6. Phelps ME, Huang SC, Hoffman EJ, Selin CJ, Sokoloff L, Kuhl DE. Tomographic measurement of local cerebral glucose metabolic rate in humans with (F-18)2-fluoro-d-deoxy-D-glucose: validation of method. *Ann Neurol* 1979;6:371–388.
7. Choi Y, Hawkins RA, Huang SC, et al. Parametric images of myocardial metabolic rate of glucose generated from dynamic cardiac PET and 2-[^{18}F]fluoro-2-deoxy-D-glucose studies. *J Nucl Med* 1991;32:733–738.
8. Weinberg IN, Huang SC, Hoffman EJ, et al. Validation of PET-acquired input functions for cardiac studies. *J Nucl Med* 1988;29:241–247.
9. Gambhir SS, Schwaiger M, Huang SC, et al. Simple noninvasive quantification method for measuring myocardial glucose utilization in humans employing positron emission tomography and fluorine-18-deoxyglucose. *J Nucl Med* 1989;30:356–366.
10. Sokoloff L, Reivich M, Kennedy C, et al. The [^{14}C]deoxyglucose method for the measurement of local cerebral glucose utilization: theory, procedure, and normal values in the conscious and anesthetized albino rat. *J Neurochem* 1977;28:897–916.
11. Huang SC, Phelps ME, Hoffman EJ, et al. Noninvasive determination of local cerebral metabolic rate of glucose in man. *Am J Physiol* 1980;238:E69–E82.
12. Phelps ME, Hoffman EJ, Selin CE, et al. Investigation of [^{18}F]2-fluoro-2-deoxyglucose for the measurement of myocardial glucose metabolism. *J Nucl Med* 1978;19:1311–1319.
13. Hoh CK, Glaspy JA, Choi Y, et al. Quantitative dynamic and whole body PET FDG imaging of breast cancer. *J Nucl Med* 1992;33:828.
14. Folkow B, Neil E. Gastrointestinal and liver circulations. In: *Circulation*. New York: Oxford University Press; 1971:485–493.
15. Hawkins RA, Phelps ME, Huang SC. Effects of temporal sampling glucose metabolic rates, and disruptions of the blood-brain barrier on the FDG model with or without a vascular compartment: studies in human brain tumors with PET. *J Cereb Blood Flow Metab* 1986;6:170–183.
16. Landaw EM, DiStefano JJ. Multiexponential, multicompartmental noncompartmental modeling. II. Data analysis and statistical considerations. *Am J Physiol* 1984;246:R665–677.
17. Akaike H. A new look at the statistical model identification. *IEEE Trans Automat Contr* 1974;AC-19:716–723.
18. Schwarz G. Estimating the dimension of a model. *Ann Stat* 1978;6:461–564.
19. Chen BC, Huang SC, Germano G, et al. Noninvasive quantification of hepatic arterial blood flow with nitrogen-13-ammonia and dynamic positron emission tomography. *J Nucl Med* 1991;32:2219–2208.
20. Niewoehner CB, Nuttall FQ. Relationship of hepatic glucose uptake to intrahepatic glucose concentration in fated rats after glucose load. *Diabetes* 1988;37:1559–1566.
21. Van Schaftingen E, Davies DR. Fructose administration stimulates glucose phosphorylation in the livers of anesthetized rats. *FASEB J* 1991;5:326–330.
22. Lindholm P, Minn H, Leskinen-Kallio S, et al. Influence of the blood glucose concentration on FDG uptake in cancer—a PET study. *J Nucl Med* 1993;34:1–6.

Condensed from
15 Years Ago:

Labeling of Human Platelets with Indium-111-8-Hydroxyquinoline

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The factors influencing the labeling of human platelets in the presence of autologous plasma were evaluated. Labeling efficiency was found to be dependent on: (a) the time and temperature of incubation, (b) the platelet concentration, (c) the concentration of citrate ions (in ACD anticoagulant), and (d) the concentration of 8-hydroxyquinoline in the suspending medium. Contrary to what was expected, unsaturated transferrin was found not to interfere with the transfer of ^{111}In from the [^{111}In]8-hydroxyquinoline complex to the platelets. Based on the findings of this study, a protocol was established by which human platelets can be labeled with ^{111}In in plasma with a labeling efficiency of 55% ± 9% (mean ± 1 s.d.).

J Nucl Med 1979; 20:524-531