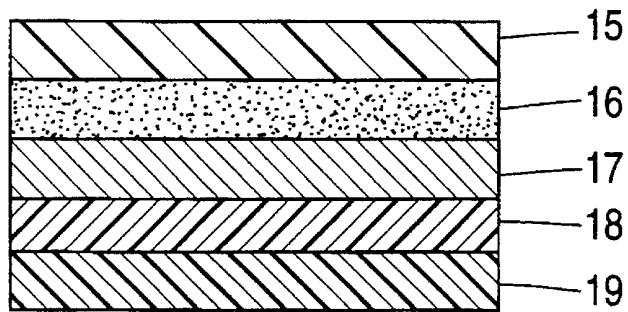


FIG. 2

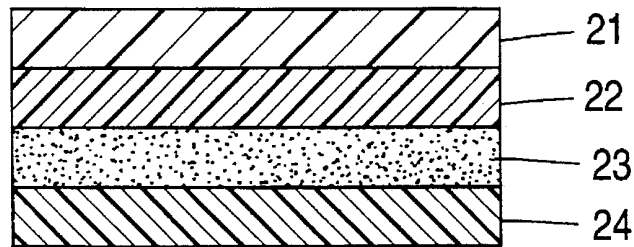


FIG. 3

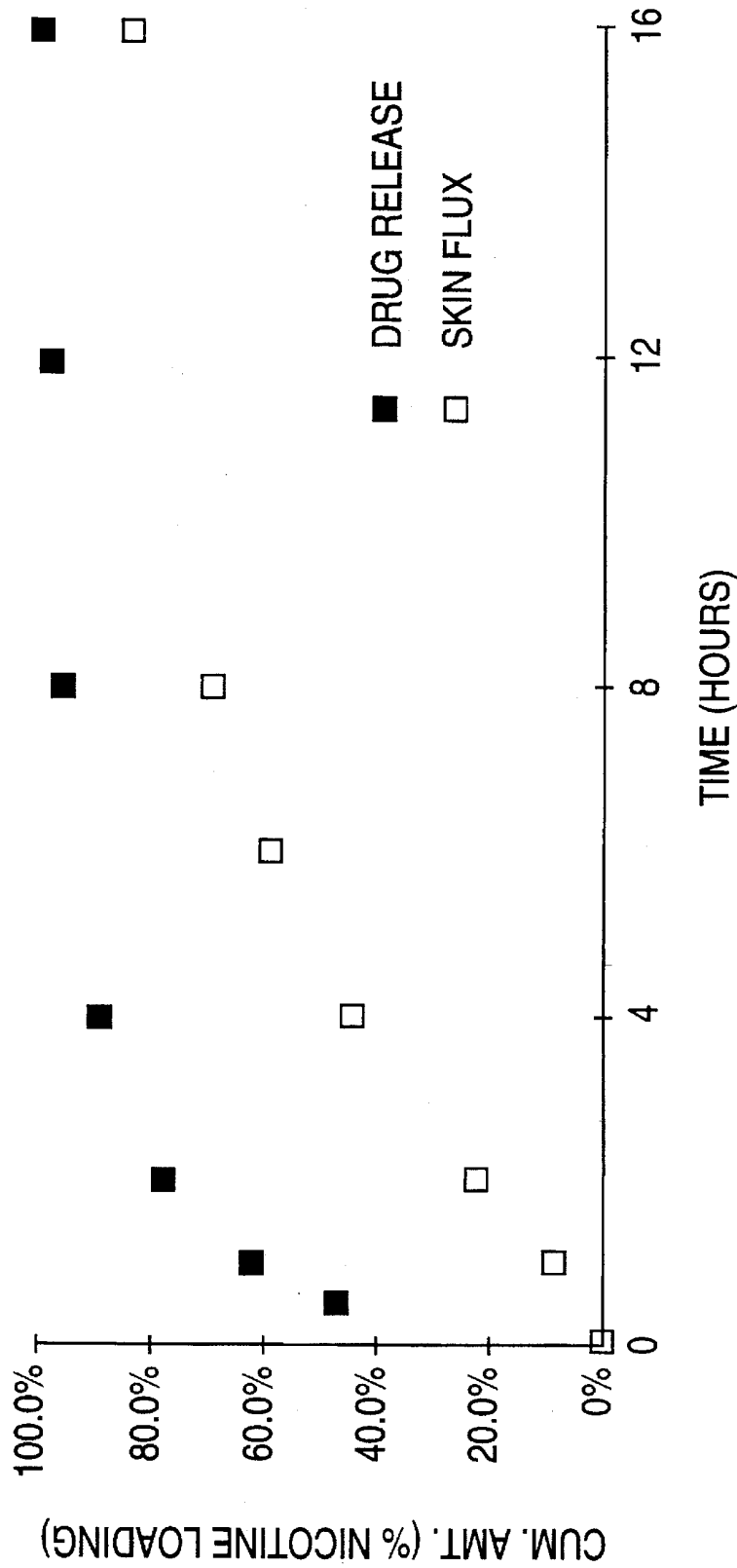


FIG. 4

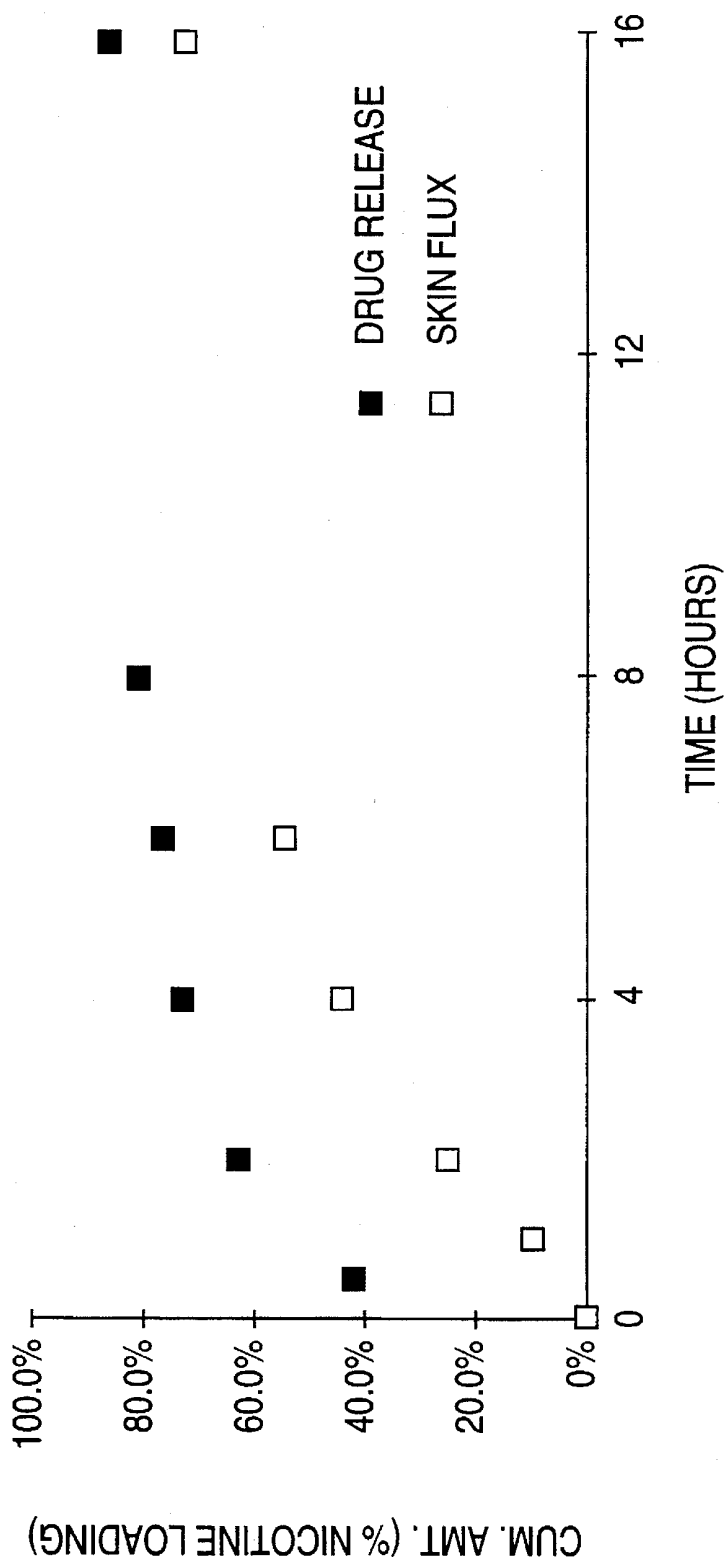


FIG. 5

