

FORM 11-K  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON D.C. 20549

ANNUAL REPORT

PURSUANT TO SECTION 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934

(X) Annual report pursuant to Section 15(d) of the Securities  
Exchange Act of 1934

For the fiscal year ended December 31, 2001

OR

( ) Transition report pursuant to Section 15(d) of the  
Securities Exchange Act of 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 0-16109

A. Full title of the plan and the address of the plan, if  
different from that of the issuer named below:

AP PHARMA 401(k) PLAN  
(formerly Advanced Polymer Systems, Inc. Salary  
Reduction Profit Sharing Plan)  
123 SAGINAW DRIVE  
REDWOOD CITY, CA 94063

B. Name of issuer of the securities held pursuant to the plan  
and the address of its principal executive office:

A.P. PHARMA, INC.  
123 SAGINAW DRIVE  
REDWOOD CITY, CA 94063  
TELEPHONE (650) 366-2626

SIGNATURE

The Plan. Pursuant to the requirements of the Securities  
Exchange Act of 1934, the administrator has duly caused this  
annual report to be signed on its behalf by the undersigned  
hereunto duly authorized.

AP PHARMA 401(k) PLAN  
(formerly Advanced  
Polymer Systems, Inc.  
Salary Reduction Profit  
Sharing Plan)

Date: June 27, 2002  
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By: /s/Gordon Sangster  
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Gordon Sangster  
Chief Financial Officer

AP Pharma 401(k) Plan  
(formerly Advanced Polymer Systems,  
Inc. Salary Reduction Profit Sharing Plan)  
Financial Statements  
December 31, 2001 and 2000  
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AP PHARMA 401(k) PLAN  
(formerly Advanced Polymer Systems,  
Inc. Salary Reduction Profit Sharing Plan)  
Financial Statements  
December 31, 2001 and 2000

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Independent Accountants' Report as of and  
for the year ended December 31, 2001

Independent Auditors' Report as of and  
for the year ended December 31, 2000

Financial Statements:

Statements of Net Assets Available for Benefits  
as of December 31, 2001 and 2000  
Statements of Changes in Net Assets Available for Benefits  
for the years ended December 31, 2001 and 2000  
Notes to Financial Statements

Consent of Independent Accountants

Consent of Independent Auditors

#### INDEPENDENT ACCOUNTANTS' REPORT

To the Participants and  
Plan Administrator of the  
AP Pharma 401(k) Plan  
(formerly Advanced Polymer Systems,  
Inc. Salary Reduction Profit Sharing  
Plan)

We have audited the financial statements of the AP Pharma 401(k)  
Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction  
Profit Sharing Plan) (the Plan) as of December 31, 2001, and for  
the year then ended, as listed in the accompanying table of  
contents. These financial statements are the responsibility of  
the Plan's management. Our responsibility is to express an  
opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards  
generally accepted in the United States of America. Those  
standards require that we plan and perform the audit to obtain  
reasonable assurance about whether the financial statements are  
free of material misstatement. An audit includes examining, on a  
test basis, evidence supporting the amounts and disclosures in  
the financial statements. An audit also includes assessing the  
accounting principles used and significant estimates made by the  
Plan's management, as well as evaluating the overall financial  
statement presentation. We believe that our audit provides a  
reasonable basis for our opinion.

In our opinion, the financial statements referred to above  
present fairly, in all material respects, the net assets  
available for benefits of the Plan as of December 31, 2001, and  
the changes in net assets available for benefits for the year  
then ended, in conformity with accounting principles generally  
accepted in the United States of America.

By /s/ Mohler, Nixon & Williams  
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MOHLER, NIXON & WILLIAMS  
Accountancy Corporation

Campbell, California  
May 23, 2002

#### INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders  
of A.P. Pharma, Inc. (formerly Advanced Polymer Systems, Inc.)  
and the Trustees and Participants of the  
AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc.  
Salary Reduction Profit Sharing Plan):

We have audited the accompanying statement of net assets  
available for benefits of the AP Pharma 401(k) Plan (formerly  
Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing

Plan) (the Plan) as of December 31, 2000, and the related statement of changes in net assets available for benefits for the year then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2000 and the changes in net assets available for benefits for the year then ended in conformity with accounting principles generally accepted in the United States of America.

