THAT WHICH IS CLAIMED:

1. A nucleic acid molecule comprising a polynucleotide encoding an RNA-guided nuclease (RGN) polypeptide, wherein said polynucleotide comprises a nucleotide sequence encoding an RGN polypeptide comprising an amino acid sequence having at least 95% sequence identity to SEQ ID NO: 1;

wherein said RGN polypeptide binds a target DNA sequence in an RNA-guided sequence specific manner when bound to a guide RNA (gRNA) capable of hybridizing to said target DNA sequence,

wherein said target DNA sequence is located 5' and adjacent to a protospacer adjacent motif (PAM) site having the sequence set forth as SEQ ID NO: 7, and

wherein said polynucleotide encoding an RGN polypeptide is operably linked to a promoter heterologous to said polynucleotide.

2. The nucleic acid molecule of claim 1, wherein said RGN polypeptide is nuclease dead or functions as a nickase.

3. The nucleic acid molecule of claim 2, wherein the RGN polypeptide is operably fused to a base-editing polypeptide.

4. A vector comprising the nucleic acid molecule of any one of claims 1-3.

5. The vector of claim 4, wherein said vector further comprises at least one nucleotide sequence encoding said guide RNA, and wherein the guide RNA comprises a CRISPR RNA comprising a CRISPR repeat sequence having at least 95% sequence identity to SEQ ID NO: 2.

6. The vector of claims 4 or 5, wherein the guide RNA comprises a tracrRNA having at least 95% sequence identity to SEQ ID NO: 3.

7. A cell comprising the nucleic acid molecule of any one of claims 1-3 or the vector of any one of claims 4-6.

8. A nucleic acid molecule comprising a polynucleotide encoding a trans-activating CRISPR RNA (tracrRNA) comprising a nucleotide sequence having at least 95% sequence identity to SEQ ID NO: 3;

wherein a guide RNA comprising:

a) said tracrRNA; and

b) a crRNA comprising a spacer sequence and a CRISPR repeat sequence, wherein said tracrRNA hybridizes with said CRISPR repeat sequence of said crRNA;

is capable of hybridizing to a target DNA sequence in a sequence specific manner through the spacer sequence of said crRNA when said guide RNA is bound to an RNA-guided nuclease (RGN) polypeptide having the amino acid sequence of SEQ ID NO: 1,

wherein said target DNA sequence is located 5' and adjacent to a protospacer adjacent motif (PAM) site having the sequence set forth as SEQ ID NO: 7, and

wherein said polynucleotide encoding a tracrRNA is operably linked to a promoter heterologous to said polynucleotide.

9. A vector comprising the nucleic acid molecule of claim 8.

10. The vector of claim 9, wherein said vector further comprises a polynucleotide encoding said crRNA.

11. The vector of claim 10, wherein said crRNA comprises a spacer sequence and a CRISPR repeat sequence, wherein said CRISPR repeat sequence comprises a nucleotide sequence having at least 95% sequence identity to SEQ ID NO: 2.

12. A system for binding a target DNA sequence, said system comprising:

a) one or more guide RNAs capable of hybridizing to said target DNA sequence or one or more nucleotide sequences encoding the one or more guide RNAs (gRNAs); and

b) an RNA-guided nuclease (RGN) polypeptide comprising an amino acid sequence having at least 95% sequence identity to SEQ ID NO: 1 or a nucleotide sequence encoding the RGN polypeptide;

wherein said nucleotide sequences encoding the one or more guide RNAs and encoding the RGN polypeptide are each operably linked to a promoter heterologous to each said nucleotide sequence;

wherein the one or more guide RNAs hybridize to the target DNA sequence,

wherein said target DNA sequence is located 5' and adjacent to a protospacer adjacent motif (PAM) site having the sequence set forth as SEQ ID NO: 7, and

wherein the one or more guide RNAs form a complex with the RGN polypeptide, thereby directing said RGN polypeptide to bind to said target DNA sequence.

13. The system of claim 12, wherein the target DNA sequence is within a eukaryotic cell.

14. The system of claim 12 or 13, wherein said RGN polypeptide is nuclease dead or functions as a nickase, and wherein the RGN polypeptide is operably linked to a base-editing polypeptide.

15. The system of claim 12 or 13, wherein said system further comprises one or more donor polynucleotides or one or more nucleotide sequences encoding the one or more donor polynucleotides, wherein said nucleotide sequences encoding the one or more donor polynucleotides are each operably linked to a promoter heterologous to each said nucleotide sequence.

16. A method for binding a target DNA sequence comprising delivering a system according to any one of claims 13-15 to said target DNA sequence or a cell comprising the target DNA sequence, wherein the method is not a method for treatment of the human or animal body by surgery or therapy.

17. A method for cleaving and/or modifying a target DNA sequence, comprising contacting the target DNA sequence with:

a) an RNA-guided nuclease (RGN) polypeptide, wherein said RGN comprises an amino acid sequence having at least 95% sequence identity to SEQ ID NO: 1; and

b) one or more guide RNAs capable of targeting the RGN of (a) to the target DNA sequence;

wherein said target DNA sequence is located 5' and adjacent to a protospacer adjacent motif (PAM) site having the sequence set forth as SEQ ID NO: 7,

wherein the one or more guide RNAs hybridize to the target DNA sequence, thereby directing said RGN polypeptide to bind to said target DNA sequence and cleavage and/or

modification of said target DNA sequence occurs, wherein the method is not a method for treatment of the human or animal body by surgery or therapy and does not comprise a process for modifying the germ line genetic identity of human beings or a use of human embryos for industrial or commercial purposes.

18. The method of claim 17, wherein said modified target DNA sequence comprises deletion or mutation of at least one nucleotide from the target DNA sequence.

19. The method of claim 17 or 18, wherein said RGN polypeptide is nuclease dead or functions as a nickase, and wherein the RGN polypeptide is operably linked to a base-editing polypeptide.

20. The method of claim 17, wherein said modified target DNA sequence comprises insertion of heterologous DNA into the target DNA sequence.

21. The method of any one of claims 17-20, wherein the target DNA sequence is within a cell.

22. The method of claim 21, wherein the cell is a eukaryotic cell.

23. The method of claim 21 or 22, further comprising culturing the cell under conditions in which the RGN polypeptide is expressed and cleaves the target DNA sequence to produce a modified DNA sequence; and selecting a cell comprising said modified DNA sequence.