

# BLOCK 2: THE HUMAN BLUEPRINT

## CWRU SOM WR2 CURRICULUM

August-November 2017

Block Leader: Jonatha Gott, Ph.D.

Block Co-leader: Joseph Bokar, M.D./Ph.D.

Course Manager: Nivo Hanson

Primary Content Areas: Cancer Biology, Cell Biology, Development (Embryology), Endocrinology, Genetics, Molecular Biology, Reproductive Biology

Longitudinal Content Areas: Histopathology, Anatomy, Bioethics

### 1. Please address last year's Action Plan. Did you accomplish the goals that you listed? Why or why not?

The following changes listed in last year's Action Plan were implemented:

- greater emphasis on connections between disciplines and intersections between different learning environments (IQ, lecture, TBL)
- IQ case revisions, including additional information added to facilitator guides regarding ties to other aspects of the block content
- better coordination between weekly content and Clinical and Basic Science Correlations
- multiple changes to Team Based Learning sessions:
  - all four TBLs were revised based on student and facilitator feedback
  - when TBL readings were provided as pdf files, they were annotated
  - supplemental bioethics questions were added to TBLs for discussion during 'down time' (i.e. when groups finished working on individual questions ahead of other groups)
  - TBL time management issues were addressed (but still need significant improvement)
  - TBL#3 (Cell signaling in cancer) was reduced to 1 hour with a 1 hour prep lecture two days prior

Some goals were only partially implemented:

- Team Based Learning sessions:
  - providing succinct goals for each session ahead of time (goals were added to some prep lectures, in other cases they were reviewed at the beginning of the session)
  - summaries of take home points were not projected after subsets of related questions due to concerns about time constraints
  - avoiding ambiguity in questions and answer choices by having non-experts examine them (TBL exercises were re-written, but in some cases new ambiguities were introduced!)
  - microphones were not available to facilitators in all TBL rooms

### 2. Please comment on 2-4 aspects of the Block that went particularly well. Do you have plans to expand/increase/improve these aspects of the Block?

3.

Endocrinology, Reproductive Biology, Genetics, and Cancer Biology continue to receive the strongest ratings. These four disciplines provide the primary content of Block 2 IQ cases, which were viewed as very effective (85% of students rated them as good or excellent). Block 2 covers a wide range of topics, from very basic science to organismal biology, and a perennial complaint has been that the block is not well integrated. We have been taking steps to address this issue and in this year's end of block feedback over 1/3 of the students mentioned organization/integration as a strength of the block. Comments such as 'reflecting back, everything went so well together that what may seem to be disconnected topics actually connected with one another' indicate that we

are making real progress on this front. Students again commented on how they appreciated having the framing lectures the week prior to the relevant IQ cases. This will be maintained in the coming year. Our faculty members are highly committed and are generally seen as being very 'approachable'.

Goals/actions: We will continue to work on better integration of all disciplines.

**4. Please comment on aspects of the Block that received decreased ratings when compared to previous years. What are possible explanations? How will you address these?**

Despite the significant revisions to TBL content, the TBL sessions were rated very poorly (2.8) again this year. Because the TBLs contain content from Genetics, Molecular Biology, Cancer Biology, and Cell Physiology, the decreased ratings in these areas are likely a reflection on how the TBLs, which fall in the second half of the block) were perceived. A number of issues contributed to this:

1. Negative comments on the TBLs were primarily directed at a subset of the facilitators rather than the actual content. While most of the facilitators were rated highly, four students characterized their TBL environment as 'hostile', indicating that when students asked questions their facilitators asked in a 'dismissive' tone whether they had attended the prep lecture or done the reading.

Goals/actions: The SCME has expressed interest in working with us on revising the Block 2 TBL exercises. We welcome the input and will be meeting with them in mid February to set up a collaboration with them. The facilitator who demonstrated 'unprofessional' behavior at one point will not be returning to TBL next year. The block leader has spoken to the other facilitators who received negative comments from students, emphasizing the importance of creating a safe learning environment. Additional facilitator training will be incorporated next year and this issue will be specifically addressed.

2. Some facilitators were less well-prepared than others. This was due, in part, to the difficulty in scheduling training sessions around clinical obligations. Despite the distribution of information outlining the changes made to the previous year's TBL content, returning faculty who missed the practice sessions were not always completely familiar with the new material.

Goals/actions: TBL revisions will be completed earlier in the year to provide a larger window for practice sessions and, if necessary, multiple training sessions will be set up for each TBL to enable every facilitator to attend.

3. Time management was still an issue for most TBL sessions. Having the 'Ready' signs and additional discussion questions helped, but some groups still lagged far behind the others in terms of coming to a consensus answer. This was particularly problematic in the larger rooms, which held up to 10 groups of 6 students. The incorporation of check-out at the end of each session further constrained the time available for TBL discussions.

