multiplication can proceed only for a few cell generations, after which they degenerate and die. Viruses producing neoplasms are far more resistant to X-rays and it seems probable that exposure *in vitro* to approximately 15,000 r units of X-rays distinguishes between virus-containing and virus-free neoplasms, the latter losing the ability to transmit the disease when exposed to 15,000 r units of X-rays *in vitro*. Viruses are unaffected by the amount of irradiation used in these studies. Irradiated sarcoma cells multiply for several days and then die. Hence, failure to produce the disease with irradiated neoplastic cells is the best evidence available thus far that the neoplasms of mice studied are not transmitted by viruses.

9906 P

Calcium Studies in the Newborn.

B. S. DENZER, M. REINER AND P. VOGEL. (Introduced by H. Sobotka.)

From the Pediatric Service and the Laboratories of the Mount Sinai Hospital, New York City.

The purpose of this investigation was to study the relationship between the calcium of the cord blood and that of the peripheral blood during the first 10 days of life. If a low cord blood calcium regularly were associated with a low calcium during the first 10 days of life, then hypocalcemic tetany of the newborn could be predicted and prevented. In the 47 cases thus far examined there is a rather constant relationship between the cord and the postnatal blood though not of the nature mentioned above. There is a tendency for the serum calcium to assume values lower than the cord blood during the first 4 days of life and then to rise toward the prenatal level during the next 5 days.

The average calcium of the serum of cord blood was 11.60.

The average deviation of peripheral blood from cord blood of the same individual was

—1.04	for the	1st	to	2nd	days	(11 cases)
—1.21	" "	3rd	"	4th	"	(16 ")
—0.36	" "	5th	"	6th	"	(8 ")
+0.55	" "	7th	to	9th	"	(12 ")

While this work was in progress Bakwin[1] reported similar find-

[1] Bakwin, H., *Am. J. Dis. Child.*, 1937, **54**, 1211.

ings, based on data obtained from different sources. Our figures were obtained from the cord and postnatal blood of the same babies, whereas Bakwin compared the results of 67 examinations made during the first 10 days of life with calcium determinations on 300 cord bloods performed some years previously.

Serum inorganic phosphorus tests were done on a few cases but are not sufficiently numerous to warrant reporting.

Studies of other factors, inorganic phosphorus, total protein, blood cell concentration, feeding, etc., are being continued to determine what circumstances may influence the calcium level variations.

We are indebted to Dr. Alexander Martin, Head of the Pediatric Service of the Lincoln Hospital for allowing us to obtain the blood used for this study.

9907

Failure to Demonstrate Pressor Properties in Extracts of Blood from Hypertensives.

MYRON PRINZMETAL,* BEN FRIEDMAN† AND ENID T. OPPENHEIMER. (Introduced by B. S. Oppenheimer.)

From the Mount Sinai Hospital, New York City.

The theory that hypertension may be due to the accumulation of a humoral pressor substance or substances of renal origin has been supported by the finding of increased concentrations of pressor material in kidneys from patients with various hypertensive diseases[1] and from dogs with experimental renal hypertension,[1, 2, 3] Against this hypothesis is the failure to find increased pressor properties in the blood of subjects with hypertension.[4] Recent chemical studies[5] indicated that the pressor principle in rabbits' kidneys is related to the globulins. This work suggested the possibility of con-

* Lionel Sutro Fellow.

† Richard and Ella Hunt Sutro Fellow.

1 Prinzmetal, M., and Friedman, B., PROC. SOC. EXP. BIOL. AND MED., 1936, **35**, 122.

2 Harrison, T. R., Blalock, A., and Mason, M. F., PROC. SOC. EXP. BIOL. AND MED., 1936, **35**, 38.

3 Harrison, T. R., Blalock, A., Mason, M. F., and Williams, J. R., Jr., *Arch. Int. Med.*, 1937, **60**, 1058.

4 Friedman, Ben, and Prinzmetal, M., in press.

5 Pickering, G. W., and Prinzmetal, M., *Clinical Science*, 1938, **3**, 211.