ergotamine is variable and severe vaso-
occlusion has been reported with
therapeutic doses. However, to our
knowledge, paraplegia owing to oc-
cclusion of the lower medullary artery of
Adamkiewicz does not seem to have
been reported.

It has long been known that ergo-
tamine crosses the placental barrier in
small amounts. David described four
of 24 patients with Poland's anomaly,
where the mother attempted abortion
with ergot derivatives and hypo-
thesised that a defect of vascularisation
in the limb bud induced by ergot could
be responsible for the malformation.

We suggest that a single dose of
ergotamine and caffeine administered
at 4½ months could be associated,
through placental transfer, with a
vascular spasm of a medullary artery
severe enough to induce spinal cord
ischaemia and neuronal loss. Our
observation, as well as the case reported
by Hughes and Goldstein, at least
raises the possibility that ergotamine
induced birth defects of vascular origin
can occur.

A VERLOES
Centre for Human Genetics, Pathologie B23,
Hôpital du Sart Tilman,
B-4000 Liège, Belgium.

P EMONTS, M DUBOIS
University Department of Gynaecology
and Obstetrics,
Hôpital de la Citadelle, Liège, Belgium.

J RIGO, J SENTERRE
University Department of Neonatology,
Hôpital de la Citadelle, Liège, Belgium.

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**BOOK REVIEWS**

HLA in Narcolepsy. Ed Y Honda,
T Juji. (Pp 208; DM 156.) Heidelberg:

This is a collection of articles about a
condition characterised by the im-
probable combination of narcolepsy
(falling asleep at inappropriate times),
catalepsy (sudden loss of bilateral
skeletal muscle tone triggered by
emotion), hypnagogic hallucinations
(vivid dreams usually of a threatening
nature), associated with sleep paralysis
(when the patient feels his whole body
to be paralysed at the stage between
arousal and sleep). This syndrome was
first described as long ago as 1672 by
Thomas Willis and many subsequent
reports suggested its reality. The recent
findings that all authenticated narcole-
ptic patients are HLA-DR2 positive provides
proof of its organic and
genetic basis.

The discovery followed the now
familiar serendipitous pattern of HLA
disease associations. In an extensive
study involving many genetic markers
carried out by Akio Asaka, Yutaka
Honda, and Takeo Juji in Tokyo the
only significant associations were Bw35
(positive) and Bw52 (negative) in 58
narcoleptic patients. Much later studies of
HLA-DR antigens showed the unexpected strong
association with DR2 which has been subsequently
confirmed in many parts of the world.

This is a well presented and interest-
ing book with contributions from
neurologists, HLA specialists, and
others, covering most aspects of this
disorder and its relationship with the
HLA system. Although rather special-
ised it is only a slim volume and
provides a fascinating insight into
a whole new field of genetic and mol-
ecular studies in brain function and in
behaviour.

RODNEY HARRIS

Genes and Signal Transduction in
Multistage Carcinogenesis. Ed Nancy
H Colburn. (Pp 480; $150.00.) New

The title of this book is immediately
attractive to anyone involved in the
field of multistage carcinogenesis.
For many years there has been a need for a
book that provides a relatively up to
date overview of the specialised animal
model systems that can be correlated with
the role of tumour promoting
agents and specific genes which confer
susceptibility to neoplastic transforma-
tion in signal transduction. The book is
subdivided into four parts. Parts I and
II deal with genetic variants for
responses to mitogens and tumour
promoters and with cloned genes that
influence susceptibility to neoplastic
progression. There is an excellent
chapter on the genetic determinants of
susceptibility to mouse skin tumour
promotion by DiGiovanni and an
excellent chapter by Herschman and
Brankow on the suppression and
expression of the transformed pheno-
type in C3H10T½ cells following two
stage transformation. The chapter by
Weber and Schawver on the role of the
src gene in cellular transformation
provides some interesting information
on 3T3-TNR9 cells, which are
resistant to the mitogenic effects of
the tumour promoter TPA, and not only
fail to be transformed by src but are
growth inhibited in the presence of the
src gene. The other interesting dis-
covery is that v-myc facilitates v-src
transformation in these cells. Thus, the
data suggest common steps in signal
transduction by v-src and TPA and
imply a role for myc in the pathway. Dr
Colburn's own chapter shows that the
promotion insensitivity of her JB6
promotion resistant cell line is not the
result of altered levels of PKC, but is
more likely to result from changes in
critical substrates phosphorylated by
PKC. There are also some cautionary
notes in the very detailed chapter on
the complex regulation of gene
expression by TPA by Denhardt et al; we
are reminded that a correlation
between PKC activation and a change in
gene expression does not signify a
causal relationship. Gene expression
during multistage carcinogenesis is
reported in detail in the following chapter by Bowden et al.

The chapters in part III on signal
transduction are excellent overviews of a
very complex field and integrate well
with the chapters mentioned above.
There is an excellent introduction to
the field in a chapter by Parker et al and	nice discussions about the trans-
duction of the phorbol ester signal and
the role of PKC in IL-2 production in
the following chapter. I particularly
enjoyed the chapter on the role of raf
and myc oncogenes in signal trans-
duction by Heidecker et al, as I think
we have dwelt on the role of raf in these
message systems for too long. Finally,
in part IV, on stress associated signals
and gene regulation, there are two
valuable chapters by the gene and fos
protein. There is also an excellent
chapter by Karin on cис and trans