to ribose. Arrows labeled with b represent ketone-alcohol isomerizations. Ar-

FIGURE 4.7. The chemical pathways that make up the formose reaction. In this reaction, formaldehyde can be polymerized to produce longer-chain sugar molecules. The reaction products (e.g., the C<sub>4</sub> sugar) can be readily converted

rows labeled with a represent aldol/retroaldol reactions.

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