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(71) Applicant: **KUMQUAT BIOSCIENCES INC.** [US/US];  
10770 Wateridge Circle, Suite 120, San Diego, California  
92121 (US).

(72) Inventors: **REN, Pingda**; 10770 Wateridge Circle, Suite  
120, San Diego, California 92121 (US). **LI, Liansheng**;  
10770 Wateridge Circle, Suite 120, San Diego, Califor-  
nia 92121 (US). **WU, Baogen**; 10770 Wateridge Circle,  
Suite 120, San Diego, California 92121 (US). **LI, Xiaom-  
ing**; 10770 Wateridge Circle, Suite 120, San Diego, Califor-  
nia 92121 (US). **CHEN, Zhiyong**; 10770 Wateridge Circle,  
Suite 120, San Diego, California 92121 (US). **ZHAO, Sil-  
ing**; 10770 Wateridge Circle, Suite 120, San Diego, Cali-  
fornia 92121 (US). **LIU, Yi**; 10770 Wateridge Circle, Suite  
120, San Diego, California 92121 (US). **ZHU, Xiuwen**;  
10770 Wateridge Circle, Suite 120, San Diego, California  
92121 (US).

(74) Agent: **HARDT, Ingo**; Wilson Sonsini Goodrich & Rosati,  
650 Page Mill Road, Palo Alto, California 94304-1050  
(US).

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(54) Title: HETEROCYCLIC COMPOUNDS AND USES THEREOF

FIG. 1

|       |             |            |            |            |            |            |       |            |    |
|-------|-------------|------------|------------|------------|------------|------------|-------|------------|----|
|       | 1           |            | 20         |            | 40         |            |       |            |    |
|       |             |            |            |            |            |            |       |            |    |
| K-Ras | mte-----    | ----yklvvv | gagggvgk   | sal        | tiqliqnhfv | deydp      | tieds | yrkqvvidge | 49 |
| H-Ras | mte-----    | ----yklvvv | gagggvgk   | sal        | tiqliqnhfv | deydp      | tieds | yrkqvvidge | 49 |
| N-Ras | mte-----    | ----yklvvv | gagggvgk   | sal        | tiqliqnhfv | deydp      | tieds | yrkqvvidge | 49 |
| Ra1A  | maankpkqgn  | slalhkvimv | gsgggvgk   | sal        | tlqfmydefv | edyep      | tkads | yrkkvvldge | 60 |
| Ra1B  | maankskqqs  | slalhkvimv | gsgggvgk   | sal        | tlqfmydefv | edyep      | tkads | yrkkvvldge | 60 |
|       |             |            |            |            |            |            |       |            |    |
|       |             | 60         |            | 80         |            | 100        |       |            |    |
|       |             |            |            |            |            |            |       |            |    |
| K-Ras | tcldildtda  | gqeaysamrd | qymr-gegf1 | cvfainntks | fedihhyreq | ikrvkdsed- | 108   |            |    |
| H-Ras | tcldildtda  | gqeaysamrd | qymr-gegf1 | cvfainntks | fedihhyreq | ikrvkdsdd- | 108   |            |    |
| N-Ras | tcldildtda  | gqeaysamrd | qymr-gegf1 | cvfainnsks | fadinlyreq | ikrvkdsdd- | 108   |            |    |
| Ra1A  | evqidildtda | gqedyaaird | nyfrsgegf1 | cvfsitemes | faatadfreq | ilrvk-eden | 119   |            |    |
| Ra1B  | evqidildtda | gqedyaaird | nyfrsgegf1 | lvfsitehes | ftataefreq | ilrvkaeedk | 120   |            |    |

(57) Abstract: The present disclosure provides compounds and pharmaceutically acceptable salts thereof, and methods of using the same. The compounds and methods have a range of utilities as therapeutics, diagnostics, and research tools. In particular, the subject compositions and methods are useful for reducing signaling output of oncogenic proteins.

[Continued on next page]

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**Declarations under Rule 4.17:**

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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