lustrous dark cherry-red crystals, mp 280° C (decomp., from benzene), readily soluble in ethanol and acetone, moderately in benzene, and sparingly in water. Found, %: C 66.58; H 5.52; N 13.05. Calculated for $C_{12}H_{12}N_2O_2$, %: C 66.65; H 5.59; N 12.95. IR spectrum: ν_{NH} 3365 cm^{-1}, ν_{CO} 1673 cm^{-1}.

sym-Octahydropyrido[2,3-g]quinoline (VI). This was obtained by the Kizhner-Wolff [Wolff-Kishner] reduction of **V**. The yield of **VI** was 80.5%, mp 161–162° C (from ethyl acetate). According to the literature [3], mp 161–162° C. Found, %: N 15.05. Calculated for $C_{12}H_{16}N_2$, %: N 14.9. IR spectrum: ν_{NH} 3362 cm^{-1}.

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ARYLAMINATION OF QUATERNARY ACRIDINIUM SALTS

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In studying the reactivity of quaternary acridinium salts, we have found that at 110–130° C in the presence of sulfur they react with arylamines. In this way, for example, high yields of 10-alkyl-9-(p-aminophenyl)- and 10-alkyl-9-(p-dimethylaminophenyl)acridinium halides (**I** and **II**) are formed.

The presence of a free amino group in **I** is shown by IR spectroscopy and by diazotization followed by azo-coupling.

The structure of the substances of type **II** was shown by independent synthesis, namely by the quaternization with methyl iodide of 9-(p-dimethylaminophenyl)acridine, which we obtained by Ullman's method [1].

The reaction described also extends to acridine base, but in contrast to the reaction with acridinium salts, it takes place with low yields (12–13%). The reaction of acridine with aniline and dimethylaniline in the presence of sulfur yielded 9-(p-aminophenyl)- and 9-(p-dimethylaminophenyl)acridines (**III** and **IV**), respectively.

The structure of **III** was confirmed by its IR spectrum and by deamination via the diazonium compound to 9-phenylacridine, which gave no depression in admixture with the substance obtained by Berntsen's method [2].

The quaternization of **III** and **IV** with equimolecular amounts of methyl iodide gave their quaternary salts with yields of 65–80%.

When ethanolic solutions of these salts were passed through Al_2O_3, compounds **III** and **IV** were re-formed quantitatively.

Some characteristics of the compounds synthesized are given in the table.

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Characteristics of the Compounds Obtained

Compound	Mp, °C	Empirical formula	Found, %			Calculated, %			Yield, %
			C	H	N	C	H	N	
10-Methyl-9-(p-aminophenyl) acridinium iodide	234 (ethanol)	$C_{20}H_{17}N_2I$	58.20	4.13	6.93	58.26	4.15	6.79	90
10-Methyl-9-(p-dimethylaminophenyl)acridinium iodide	216 (ethanol)	$C_{22}H_{21}N_2I$	59.77	4.77	6.30	60.00	4.80	6.36	91
9-(p-Aminophenyl)acridine	269 (ethanol)	$C_{19}H_{14}N_2$	84.66	5.23	10.14	84.41	5.22	10.37	12
9-(p-Dimethylaminophenyl) acridine	279 (xylene)	$C_{21}H_{18}N_2$	85.06	6.13	9.25	84.88	6.08	9.39	13
10-Ethyl-9-(p-aminophenyl) acridinium iodide	220 (ethanol)	$C_{21}H_{19}N_2I$	59.51	4.61	6.69	59.16	4.49	6.57	90
10-Ethyl-9-(p-methylaminophenyl)acridinium iodide	214 (ethanol)	$C_{22}H_{21}N_2I$	59.73	5.01	6.55	60.01	4.81	6.36	96
10-Ethyl-9-(p-dimethylaminophenyl)acridinium iodide	224 (ethanol)	$C_{23}H_{23}N_2I$	60.42	4.90	6.06	60.80	5.10	6.16	94
10-Benzyl-9-(p-dimethylaminophenyl)acridinium iodide dihydrate	melts diffusely	$C_{28}H_{25}N_2I \cdot 2H_2O$	60.99	5.41	5.66	60.87	5.29	5.07	91