By /s/KPMG LLP  
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 KPMG LLP

San Francisco, California  
 June 22, 2001

AP PHARMA 401(k) PLAN  
 (formerly Advanced Polymer Systems, Inc.  
 Salary Reduction Profit Sharing Plan)

STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS

	DECEMBER 31,	
	2001	2000
	----	----
ASSETS:		
Investments, at fair value	\$2,301,405	\$3,087,958
Participant loans	21,193	52,081
Assets held for investment purposes	2,322,598	3,140,039
Employer's contribution receivable	17,277	13,354
Participant's contribution receivable	--	4,576
	-----	-----
Net assets available for benefits	\$2,339,875	\$3,157,969
	=====	=====

See notes to financial statements

AP PHARMA 401(k) PLAN  
 (formerly Advanced Polymer Systems, Inc.  
 Salary Reduction Profit Sharing Plan)

STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

YEARS ENDED	
DECEMBER 31,	
2001	2000
----	----

Deductions/Additions to net assets  
attributed to:

Investment income:		
Dividends and interest	\$ 3,757	\$ 5,409
Net realized and unrealized depreciation in fair value of investments	(404,295)	(376,115)
Total investment (loss) income	<u>(400,538)</u>	<u>(370,706)</u>

Contributions:

Participants'	190,173	309,314
Employer's	63,583	97,567
	<u>253,756</u>	<u>406,881</u>
Total deductions/additions	<u>(146,782)</u>	<u>36,175</u>

Deductions from net assets attributed to:

Withdrawals and distributions	671,312	849,891
Total deductions	<u>671,312</u>	<u>849,891</u>

Net decrease in net assets	(818,094)	(813,716)
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Net assets available for benefits:

Beginning of year	3,157,969	3,971,685
End of year	<u>\$2,339,875</u>	<u>\$3,157,969</u>

See notes to financial statements.

AP PHARMA 401(k) PLAN  
(formerly Advanced Polymer Systems, Inc.  
Salary Reduction Profit Sharing Plan)

NOTES TO FINANCIAL STATEMENTS  
DECEMBER 31, 2001 AND 2000

Note 1 The Plan and its significant accounting policies

General - The following description of the AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) (the Plan) provides only general information. Participants should refer to the Plan document for a more complete description of the Plan's provisions.

The Plan is a defined contribution plan that was established in 1986 to provide benefits to eligible employees as defined in the Plan document. Formerly known as the Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan, the Plan was amended in May 2001 to change the Plan name in conjunction with the change in the name of the employer and Plan sponsor from Advanced Polymer Systems, Inc. to A.P. Pharma, Inc. (the Company).

In June 2000, the Company sold certain technology rights, product lines and other assets to R.P. Scherer Corporation, a subsidiary of Cardinal Health, Inc. The majority of affected employees was hired by R.P. Scherer and had the option of taking a distribution from the Plan or maintaining their account balance in the Plan.

The Plan administrator believes that the Plan is currently designed and operated in compliance with the applicable requirements of the Internal Revenue Code (the Code) and provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended.

Administration - The Company has appointed an Administrative Committee (the Committee) to manage the operation and administration of the Plan. A third-party administrator, CMG Consulting, Inc. (CMG), processes and maintains the records of participant data. The Company has contracted with Eastern Bank and Trust Company to act as the trustee. Substantially all expenses incurred for administering the Plan are paid by the Company.

Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Basis of accounting - The financial statements of the Plan are prepared on the accrual method of accounting in accordance with accounting principles generally accepted in the United States of America.

Investments - Investment options include various mutual funds offered through D-Access, an affiliate of CMG, and a fund invested in shares of A.P. Pharma, Inc. common stock (Company Stock Fund). The Plan's investments in mutual funds and the Company Stock Fund are valued at fair value as of the last day of the Plan year, as measured by quoted market prices. Participant loans are valued at cost, which approximates fair value.

Effective January 1, 2000, the Company Stock Fund was frozen by the Committee. As a result, participants are permitted to transfer their investments from the Company Stock Fund, but no new contributions or transfers into the fund are permitted.

