there are substances possessing chemotherapeutic activity sufficient to justify a thoroughly systematic study. The activity against *Leptospira* is particularly interesting. It seems that the *N*-alkyl derivatives of the *o*-amino series, which are unable to form ring compounds, such as inactive benzothiazoles, may be more active and have less toxicity than the corresponding nonalkylated derivatives. This follows from the behavior of bis(2-methylaminophenyl) disulfide. The activity of these compounds is connected with their oxidizing action. The bis(2-acylaminophenyl) disulfides, owing to their capacity for irreversible reduction (following cyclization to benzothiazoles) may in some cases constitute useful agents for the study of certain enzymatic systems.

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New Method for Blood Pressure Recording

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During the last decade there has been an ever increasing interest in electrical transmission methods for accurate measurement and recording of intra-arterial pressure. A number of methods have been described, e.g., photoelectric (*9*) and piezoelectric (*5, 6*) manometers, Clark reluctance manometer (Clark Pressure Capsule) (*7*), capacitance manometers (*1, 10*), and inductive (*8*) and resistance (*2, 4*) transmission methods.

In our investigations of the physiological effects on animals of high explosive blasts, we originally used a resistance-wire instrument (strain-gage) for the continuous recording of arterial blood pressure during the detonation (*3*). Since this method has several disadvantages, however, we have now developed an instrument in which the pressure variations are transmitted by a mechano-electronic transducer. So far as we know, this principle has not been used before in blood pressure recorders.

The instrument consists of a small pressure chamber with a thin silver membrane. The membrane acts directly upon the movable anode of the transducer tube (RCA 5734). The chamber and the short steel cannula which is inserted in the blood vessel are filled with a solution of 1% heparin in physiologic NaCl.

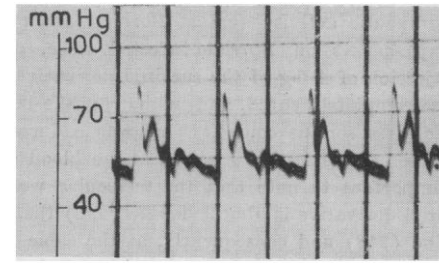

FIG. 1. A recording of the pressure in the carotid artery of a rabbit. The heavy vertical lines represent intervals of 1/10 sec. The curve is underdamped.

The transducer is connected to a pentode as a variable grid leak. The recording instrument (e.g., an oscillograph) is bridged in the anode circuit of the pentode. By using this way of coupling it is possible to make full use of the excellent frequency properties of the transducer. Another advantage is that the transducer has no other electric tension than the filament voltage and the grid voltage, which amounts to only a few volts.

The construction of the instrument is very simple and sturdy. Owing to the small dimensions of the transducer (length 20 mm, diam 8 mm) the whole instrument can be made very small and convenient. It requires only a slight amplification with one amplifier valve, or if the recording device is sensitive enough the amplification is not necessary at all. The instrument has a great range of frequencies and the phase displacement of the recordings is insignificant (Fig. 1). Owing to its low input impedance, the apparatus is quite insensitive to outside disturbances even if long feed lines must be used (as, for instance, in blasting experiments). The sensitivity of the instrument makes it possible to record fluctuations of pressure down to 1–2 mm of water. Supplied with a suitable membrane the apparatus can, therefore, be used even for recording venous pressure.

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