

(12) **United States Patent**
Zamora et al.

(10) **Patent No.:** **US 6,261,536 B1**
(45) **Date of Patent:** **Jul. 17, 2001**

(54) **POST LABELING STABILIZATION OF
RADIOLABELED PROTEINS AND PEPTIDES**

(75) Inventors: **Paul O. Zamora**, Guadalajara (MX);
Michael J. Marek, Albuquerque, NM
(US)

(73) Assignee: **RhoMed Incorporated**, Princeton, NJ
(US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/393,581**

(22) Filed: **Sep. 9, 1999**

Related U.S. Application Data

(63) Continuation of application No. 08/794,311, filed on Feb. 3,
1997, now Pat. No. 6,066,309, which is a continuation-in-
part of application No. 08/794,270, filed on Jan. 31, 1997,
now abandoned.

(60) Provisional application No. 60/011,027, filed on Feb. 2,
1996.

(51) **Int. Cl.**⁷ **A61K 51/00**; A61M 36/14

(52) **U.S. Cl.** **424/1.49**; 424/1.11; 424/1.69;
424/1.53; 424/806; 530/863

(58) **Field of Search** 424/1.11, 1.37,
424/1.49, 1.53, 1.65, 1.69, 9.1, 179.1, 806,
807, 804, 805; 530/300, 311, 317, 333,
334, 338, 863, 864, 350, 866, 861, 862;
206/223, 569, 570; 549/315; 436/129

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,401,646	8/1983	Rhodes et al.	424/1
4,510,125	4/1985	Grogg et al.	424/1.1
4,707,353	11/1987	Bugaj et al.	424/1.1
4,988,496	1/1991	Srinivasan et al.	424/1.1
5,078,985	1/1992	Rhodes	424/1.1
5,102,990	4/1992	Rhodes	530/391.5
5,219,556	6/1993	Wolfangel	424/1.1
5,250,666	10/1993	Gustavson et al.	530/391.5
5,277,892	1/1994	Rhodes	424/1.69
5,308,603	5/1994	Thakur	424/1.49
5,384,113	1/1995	Deutsch et al.	424/1.69
5,393,512	2/1995	Vanderheyden et al.	424/1.53
5,443,816	8/1995	Zamora et al.	424/1.169
5,460,785	10/1995	Rhodes et al.	424/1.49
5,679,318	10/1997	Vanderheyden et al.	424/1.11
5,700,444	12/1997	Zamora et al.	424/1.69
5,759,515	6/1998	Rhodes	424/1.69
6,066,309 *	5/2000	Zamora et al.	424/1.49

* cited by examiner

Primary Examiner—Dameron L. Jones

(74) *Attorney, Agent, or Firm*—Darby & Darby

(57) **ABSTRACT**

The subject invention relates to the use of ascorbic acid and derivatives thereof in stabilizing radiolabeled proteins and peptides against oxidation loss of radiolabel and autoradiolysis. Ascorbic acid is added after radiolabeling, including any required incubation period, but prior to patient administration.