Income taxes - The Plan has been amended since receiving its latest favorable determination letter dated September 19, 1991. The Company believes that the Plan is operated in accordance with, and continues to qualify under, the applicable requirements of the Code and related state statutes, and that the trust, which forms a part of the Plan, is exempt from federal income and state franchise taxes.

Risks and uncertainties - The Plan provides for various investment options in any combination of mutual funds and Company stock offered by the Plan. Investment securities are exposed to various risks, such as interest rate, market fluctuations and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits and the statements of changes in net assets available for benefits.

New accounting pronouncements - In June 1998, the Financial Accounting Standards Board issued FAS 133, "Accounting for Derivative Instruments and Hedging Activities". FAS 133 requires that an entity recognize all derivatives and measure those instruments at fair value. Adoption of this statement did not have an impact on the plan financial statements.

#### NOTE 2 PARTICIPATION AND BENEFITS

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Participant contributions - Participants may elect to have the Company contribute from 1% to 15% of their eligible pre-tax compensation not to exceed the amount allowable under current income tax regulations. Participants who elect to have the Company contribute a portion of their compensation to the Plan agree to accept an equivalent reduction in taxable compensation. Contributions withheld are invested in accordance with the participant's direction.

Participants are also allowed to make rollover contributions of amounts received from other tax-qualified employer-sponsored retirement plans. Such contributions are deposited in the appropriate investment funds in accordance with the participant's direction and the Plan's provisions.

Employer contributions - The Company is allowed to make matching contributions as defined in the Plan and as approved by the Board of Directors. The Company matched 50% of each eligible participant's contribution up to a maximum amount equal to the lesser of 3% of each participant's annual compensation or \$5,250 and \$5,100 in 2001 and 2000, respectively. The Plan also allows for a discretionary profit sharing contribution. No discretionary contribution has been made since inception of the Plan.

Vesting - Participants are immediately vested in their contributions and employer matching contributions. Participants are fully vested in the employer's profit sharing contributions allocated to their account, if any, after six years of credited service.

Participant accounts - Each participant's account is credited with the participant's contribution, Plan earnings or losses and an allocation of the Company's contribution. Allocation of the Company's contribution is based on participant contributions or eligible employee compensation, as defined in the Plan.

Payment of benefits - Upon termination, the participant or beneficiary may elect to leave their account balance in the Plan, or receive their total benefits in a lump sum amount equal to the value of the participant's vested interest in their account, or installments. The Plan allows for automatic lump sum distribution of participant vested account balances that do not exceed \$5,000. Distribution of accounts invested in the Company Stock Fund must be in a lump sum and may be made in cash or shares of stock.

Loans to participants - The Plan allows participants to borrow not less than \$1,000 and up to the lesser of \$50,000 or 50% of their vested account balance. The loans are secured by the participant's vested balance. Such loans bear interest at the available market financing rates and must be repaid to the Plan within a five-year period, unless the loan is used for the purchase of a principal residence in which case the maximum repayment period may exceed five years. The specific terms and conditions of such loans are established by the Committee. Outstanding loans at December 31, 2001 carry interest rates which range from 9.75% to 10%.

NOTE 3 INVESTMENTS

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The following table includes the fair values of investments and investment funds that represent 5% or more of the Plan's net assets at December 31:

	2001	2000
	----	----
Federated Capital Preservation Fund	\$ 330,224	\$ 474,342
Bond Fund of America	146,026	142,431
American Balanced Fund	238,683	294,964
Federated Max-Cap Fund	255,232	225,450
Fidelity Advisor Equity Growth Fund	406,610	498,053
MFS Mass Investors Growth Fund	728,958	1,132,985
Van Kampen Emerging Growth Fund	117,313	214,458
Other funds that are less than 5% of Plan net assets	78,359	105,275
Participant loans	21,193	52,081
	-----	-----
Assets held for investment Purposes	\$2,322,598	\$3,140,039
	=====	=====

The Plan's investments (including gains and losses on investments bought and sold, as well as held during the year) appreciated (depreciated) in value as follows for the years ended December 31:

