

ROBIN COOK

CHROMOSOME

6

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G. P. PUTNAM'S SONS : NEW YORK

This is a work of fiction. The events described here are imaginary. The settings and characters are fictitious, even when a real name may be used. They are not intended to represent specific places or persons, or, even when a real name is used, to suggest that the events described actually occurred.

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CHROMOSOME 6

ALSO BY ROBIN COOK

CONTAGION

ACCEPTABLE RISK

FATAL CURE

TERMINAL

BLINDSIGHT

VITAL SIGNS

HARMFUL INTENT

MUTATION

MORTAL FEAR

OUTBREAK

MINDBEND

GODPLAYER

FEVER

BRAIN

SPHINX

COMA

THE YEAR OF THE INTERN

FOR AUDREY AND BARBARA
Thanks for being wonderful mothers

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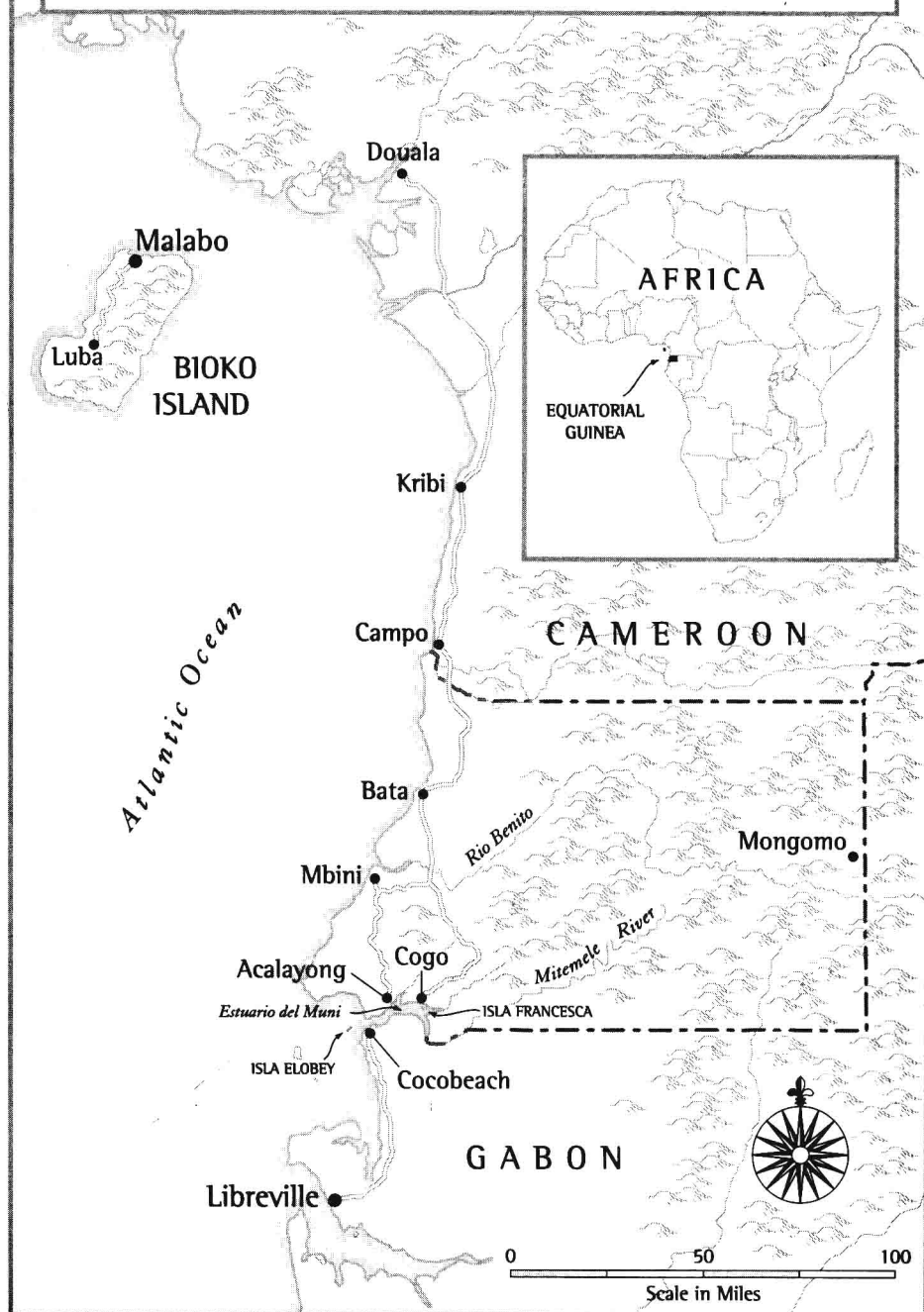
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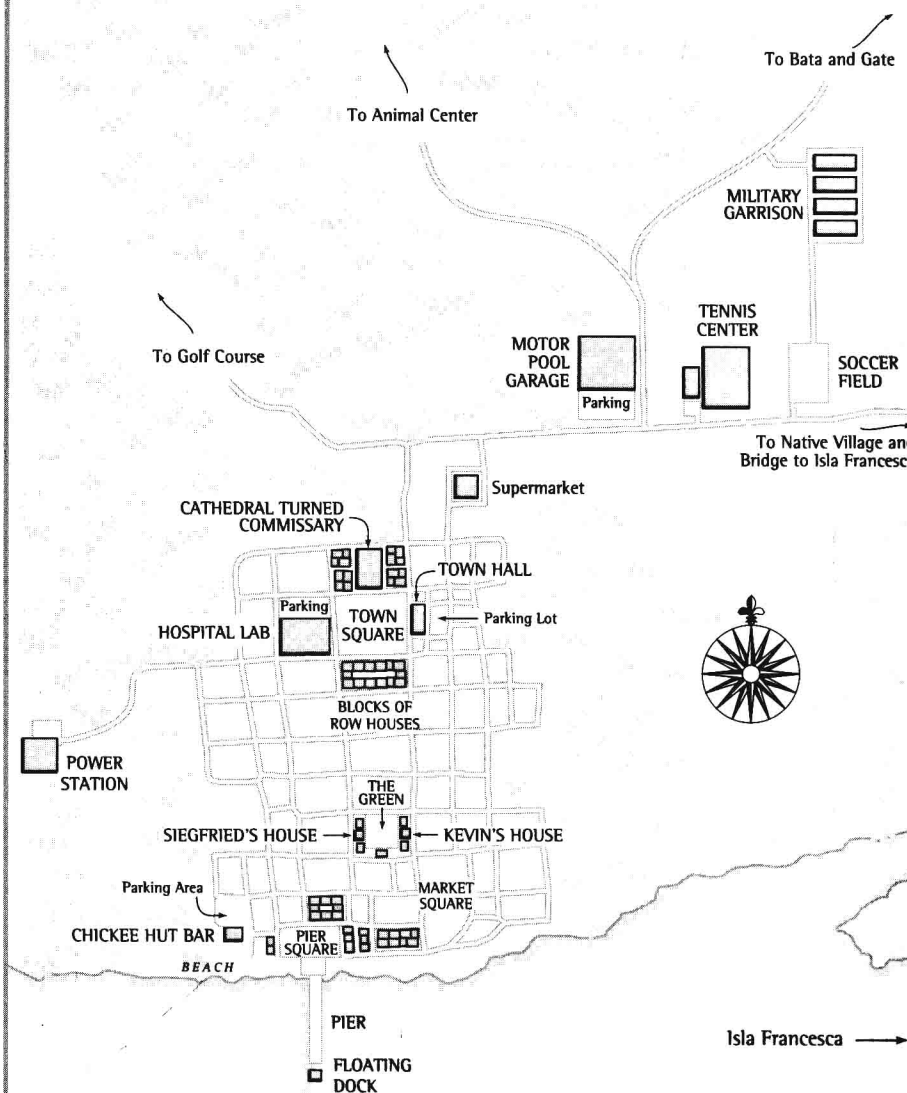
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Suffolk County, New York*