12 Claims, 13 Drawing Sheets

FIG. 1A

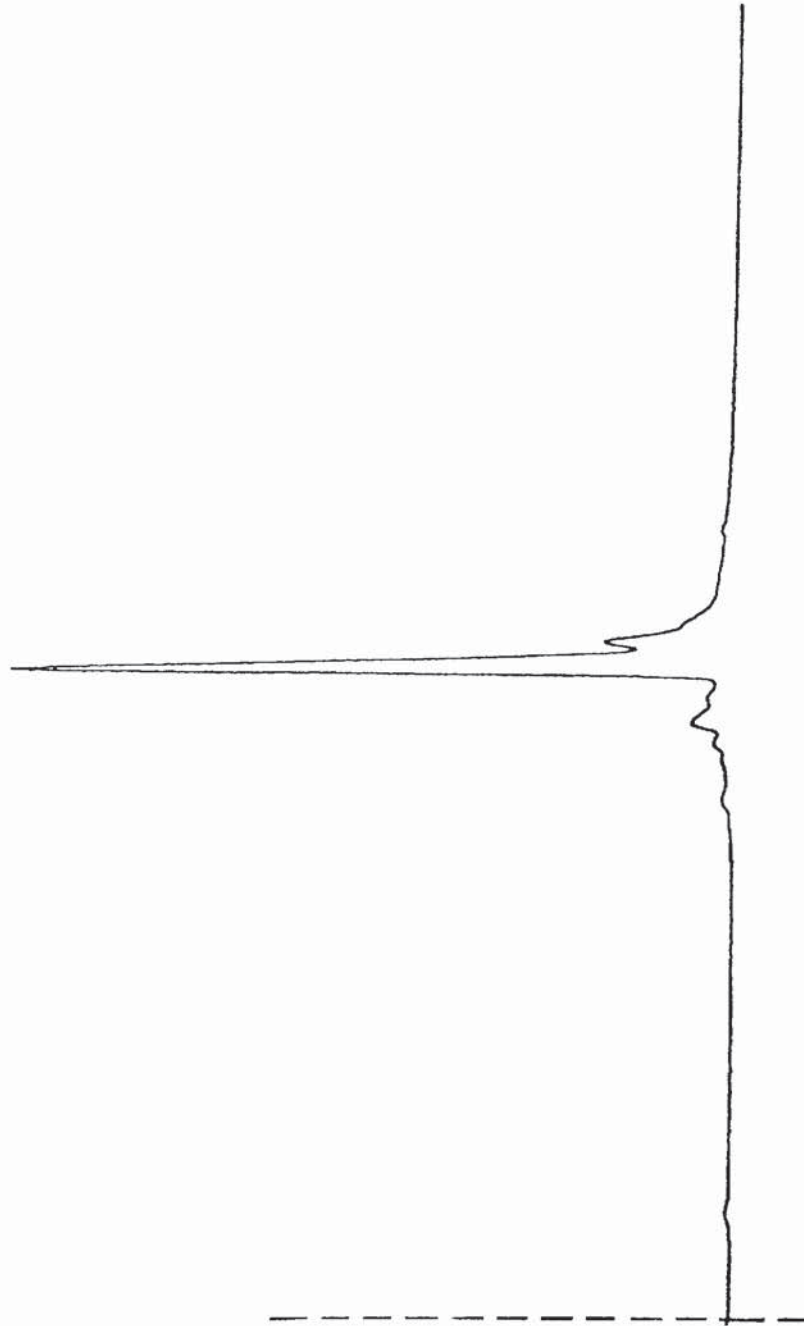
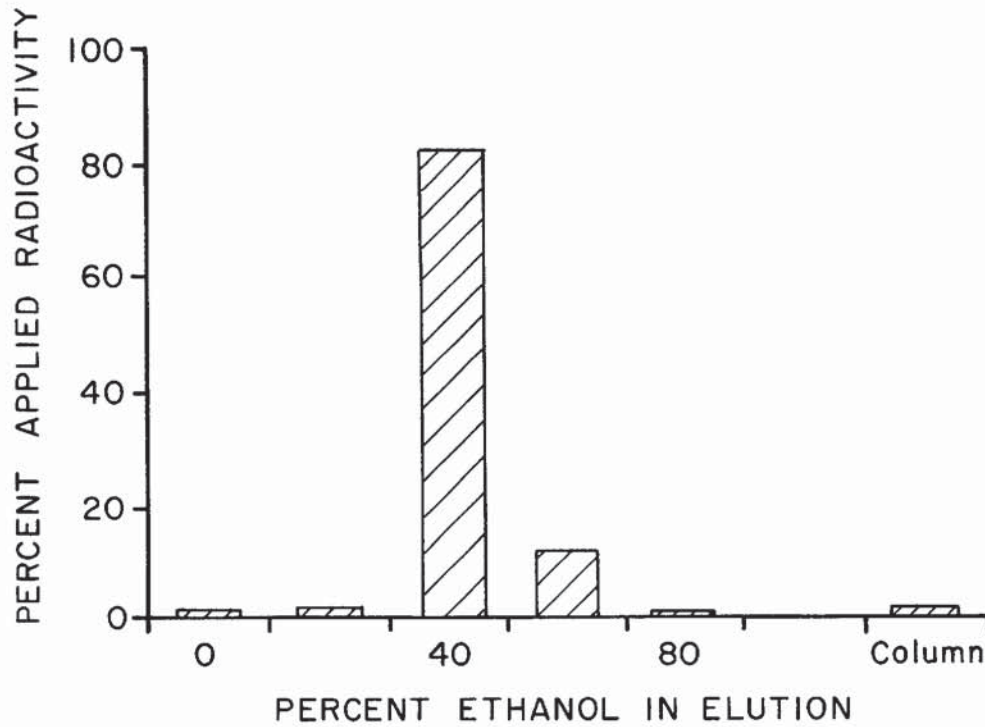


