Supporting Information

Development of a non-invasive KIM-1-based live-imaging technique in the context of a drug-induced kidney-injury mouse model

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Figure S1

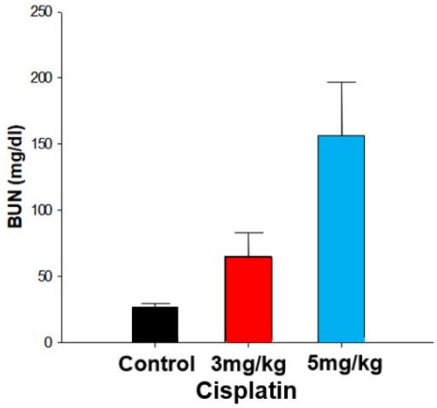

Figure S1. Blood urea nitrogen (BUN) levels in the cisplatin-induced kidney-injury model

Nude mice received cisplatin (3 or 5 mg/kg) intraperitoneally, for five consecutive days. The control group received PBS. BUN levels were quantified and are represented as mean±SD. *p≤0.05 ***p≤0.001.

Figure S2

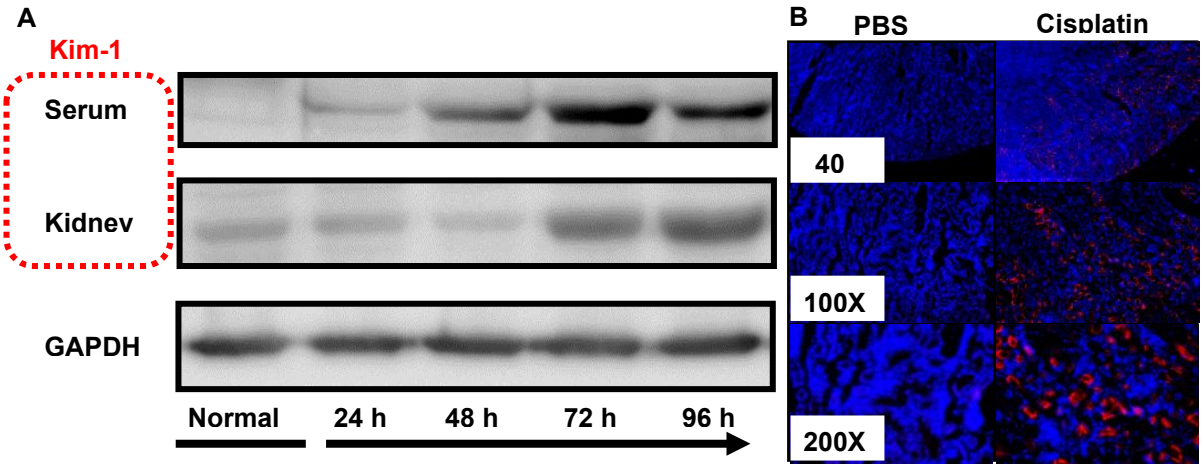

Figure S2. High-dose (20 mg/kg) cisplatin treatment induces high renal and circulatory levels of KIM-1 time dependently Animals were treated with a single high dose of cisplatin (20 mg/kg) intravenously, and euthanized at different time points. (A) KIM-1 levels were quantified using western blot analysis on the samples from the kidney and serum collected at 24, 48, 72, and 96 h after cisplatin treatment. (B) Kidney sections were stained using anti-Kim-1 antibody (red) and DAPI (blue) to assess KIM-1 expression through immunofluorescence.

