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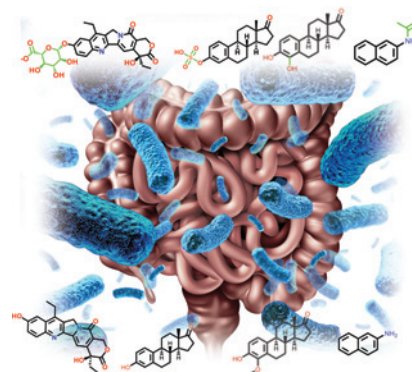
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The gut microbiota are trillions of microorganisms that physically interact with human intestinal and immune cells and functionally impact numerous physiological systems. The intestinal microflora significantly impact both the efficacy and toxicity of endogenous compounds and therapeutic agents. In the commentary beginning on page 635, Ervin and Redinbo proposed that the reactions performed by the gut microbiota be called “Phase IV metabolism”, an extension of human Phase I-III drug and endobiotic metabolic systems. Phase IV metabolism contributes to cancer etiology by performing crucial transformations on the products of human drug and endobiotic metabolism. The authors further proposed that inhibition of Phase IV reactions would limit tumor initiation and progression, representing a new way to control cancer etiology. The cover image depicts products of human Phase I-III metabolism in the liver undergoing Phase IV metabolism - molecules on the top are converted to those on the bottom by microbes in the intestine.



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