FIG. 1B



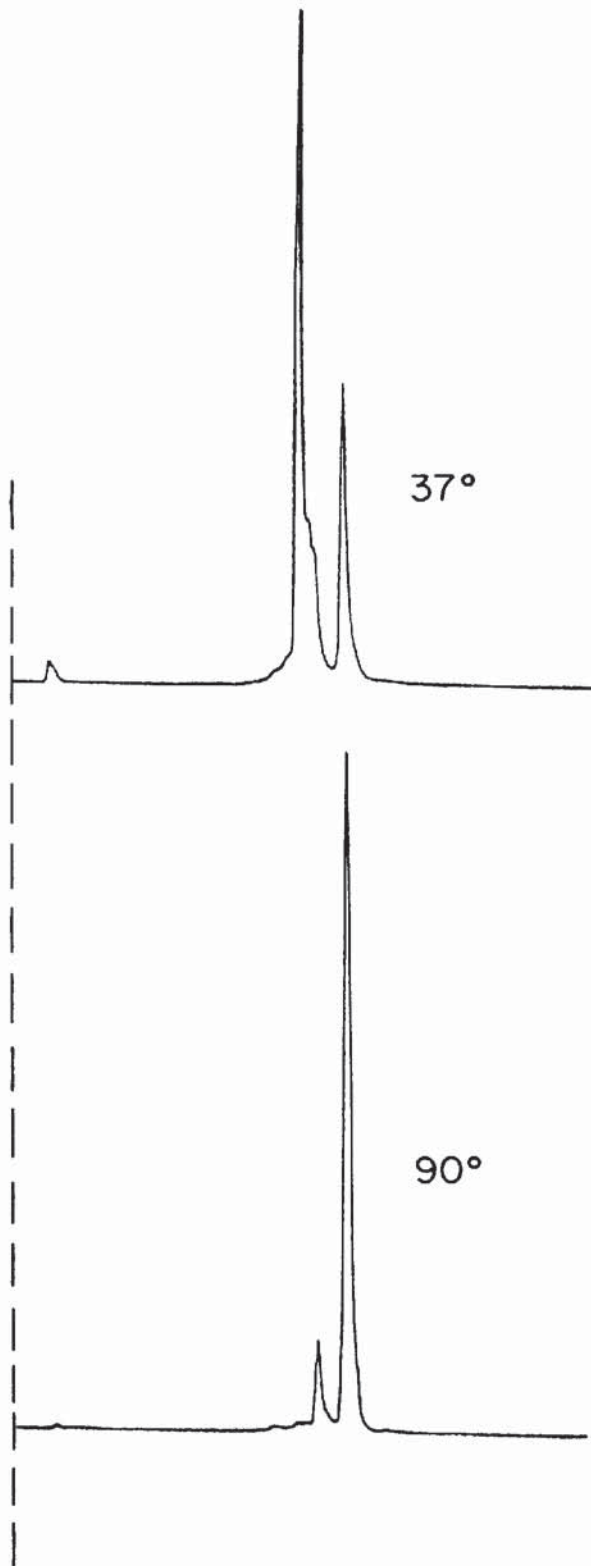
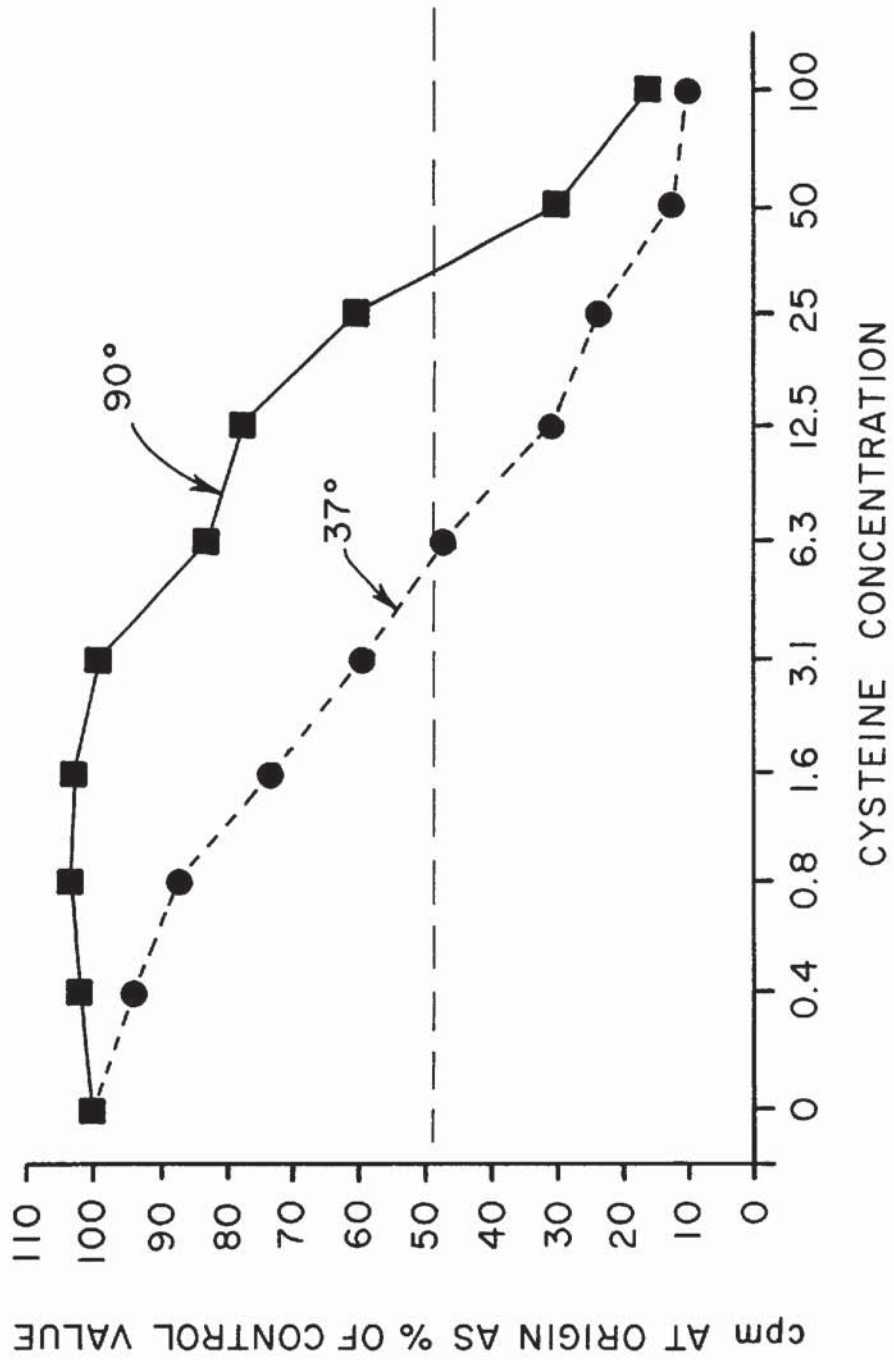


FIG. 2A

FIG. 2B

FIG. 3



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.