Angiogenesis

For 17 players

Katherine Bodor

Duration ca. 8′

Score in C

Instrumentation

Flute
Oboe
Clarinet in Bb
Bassoon

Horn in F
Trumpet in Bb
Trombone
Tuba

2 Percussion
Harp
Piano

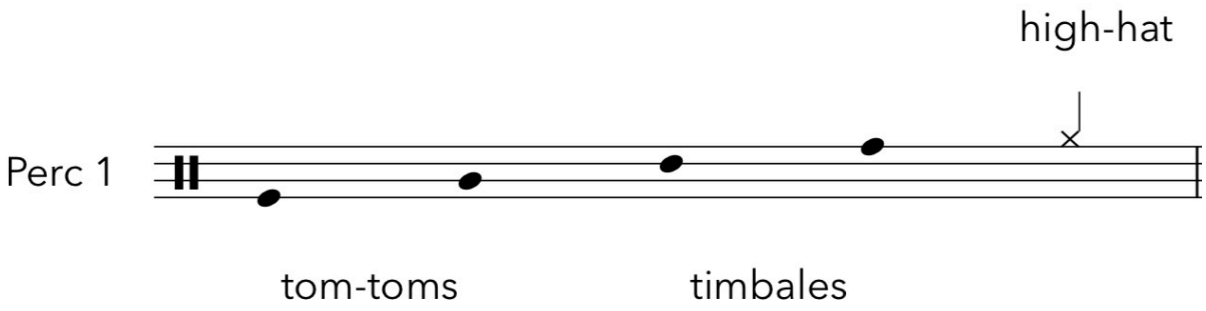
2 Violins
Viola
Cello
Double Bass

Percussion 1

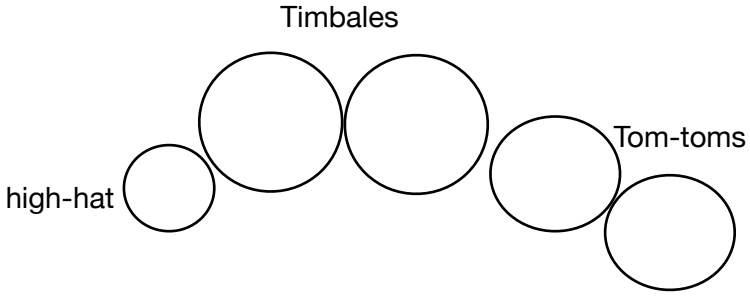
High-hat
2 timbales
2 tom-toms

Percussion 2

Suspended cymbal
Bongos
Bass drum
Crotales

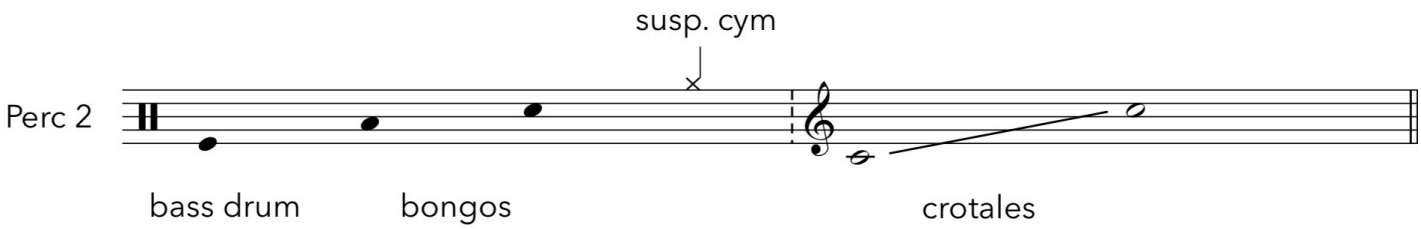


Setup:

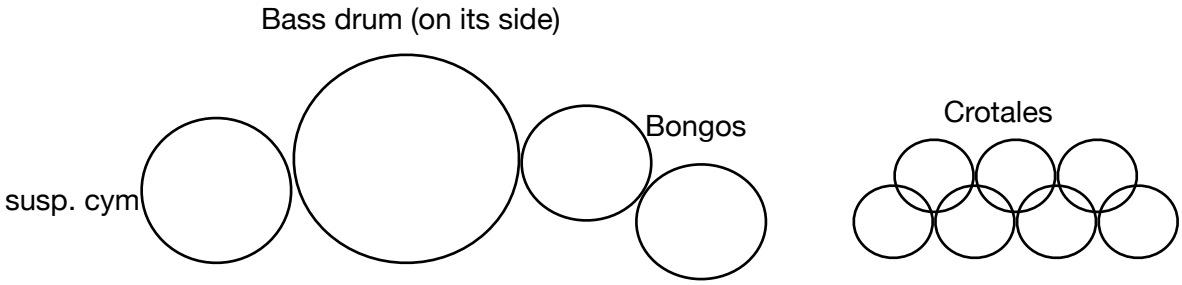


Performance notes:

- When playing the high-hat, symbols for closed or open apply to all of the notes following, until the next symbol appears
- "Choke" or "dampen immediately" indicates to dampen the sound; otherwise, assume all sounds can ring



Setup:



Performance notes:

- "Choke" or "dampen immediately" indicates to dampen the sound; otherwise, assume all sounds can ring

Composer's Note

Angiogenesis is the process by which the human body creates new blood vessels. This is a fascinating capability, as it is both lethal and lifesaving in different contexts.

