

The diagram illustrates the iterative step of the Smith-Waterman algorithm. It shows three matrices: **S** (Score), **C** (Cell), and **R** (Row/Column indices). The matrices are 8x6. Arrows indicate the backtracking path from the maximum score cell (S[7][5] = 10) to the start of the alignment (S[1][1] = 1). The alignment sequence is A-G-A-T-T-A.

S	C	R
\$	A	G
A	G	A
A	T	\$
A	T	T
A	T	A
T	\$	A
T	A	T
T	T	A

S	C	R	/	S	A
\$	A	G	A	T	T
A	G	A	T	T	A
A	T	\$	A	G	A
A	T	T	A	T	\$
A	T	T	A	T	\$
T	\$	A	G	A	T
T	A	T	\$	A	G
T	T	A	T	\$	A

S	A
\$	
A	G
A	T
A	T
A	T
T	\$
T	A
T	T