In the study of the "general equivalence problem," one of the principal tools is the use of the structure function to reduce the group. (For a discussion of this technique for the case of G-structures, cf. ref. 3; the general setting, where the structure groups are allowed to vary from point to point, is the notion of differentiable groupoid of Ehresmann.\textsuperscript{1} We hope to discuss the foundations of the general theory in the near future.) Here we shall present some techniques applicable in the case that our structure is subordinate to a nonintegrable differential system. More precisely, we shall assume that the Lie algebra of the structural group at each point has the form

\[
\begin{pmatrix}
\tilde{g}^0_h \\
\tilde{g}^1_h
\end{pmatrix}
\]

where the lower-right-hand block corresponds to the invariant subspace \( V_1 \) of the tangent space \( V \) (and \( g \) is the restriction of the structure algebra to \( V_1 \)) where \( \tilde{g} \) is the induced action of the structure algebra on \( V/V_1 \) and where we assume that the structure function \( \rho: V_1 \wedge V_1 \rightarrow V/V_1 \) of the differential system is surjective. (This is our nonintegrability assumption.) In particular, \( \tilde{g} \) is a homomorphic image of \( g \) and we have \( \tilde{g} \circ \rho = \rho \circ \wedge^2(Y) \) for any \( Y \in g \). We wish to describe how to cut down \( h \).

Setting the structure function constant has the following effect on \( h \):

1. For any \( X \in h, X \circ \rho \) lies in \( V_1 \otimes \wedge^2(V_1^*) \). Setting the structure function constant implies that

\[
X \circ \rho \text{ lies in } \mathcal{D}(g \otimes V_1^*)
\]

(in the Spencer complex). Notice that if \( g^{(1)} = 0 \) (i.e., \( H^{5,0} = 0 \)) then we have a unique \( S \) with

\[
X \circ \rho = \partial S.
\]

(This is useful when \( g \) is a "small" subalgebra of \( \text{Hom}(V_1, V_1) \), in particular if \( V_1 \) is of small codimension \( >2 \).)

2. To each \( v \in V_1 \) and \( X \in h \) associate \( (v \underline{\wedge} \rho) \circ X \in \text{Hom}(V/V_1, V/V_1) \). Then setting the structure function constant implies that

\[
(v \underline{\wedge} \rho) \circ X \in \tilde{g}
\]

so that \( X \) gives \( T \in \tilde{g} \otimes V_1^* \). (This is useful when \( V_1 \) is of large codimension.)

3. If \( g^{(1)} = 0 \) (so that (2) holds) then we have
for all \( v \in V_1. \)

As an example of the first technique, see reference 2 where we prove that a generic \( n\)-distribution in \( n + n(n - 1)/2 \) space is of finite type.


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**DEVELOPMENTAL CHANGES AND HETEROGENEITY OF LACTIC AND MALIC DEHYDROGENASES OF HUMAN SKELETAL MUSCLES AND OTHER ORGANS**

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Lactic dehydrogenase (LDH), the enzyme catalyzing the reversible reduction of pyruvate, is ubiquitous in mammalian tissues and has been shown to exist in 5 distinct molecular forms within the tissues of each mammal that has so far been studied. These isoenzymes of LDH may be separated by electrophoresis on different suitable media,\(^1\)\(^-\)\(^8\) column chromatography,\(^9\) or by coenzyme analogue specificity using nicotinamide adenine dinucleotide (NAD).\(^10\) They differ in their catalytic and immunologic properties, amino acid compositions, and also in certain physical characteristics.\(^11\),\(^12\) It has been demonstrated that each LDH isoenzyme molecule is formed from four polypeptide subunits of equal size and that the subunits are divisible into two distinctive varieties by electrophoresis.\(^11\),\(^12\) The LDH isoenzymes are designated respectively as LDH\(_1\) for the most rapidly migrating anodal form to LDH\(_b\), the cathodal slowly moving variety at pH 8.6. Both LDH\(_1\) and LDH\(_b\) are composed of four identical subunits, each of a different type. LDH\(_b\), LDH\(_a\), and LDH\(_1\) are made up of the two types of subunits in various combinations. They are thus hybrid forms.

The two pure types of LDH have also been designated as M (muscle or LDH\(_b\)) and H (heart or LDH\(_1\)) forms.\(^12\) Recently, Kaplan and Cahn\(^13\) reported that the composition of LDH in the various skeletal muscles of the normal chicken differs to a great extent, ranging from almost pure H type to pure M type. The red and white muscle fibers of the guinea pig, rabbit, and mouse have also been found to differ in respect to LDH isoenzyme composition.\(^14\) In examining the isoenzyme patterns of human skeletal muscles, previous investigators\(^7\),\(^15\) have not taken into consideration the heterogeneous nature of this tissue. In the present paper, evidence is given for the heterogeneity of LDH and malic dehydrogenase (MDH) isoenzyme compositions of human skeletal muscles and various visceral organs.