In the case of cancer, angiogenesis around and into tumors supplies the oxygen and nutrients necessary for accelerated tumor growth, and a goal in cancer treatment is to target and block receptors that trigger the growth of new blood vessels that feed tumors.

On the other hand - in the case of heart disease - if an arterial blockage in the heart develops slowly enough, the restricted blood flow acts as a cue to the body to stimulate angiogenesis around a blockage. There are documented cases where patients have a total coronary blockage, but have not had a major heart attack: the body has healed itself, growing new tiny blood vessels around a blockage and allowing the blood to still pass through. New treatments for cardiovascular blockages include targeted, controlled stimulation of this incredible natural process.

This piece focuses on the latter form of angiogenesis, offering a musical depiction of the sinister nature of a growing blockage that the body then overcomes. Coronary angiogenesis is a miracle, and the piece ends with a meditative soundworld that reflects the peace of knowing that healing is possible.

Angiogenesis

Written for the Indiana University Jacobs School of Music New Music Ensemble

Katherine Bodor (b. 1994)

Flute
Oboe
Clarinet in B♭
Bassoon
Horn in F
Trumpet in B♭
Trombone
Tuba
Percussion 1 (high-hat, 2 timbales, 2 tom-toms)
Percussion 2 (bass drum, bongos, susp. cym, crotales)
Harp
Piano
Violin I
Violin II
Viola
Violoncello
Contrabass

2/4 ♩ = 76 — 4/4

wooden sticks
bass drum beater
(bass drum beater)
choke
(Tune to E Major scale through m. 7)
gliss.
Ped.

8

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

(wooden sticks)

Perc.

(bass drum beater)

Hp.

Pno.

8

Vln. I

Vln. II

Vla.

pizz.

Vc.

pizz.

Cb.

pizz.

13

14

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

Hp.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

19

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

snap pizz
snap pizz

24

27

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

dampen
immediately

(pizz)
(pizz)
(pizz)

28

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

Hp.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

31

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

Hp.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

34

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

pp mf mp p arco

38

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

p *mp* arco

40

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

2/4

Ped.

45

49

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

choke

(tune to f natural minor scale through m. 51)

gliss.

Ped.

50

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

Hp.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

53

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

Hp.

(f minor scale through m. 54)

gliss.

gliss.

Pno.

Ped.

Ped.

Vln. I

Vln. II

Vla.

Vc.

Cb.

55

57

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

choke

dampen immediately

To crotales

Hp.

Pno.

Ped.

57

Vln. I

Vln. II

Vla.

Vc.

Cb.

59

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

Hp.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

p

pp

63

65

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

brass mallets

Hp.

l.v.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

66

Fl.

Ob.

Cl.

Bsn.

p *mp* *mp* *p* *mp*

Hn.

p *mf*

Tpt.

p *mf*

Tbn.

p *mf*

Tba.

p *mf*

Perc.

Crot.

l.v.

Hp.

l.v.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

69

Fl.

Ob.

Cl.

Bsn.

mf *p* *mp*

Hn. *p* *f*

Tpt. *p* *f*

Tbn. *p* *f*

Tba. *p* *f*

Perc.

(wooden sticks)

Crot.

back to drums

wooden sticks

Hp.

l.v.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

l.v.

75

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

l.v.
l.v.

79

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

4/4

12/8 ♪. = ♩.

83

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

bass drum beater

gradually rising, not specific pitches
(pitches provided as approximate reference)

gradually rising, not specific pitches
(pitches provided as approximate reference)

gradually rising, not specific pitches
(pitches provided as approximate reference)

gradually rising, not specific pitches
(pitches provided as approximate reference)

87

89

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

f
ff
sf≠p
dampen immediately
p
(tune to f natural minor scale through m. 91)
gliss.
(as high as possible)
Ped.

90

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Perc.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

f
ff
sfzp *ff*
p
gliss.
Ped.

93

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

sfzp ff

Tbn.

Tba.

Perc.

p f

Hp.

gliss.

Pno.

Ped.

Vln. I

Vln. II

Vla.

Vc.

Cb.

96

97

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

p

To crotales

Perc.

f

Hp.

Pno.

p

Ped.

97

Vln. I

Vln. II

Vla.

Vc.

Cb.

99

rit.

♩ = 60

Fl.

Ob.

Cl.

Bsn.

pp

Hn.

Tpt.

Tbn.

Tba.

Perc.

Perc.

bowed

p

Hp.

Pno.

Ped.

rit.

♩ = 60

Vln. I

Vln. II

Vla.

Vc.

Cb.

107

112

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Crot.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

tr

mf p

pp

sim.

113

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Crot.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

pp mp pp mp pp mp pp mp pp mp pp mp pp mp pp mp p p mp pp p p mp pp p

117

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Crot.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

121

122

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Tba.

Perc.

Crot.

Hp.

Pno.

122

Vln. I

sim.

Vln. II

Vla.

Vc.

Cb.

127

Fl.

Ob.

mp *mf* *p*

Cl.

mf *p*

Bsn.

Hn.

mf *p*

Tpt.

Tbn.

mf *p*

Tba.

Perc.

Crot.

p *p* *p*

Hp.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

131 tr

Fl.
Ob.
Cl.
Bsn.
Hn.
Tpt.
Tbn.
Tba.
Perc.
Crot.
Hp.
Pno.
Vln. I
Vln. II
Vla.
Vc.
Cb.

p
pp
mp
sim.