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Histone-DNA assemblies in archaea : shaping the genome on the edge of life

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HISTONE-DNA ASSEMBLIES IN ARCHAEA

Shaping the genome on the edge of life

Bram Henneman

Histone-DNA assemblies in archaea - Shaping the genome on the edge of life

Bram Henneman

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Shaping the genome on the edge of life

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TABLE OF CONTENTS

List of abbreviations	8
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CHAPTERS

<u>1</u> Introduction	11
<u>2</u> Structure and function of archaeal histones	31
<u>3</u> Quantitation of DNA binding affinity using Tethered Particle Motion	73
<u>4</u> Mechanical and structural properties of archaeal hypernucleosomes	97
<u>5</u> DNA binding by histones from <i>Ca. Nanohaloarchaeota</i>	125
<u>6</u> Specific DNA binding of archaeal histones	141
<u>7</u> General discussion	151

References	159
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Summary & Nederlandse samenvatting	180
------------------------------------	-----

Curriculum Vitae	186
------------------	-----

List of publications	187
----------------------	-----

Acknowledgments	188
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LIST OF ABBREVIATIONS

AFM	atomic force microscopy
AFS	acoustic force spectroscopy
Alba	acetylation lowers binding affinity
ANME	anaerobic methanotrophs
BB	bead buffer
BRE	B recognition element
Ca.	<i>Candidatus</i>
CARD-FISH	catalyzed reporter deposition fluorescence <i>in situ</i> hybridization
DPANN	superphylum originally named after Diapherotrites, Parvarchaeota, Aenigmarchaeota, Nanoarchaeota and Nanohaloarchaeota
Dps	DNA-binding protein from starved cells
EB	experimental buffer
EMSA	electrophoretic mobility shift assay
FECA	first eukaryotic common ancestor
FJC	freely-jointed chain
F_{norm}	normalized fluorescence
G1P	<i>sn</i> -glycerol-1-phosphate
G3P	<i>sn</i> -glycerol-3-phosphate
GRN	gene regulatory network
GTF	general transcription factor
H-NS	histone-like nucleoid-structuring protein
HADDOCK	high-ambiguity driven docking
HU	histone-like protein from <i>Escherichia coli</i> strain U93
IHF	integration host factor
Inr	initiator element
ITC	isothermal titration calorimetry
K_D	binding constant
k_{off}	off-rate constant
k_{on}	on-rate constant
LECA	last eukaryotic common ancestor
L_p	persistence length
LUCA	last universal common ancestor
MC1	methanogen chromosomal protein 1
MNase	micrococcal nuclease
MST	microscale thermophoresis
NAP	nucleoid-associated protein
PCR	polymerase chain reaction

pI	isoelectric point
PIC	preinitiation complex
PIFE	protein induced fluorescence enhancement
PPE	promoter proximal DNA element
PTM	post-translational modification
RMS	root mean square displacement
RNAP	RNA polymerase
SAMP	small archaeal modifier protein
SD	standard deviation
SELEX	systematic evolution of ligands by exponential enrichment
smFRET	single molecule Förster resonance energy transfer
SPR	surface plasmon resonance
sRNA	small RNA
TACK	superphylum originally named after Thaumarchaeota, Aigarchaeota, Crenarchaeota and Korarchaeota
TBP	TATA-binding protein
TF	transcription factor
TFB	transcription factor B
TFE α	transcription factor E
TPM	tethered particle motion
TSS	transcription start site
WLC	worm-like chain
ΔF_{norm}	difference in normalized fluorescence