Figure S3

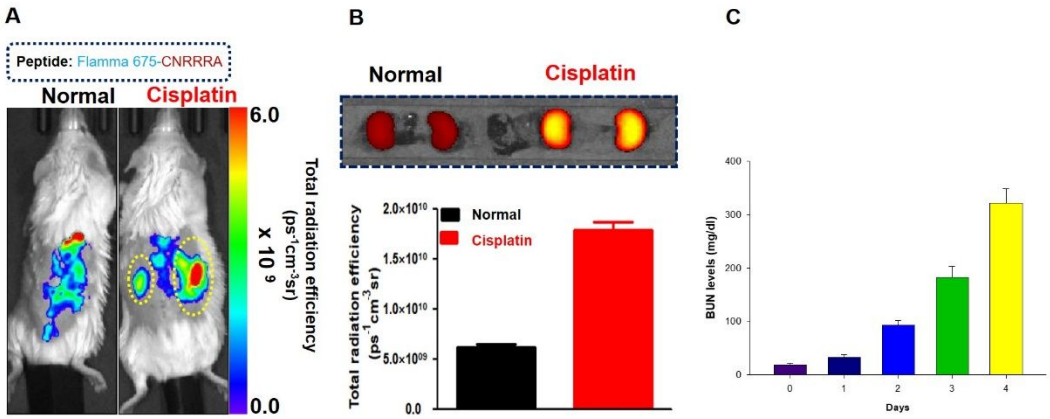

Figure S3. Labeled-CNRRRA peptide for imaging in mice with cisplatin-induced acute toxicity Animals were treated with a single high dose of cisplatin (20 mg/kg) intravenously. The CNRRRA labeled peptide was administered intravenously 72 h later, and animals were imaged after one day. (A) Representative live imaging data (B) *Ex vivo* image and total radiation efficiency (C) BUN level after cisplatin injection of 20 mg/kg (1~4 days)

Figure S4

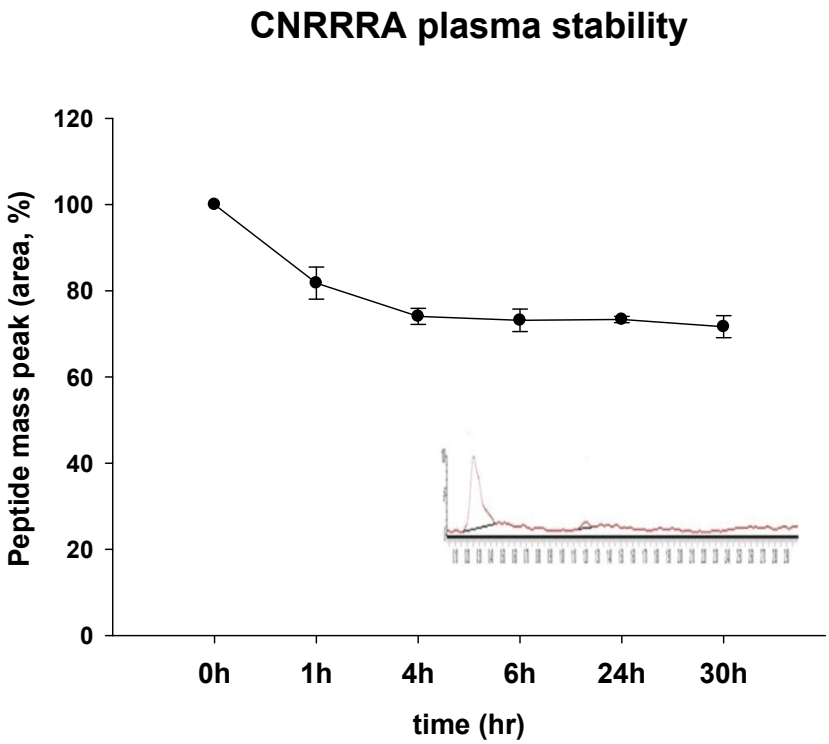

Figure S4. Stability of CNRRRA peptide in mouse plasma. The peptide was analyzed using Mass Q-tof (Waters Corp. USA). The mass area of intact peptide was calculated after incubation for 0, 1, 4, 6, 24, 30 h in mouse plasma.

MS Condition: Aquinity UPLC BEH C18 column,

MS negative sensitivity mode

Flow: 0.5 ml/min

Water/ACN isocratic

MW: 774