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December 21, 2007

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Dockets Management (HFA-305)
Food and Drug Administration
5630 Fishers Lane, Rm. 1061
Rockville, MD 20852

RE: RIN 0910-ZA30; Docket No. 2006N-0168

To Whom It May Concern:

On behalf of Shire Pharmaceuticals and the chronic kidney disease (CKD) community, I am submitting a request for phosphorus content to be added to Nutrition Facts/Supplement Facts labels.

Current research points to a significant rise over the past decade in the number of adult Americans with CKD, caused in large part by an increase in diabetes and hypertension, the two leading causes of CKD in the United States.¹ In fact, a study recently published in the November 7, 2007 issue of the *Journal of American Medical Association* found that an estimated 26 million people – about 13 percent of the U.S. population – now have CKD, compared with 10 percent in 1994.²

One of the conditions associated with CKD is hyperphosphatemia – high levels of serum phosphorus in the blood³ – which often is associated with serious consequences, including mineral deposits in the heart and blood vessels, bone disease and even death.⁴ While typically not treated until a patient reaches CKD Stage 5 (also known as end stage renal disease or ESRD),⁵ it has been well documented that phosphorus imbalance occurs well before the need for dialysis in CKD.⁶ In fact, data from the Framingham Offspring Study suggest that elevated serum phosphorus in patients with **healthy** kidneys is associated with an increased risk for cardiovascular events of up to 55 percent.⁷

Kidney patients are encouraged to work with their health care team, including a renal dietitian, to limit phosphorus intake, but this can be challenging as phosphorus is found in almost all foods.⁸ Additionally, Americans have steadily increased their phosphate intake over the past several decades through the growing consumption of processed food. Phosphorus compounds often are added to processed foods to improve shelf life, and cola-type beverages contribute significant quantities of phosphorus as phosphoric acid.⁹ The introduction of calcium-fortified foods also has led to an increase in phosphorus intake, as these foods are processed with calcium phosphate compounds.¹⁰

Because phosphorus currently is not listed on the Nutrition Facts label, many people have a difficult time keeping track of their phosphorus consumption and regularly ingest much more than the recommended maximum daily allowance. The National Academy of Sciences

recommends 700 milligrams (mg) of phosphorus per day in adults aged 18 years and older, including pregnant or breastfeeding women.¹¹ However, research has found that the dietary intake of phosphorus in the United States can be as high as 1,400 mg daily – double the recommended allowance.¹² Prominently displaying phosphorus content on the Nutrition Facts label will enable consumers to more accurately track their phosphorus intake and make more informed choices to fit their dietary needs. In addition, listing phosphorous along with fat, cholesterol and sodium will help raise awareness of the need to monitor phosphorus intake, especially for people with kidney disease, who likely monitor these other nutrients.

This seemingly small step in nutritional disclosure may have a lasting impact on more than just those with CKD, as the cost of treatment places a high burden not only on patients and caregivers, but also on the U.S. health care system. In fact, nearly \$27.3 billion was spent to treat CKD Stage 5 patients in 2003,¹³ and Medicare projects that costs for its program to treat kidney failure will grow to \$28 billion by 2010.¹⁴ Alerting consumers to phosphorus content on the Nutrition Facts label may help prevent cases of hyperphosphatemia and cardiovascular events that are often caused by hyperphosphatemia, thereby lowering the burden of care for treating these patients.

We hope you will consider the information we have outlined above as incentive to add phosphorus to the Nutrition Facts/Supplement Facts labels. We look forward to working with you on this and future label revisions.

Warmest regards,

A handwritten signature in black ink that reads "Kathy Ricketts". The signature is written in a cursive, flowing style.

Kathy Ricketts, MS, RD, LDN
Senior Specialist, Dialysis Centers
Shire Pharmaceuticals

References

¹ Centers for Disease Control and Prevention. Chronic Kidney Disease: A Public Health Problem That Needs a Public Health Action Plan. Preventing Chronic Disease: Public Health Research, Practice, and Policy; April 2006, vol. 3, no. 2: 1-6.

² Coresh J, et al. Prevalence of Chronic Kidney Disease in the United States. *J of Am Med Assoc*, 2007; 298 (17): 2038-2047.

³ Venes D, Thomas CL eds. *Taber's Cyclopedic Medical Dictionary*. 20th ed. Philadelphia, Pa: FA Davis Company; 2001, Page 1037.

⁴ National Kidney Foundation. K/DOQI Clinical Practice Guidelines for Bone Metabolism and Disease in Chronic Kidney Disease. *Am J Kidney Disease* 42: S1-S202, 2004, page 69.

⁵ National Kidney Foundation. Dialysis. Available at: <http://www.kidney.org/atoz/atozItem.cfm?id=39>. Accessed November 29, 2007.

⁶ National Kidney Foundation Kidney Disease Outcomes Quality Initiative. K/DOQI Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification, and Stratification: Part 6. Association of Level of Gfr With Complications In Adults, Guideline 10. Association of Level of Gfr With Bone Disease And Disorders of Calcium And Phosphorus Metabolism. Available at: http://www.kidney.org/professionals/kdoqi/guidelines_ckd/p6_comp_g10.htm. Accessed November 12, 2007.

⁷ Dhingra, R. Relations of Serum Phosphorus and Calcium Levels to the Incidence of Cardiovascular Disease in the Community. *Arch Intern Med*. 2007; 167: 879-885.

⁸ Harum, P. Hemodialysis Diet Guidelines. In: *Renal Lifestyles Manual: The Renal Diet Guidebook for Professionals and Patients*. Marina Del Ray, CA: R&D Laboratories Inc.; 1999: 71-77, Page 135.

⁹ Food Additive Status List. U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition/Office of Food Additive Safety, July 2006.

¹⁰ Cerkleski, Florian L. "Calcium Fortification of Food Can Add Unneeded Dietary Phosphorus." *J Food Comp Anal*, 18 (2005) 595-598.

¹¹ Institute of Medicine of the National, Dietary Reference Intakes: Elements. Available at: [Academies.http://www.iom.edu/Object.File/Master/7/294/Webtableminerals.pdf](http://www.iom.edu/Object.File/Master/7/294/Webtableminerals.pdf). Accessed November 12, 2007

¹² Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride (1997) National Academy of Sciences. Institute of Medicine. Food and Nutrition Board. Available at: http://www.nal.usda.gov/fnic/DRI//DRI_Calcium/146-189.pdf. Accessed November 12, 2007.

¹³ Agency for Healthcare Research and Quality. 2005 National Healthcare Quality Report. Available at <http://www.ahrq.gov/qual/nhqr05/nhqr05.pdf>. Accessed May 23, 2007.

¹⁴ National Kidney Disease Education Program, Strategic Development & Planning Meeting, June 28-29, 2001, Page 2. National Institutes of Health, National Institute of Diabetes & Digestive & Kidney Diseases, Bethesda, MD, Baseline Report. Available at: <http://www.niddk.nih.gov/fund/reports/nkdep/baseline-rpt.pdf>.