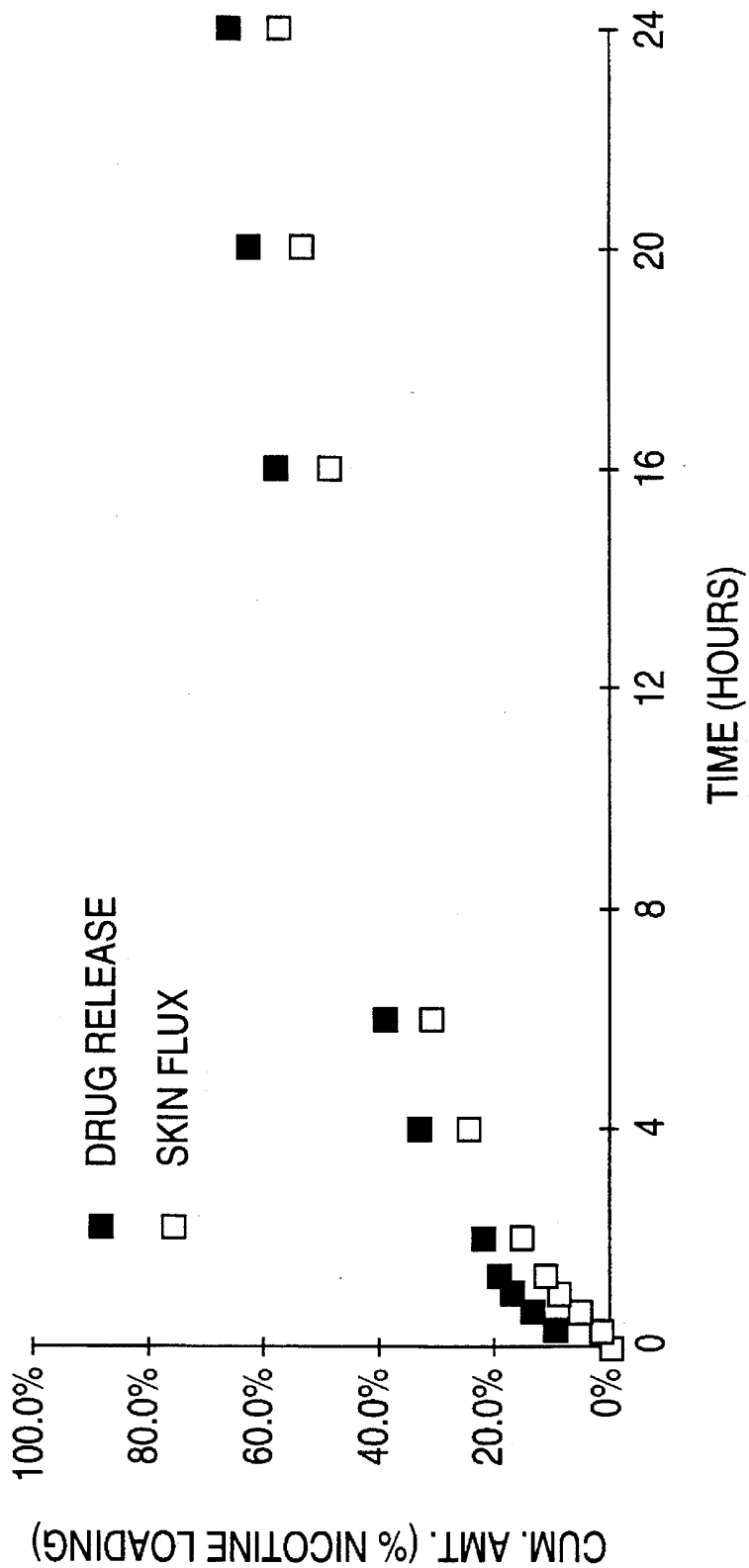


FIG. 6

# 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.