EQUATORIAL GUINEA



C O G O



Estuario Del Muni

CHROMOSOME 6

P R O L O G U E

MARCH 3, 1997

3:30 P.M.

COGO, EQUATORIAL GUINEA

GIVEN a Ph.D. in molecular biology from MIT that had been earned in close cooperation with the Massachusetts General Hospital, Kevin Marshall found his squeamishness regarding medical procedures a distinct embarrassment. Although he'd never admitted it to anyone, just having a blood test or a vaccination was an ordeal for him. Needles were his specific *bête noire*. The sight of them caused his legs to go rubbery and a cold sweat to break out on his broad forehead. Once he'd even fainted in college after getting a measles shot.

At age thirty-four, after many years of postgraduate biomedical research, some of it involving live animals, he'd expected to outgrow his phobia, but it hadn't happened. And it was for that reason he was not in operating room 1A or 1B at the moment. Instead he'd chosen to remain in the intervening scrub room, where he was leaning against the scrub sink, a vantage that allowed him to look through angled windows into both OR's—until he felt the need to avert his eyes.

The two patients had been in their respective rooms for about a quarter hour in preparation for their respective procedures. The two surgical teams were quietly conversing while standing off to the side. They were gowned and gloved and ready to commence.

There'd been little technical conversation in the OR's except between the anesthesiologist and the two anesthesiologists as the patients were inducted under general anesthesia. The lone anesthesiologist had slipped back and forth between the two rooms to supervise and to be available at any sign of trouble.

But there was no trouble. At least not yet. Nonetheless, Kevin felt anxious. To his surprise he did not experience the same sense of triumph he had enjoyed during three previous comparable procedures when he'd exalted in the power of science and his own creativity.

Instead of jubilation Kevin felt a mushrooming unease. His discomfort had started almost a week previously, but it was now, watching these patients and contemplating their different prognoses, that Kevin felt the disquietude with disturbing poignancy. The effect was similar to his thinking about needles: perspiration appeared on his forehead and his legs trembled. He had to grasp the edge of the scrub sink to steady himself.

The door to operating room 1A opened suddenly, startling Kevin. He was confronted by a figure whose pale blue eyes were framed by a hood and a face mask. Recognition was rapid: It was Candace Brickmann, one of the surgical nurses.

"The IV's are all started, and the patients are asleep," Candace said. "Are you sure you don't want to come in? You'll be able to see much better."

"Thank you, but I'm fine right here," Kevin said.

"Suit yourself," Candace said.

The door swung shut behind Candace as she returned to one of the surgeries. Kevin watched her scurry across the room and say something to the surgeons. Their response was to turn in Kevin's direction and give him a thumbs-up sign. Kevin self-consciously returned the gesture.

The surgeons went back to their conversation, but the effect of the wordless communication with Kevin magnified his sense of complicity. He let go of the scrub sink and took a step backward. His unease was now tinged with fear. What had he done?

Spinning on his heels, Kevin fled from the scrub room and then from the operating suite. A puff of air followed him as he left the mildly positive pressure aseptic OR area and entered his gleaming, futuristic laboratory. He was breathing heavily as if out of breath from exertion.

On any other day, merely walking into his domain would have filled him with anticipation just at the thought of the discoveries awaiting his magic hand. The series of rooms literally bristled with hi-tech equipment the likes of which used to be the focus of his fantasies. Now these sophisticated machines were at his beck and call, day and night. Absently he ran his fingers lightly along the stainless-steel cowlings, casually brushing the analogue dials and digital displays as he headed for his office. He touched the hundred-and-fifty-thousand-dollar DNA sequencer and the five-hundred-thousand-dollar globular NMR machine that sprouted a tangle of wires like a giant sea anemone. He glanced at the PCR's, whose red lights blinked like distant quasars announcing successive DNA-strand doublings. It was an environment that had previously filled Kevin with hope and promise. But now each Eppendorf microcentrifuge tube and each tissue-culture flask stood as mute reminders of the building foreboding he was experiencing.

Advancing to his desk, Kevin looked down at his gene map of the short arm of chromosome 6. His area of principal interest was outlined in red. It was the major histocompatibility complex. The problem was that the MHC was only a small portion of the short arm of chromosome 6. There were large blank areas that represented millions and millions of base pairs, and hence hundreds of other genes. Kevin did not know what they did.

A recent request for information concerning these genes that he'd put out over the Internet had resulted in some vague replies. Several researchers had responded that the short arm of chromosome 6 contained genes that were involved with muscular-skeletal development. But that was it. There were no details.

Kevin shuddered involuntarily. He raised his eyes to the large picture window above his desk. As usual it was streaked with moisture from the tropical rain that swept across the view in undulating sheets. The droplets slowly descended until enough had fused to reach a critical mass. Then they raced off the surface like sparks from a grinding wheel.

Kevin's eyes focused into the distance. The contrast between the gleaming, air-conditioned interior with the outside world was always a shock. Roiling, gun-metal gray clouds filled the sky despite the fact that the dry season was supposed to have begun three weeks previously. The land was dominated by riotous vegetation that was so dark green as to almost appear black. Along the edge of the town it rose up like a gigantic, threatening tidal wave.

Kevin's office was in the hospital-laboratory complex that was one of the few new structures in the previously decaying and deserted Spanish colonial town of Cogo in the little-known African country of Equatorial Guinea. The building was three stories tall. Kevin's office was on the top floor, facing southeast. From his window he could see a good portion of the town as it sprawled haphazardly toward the Estuario del Muni and its contributory rivers.