Goals/actions: Stricter time limits for each question will be imposed next year. TBL content will also be examined for ambiguities and, when necessary, some questions will be shortened or dropped. TBLs #1 and #2 have already been revised to address issues 2 and 3. TBLs #3 and #4 include vignettes that contain a significant amount of background information. We will discuss the possibility of providing some of this reading as part of the class preparation material to allow the students to have enough time to assimilate this information.

4. Unfortunately, due to the lack of Just-in-time feedback, written comments were not received until the End of Block feedback. More timely feedback would have been extremely helpful, allowing earlier interventions with faculty. In addition, the structure of the EOB feedback was not helpful in that we did not receive much feedback on the actual TBL content.

Goals/actions: We feel that timely feedback is especially important when new additions to the curriculum are being developed. We have requested Just-in-time feedback after every TBL session in the coming year. Questions should be structured to elicit feedback on the TBL content as well as individual facilitators.

**5. Please comment on any new curricular innovation(s) that you introduced into the Block this year. Did they work well? Will you continue them? (Note: this may overlap with #2 above).**

No new curricular innovations were introduced into Block 2 in 2017, although TBLs were substantially revised. The most significant change was the addition of a preparatory lecture for TBL #3 to provide more background for the TBL exercise, which was reduced to 1 hour.

*Goals/actions:* Further TBL revisions are planned, incorporating student (and faculty) feedback.

**6. Are you planning any changes to your required resources?**

Required readings will be revised as necessary to accommodate changes in course content and EBIQ papers.

**7. Please comment on observations of student attendance and student participation. Was it similar to the preceding year?**

Except for optional review sessions, student attendance and participation was excellent and similar to last year.

**8. Please comment on the alignment between the weekly Block content and the MCQs/SEQs.**

The MCQs and SEQs were tagged previously, but we were not aware that this did not translate to the Canvas system. Misalignment with the course content did not come up in student feedback, so it does not appear to have been much of a problem.

*Goals/actions:* With the change in schedule necessitated by the Anatomy Bootcamp, the lecture order will change somewhat in 2018, so the alignment of MCQs and SEQs will need to be monitored. MCQs and SEQs will be updated to reflect changes in the curriculum (e.g. TBLs)

**9. What additional information or comments do you want to share about the Block?**

During IQ and feedback sessions students indicated that they liked having relevant lectures prior to the IQ cases. IQ facilitators also commented that the students seemed better prepared. This will be kept in mind as the new schedule is being organized.

We feel strongly that the end of block feedback should revert to inviting the entire class to comment on the block content and organization. This is needed to provide the design team with more comprehensive information about students' perceptions of the block and to provide all students with an opportunity to share their opinions and suggestions. Their written comments are particularly helpful.

We want to express our sincere gratitude to the members of our design team for their dedication, responsiveness, and hard work. Their largely unheralded contributions are what make this block work so well. Course manager Nivo Hanson does an incredible job of supporting us and gently keeping us on track. She is a pleasure to work with and is instrumental in making this block a success. Other faculty members contributing to the block are highly committed and do an excellent job. We also gratefully acknowledge the considerable support received from the office of assessment, especially Dr. Klara Papp and Katie Battistone, as well as Bart Jarmusch, who acted as our IQ program manager despite having a new position, and the AV and IT technical support teams.

**11. Longitudinal Evaluation Data on next page**

Block 2, The Human Blueprint  
AY 17-18

Class of 2021 was asked questions of Block 2 components. Results are reported below as compared to results of previous three years. Responses/Expected: 46/46 (100%)

Percentage of Students who rated "Good" or "Excellent"

<b>Block 2: The Human Blueprint</b>				
<b>General Block Aspects</b>				
Block Components	2014-2015 %	2015-2016 %	2016-2017 %	2017-2018 %
Approachability of faculty	85	89	77	<b>83</b>
Effectiveness of large group lecturers	64	78	62	<b>63</b>
Effectiveness of IQ cases	92	96	87	<b>85</b>
Effectiveness of team-based learning (TBL) group activities	--	--	30	<b>35</b>
Overall quality of this block	65	78	55	<b>74</b>
<b>Block Concepts/Integration of Block Concepts and Longitudinal Themes</b>				
Endocrinology—Concepts & IQ*	94	92	81	<b>94</b>
Reproductive biology —Concepts & IQ*	91	84	79	<b>74</b>
Development —Concepts & IQ*	44	53	26	<b>35</b>
Genetics —Concepts & IQ*	97	93	94	<b>89</b>
Molecular Biology —Concepts & IQ*	56	63	57	<b>52</b>
Cancer Biology —Concepts & IQ*	91	91	92	<b>83</b>
Cell Physiology —Concepts & IQ*	63	63	60	<b>52</b>
Clinical & Basic Science Correlation Series —Concepts & IQ*	70	64	64	<b>63</b>
Gross Anatomy	54	59	66	<b>61</b>
Histopathology	61	76	75	<b>81</b>
Bioethics	29	41	47	<b>57</b>

\* "Well" or "Very Well"