



US 20200156935A1

(19) **United States**(12) **Patent Application Publication**  
**Ruoslahti et al.**(10) **Pub. No.: US 2020/0156935 A1**(43) **Pub. Date: May 21, 2020**(54) **METHODS AND COMPOSITIONS USING  
PEPTIDES AND PROTEINS WITH  
C-TERMINAL ELEMENTS**(71) Applicant: **Sanford Burnham Prebys Medical  
Discovery Institute**, La Jolla, CA (US)(72) Inventors: **Erkki Ruoslahti**, La Jolla, CA (US);  
**Tambet Teesalu**, La Jolla, CA (US);  
**Kazuki Sugahara**, La Jolla, CA (US)(21) Appl. No.: **16/524,869**(22) Filed: **Jul. 29, 2019****Related U.S. Application Data**(63) Continuation of application No. 12/821,050, filed on  
Jun. 22, 2010, now Pat. No. 10,370,245.(60) Provisional application No. 61/219,086, filed on Jun.  
22, 2009, provisional application No. 61/249,140,  
filed on Oct. 6, 2009.**Publication Classification**(51) **Int. Cl.**  
**B82Y 5/00** (2006.01)**A61K 47/66** (2006.01)(52) **U.S. Cl.**  
CPC ..... **B82Y 5/00** (2013.01); **A61K 47/66**  
(2017.08)(57) **ABSTRACT**

Disclosed are compositions and methods useful for targeting and internalizing molecules into cells of interest and for penetration by molecules of tissues of interest. The compositions and methods are based on peptide sequences that are selectively internalized by a cell, penetrate tissue, or both. The disclosed internalization and tissue penetration is useful for delivering therapeutic and detectable agents to cells and tissues of interest.

**Specification includes a Sequence Listing.**