	2001	2000
	----	----
Pooled separate accounts	\$ --	\$ (194,250)
Common stock	4,824	(15,003)
Mutual funds	(409,119)	(166,862)
	-----	-----
	\$ (404,295)	\$ (376,115)
	=====	=====

Note 4 Party-in-interest transactions

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As summarized in Note 1, prior to January 1, 2000, participants could elect to invest a portion of their accounts in the common stock of the Company. Aggregate investment in A.P. Pharma, Inc. common stock was as follows at December 31, 2001 and 2000:

Date	Number of shares	Fair value
----	-----	-----
2001	12,990	\$36,372
2000	14,381	34,177

Note 5 Plan termination

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The Company intends to continue the Plan indefinitely for the benefit of its participants; however, it reserves the right to terminate or modify the Plan at any time by resolution of its Board of Directors and subject to the provisions of ERISA. In the event the Plan is terminated in the future, participants would become fully vested in their accounts.

NOTE 6 PLAN AMENDMENT

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The Company amended and restated the Plan effective January 1, 2002 to conform to provisions of the Code and to adopt certain provisions of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRAA).

NOTE 7 SUBSEQUENT EVENT

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In May 2002, the Company designated Sterling Trust Company to replace Eastern Bank and Trust Company as trustee.

Exhibit 23

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 33-29084) of A.P. Pharma, Inc. (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) of our report dated May 23, 2002, relating to the Statement of Net Assets Available for Benefits of the AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) as of December 31, 2001, and the related Statement of Changes in Net Assets Available for Benefits for the year then ended included in this Annual Report on Form 11-K.

By /s/ Mohler, Nixon & Williams  
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MOHLER, NIXON & WILLIAMS  
Accountancy Corporation

Campbell, California  
June 25, 2002

Exhibit 23

CONSENT OF INDEPENDENT AUDITORS

The Board of Directors and Stockholders of A.P. Pharma, Inc. (formerly Advanced Polymer Systems, Inc.) and the Trustees and Participants of the AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan):

We consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 33-29084) of A.P. Pharma, Inc. (formerly Advanced Polymer Systems, Inc.) of our report dated June 22, 2001, relating to the statement of net assets available for benefits of the AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) as of December 31, 2000, and the related statement of changes in net assets available for benefits for the year then ended, which report appears in the December 31, 2001 Annual Report on Form 11-K of the AP Pharma, Inc. 401(k) Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan).

By /s/ KPMG LLP  
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KPMG LLP

San Francisco, California  
June 25, 2002



CONSENT OF INDEPENDENT AUDITORS

The Board of Directors and Stockholders  
of A.P. Pharma, Inc. (formerly Advanced Polymer Systems, Inc.)  
and the Trustees and Participants of the  
AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc.  
Salary Reduction Profit Sharing Plan):

We consent to the incorporation by reference in the Registration  
Statement on Form S-8 (No. 33-29084) of A.P. Pharma, Inc.  
(formerly Advanced Polymer Systems, Inc.) of our report dated  
June 22, 2001, relating to the statement of net assets available  
for benefits of the AP Pharma 401(k) Plan (formerly Advanced  
Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) as of  
December 31, 2000, and the related statement of changes in net  
assets available for benefits for the year then ended, which  
report appears in the December 31, 2001 Annual Report on Form 11-  
K of the AP Pharma, Inc. 401(k) Plan (formerly Advanced Polymer  
Systems, Inc. Salary Reduction Profit Sharing Plan).

By /s/ KPMG LLP  
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KPMG LLP

San Francisco, California  
June 25, 2002

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 33-29084) of A.P. Pharma, Inc. (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) of our report dated May 23, 2002, relating to the Statement of Net Assets Available for Benefits of the AP Pharma 401(k) Plan (formerly Advanced Polymer Systems, Inc. Salary Reduction Profit Sharing Plan) as of December 31, 2001, and the related Statement of Changes in Net Assets Available for Benefits for the year then ended included in this Annual Report on Form 11-K.

By /s/ Mohler, Nixon & Williams  
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MOHLER, NIXON & WILLIAMS  
Accountancy Corporation

Campbell, California  
June 25, 2002