Some of the neighboring buildings had been renovated, some were in the process, but most had not been touched. A half dozen previously handsome haciendas were enveloped by vines and roots of vegetation that had gone wild. Over the whole scene hung the perennial mist of super-saturated warm air.

In the immediate foreground Kevin could see beneath the arched arcade of the old town hall. In the shadows were the inevitable handful of Equatoguinean soldiers in combat fatigues with AK-47's haphazardly slung over their shoulders. As usual they were smoking, arguing, and consuming Cameroonian beer.

Finally Kevin let his eyes wander beyond the town. He'd been unconsciously avoiding doing so, but now he focused on the estuary whose rain-lashed surface looked like beaten tin. Directly south he could just make out the forested shoreline of Gabon. Looking to the east he followed the trail of islands that stretched toward the interior of the continent. On the horizon he could see the largest of the islands, Isla Francesca, named by the Portuguese in the fifteenth century. In contrast to the other islands, Isla Francesca had a jungle-covered limestone escarpment that ran down its center like the backbone of a dinosaur.

Kevin's heart skipped a beat. Despite the rain and the mist, he could see

what he'd feared he'd see. Just like a week ago there was the unmistakable wisp of smoke lazily undulating toward the leaden sky.

Kevin slumped into his desk chair and cradled his head in his hands. He asked himself what he'd done. Having minored in the Classics as an undergraduate, he knew about Greek myths. Now he questioned if he'd made a Promethean mistake. Smoke meant fire, and he had to wonder if it was the proverbial fire inadvertently stolen from the gods.

6 : 4 5 P . M .

B O S T O N , M A S S A C H U S E T T S

While a cold March wind rattled the storm windows, Taylor Devonshire Cabot reveled in the security and warmth of his walnut-paneled study in his sprawling Manchester-by-the-Sea home north of Boston, Massachusetts. Harriette Livingston Cabot, Taylor's wife, was in the kitchen supervising the final stages of dinner scheduled to be served at seven-thirty sharp.

On the arm of Taylor's chair balanced a cut-crystal glass of neat, single-malt whiskey. A fire crackled in the fireplace as Wagner played on the stereo, the volume turned low. In addition there were three, built-in televisions tuned respectively to a local news station, CNN, and ESPN.

Taylor was the picture of contentment. He'd spent a busy but productive day at the world headquarters of GenSys, a relatively new biotechnology firm he'd started eight years previously. The company had constructed a new building along the Charles River in Boston to take advantage of the proximity of both Harvard and MIT for recruitment purposes.

The evening commute had been easier than usual, and Taylor hadn't had time to finish his scheduled reading. Knowing his employer's habits, Rodney, his driver, had apologized for getting Taylor home so quickly.

"I'm sure you'll be able to come up with a significant delay tomorrow night to make up," Taylor had quipped.

"I'll do my best," Rodney had responded.

So Taylor wasn't listening to the stereo or watching the TVs. Instead he was carefully reading the financial report scheduled to be released at the

GenSys stockholders' meeting scheduled the following week. But that didn't mean he was unaware of what was going on around him. He was very much aware of the sound of the wind, the sputtering of the fire, the music, and alert to the various reporters' banters on the TVs. So when the name Carlo Franconi was mentioned, Taylor's head snapped up.

The first thing Taylor did was lift the remote and turn up the sound of the central television. It was the local news on the CBS affiliate. The anchors were Jack Williams and Liz Walker. Jack Williams had mentioned the name Carlo Franconi, and was going on to say that the station had obtained a videotape of the killing of this known Mafia figure who had some association with Boston crime families.

"This tape is quite graphic," Jack warned. "Parental discretion is recommended. You might remember that a few days ago we reported that the ailing Franconi had disappeared after his indictment, and many had feared he'd jumped bail. But then he'd just reappeared yesterday with the news that he'd struck a deal with the New York City's DA's office to plea-bargain and enter the witness-protection program. However, this evening while emerging from a favorite restaurant, the indicted racketeer was fatally shot."

Taylor was transfixed as he watched an amateur video of an overweight man emerge from a restaurant accompanied by several people who looked like policemen. With a casual wave, the man acknowledged the crowd who'd assembled and then headed to an awaiting limousine. He assiduously ignored questions from any journalists angling to get close to him. Just as he was bending to enter the car, Franconi's body jerked, and he staggered backward with his hand clasping the base of his neck. As he fell to his right, his body jerked again before hitting the ground. The men who'd accompanied him had drawn their guns and were frantically turning in all directions. The pursuing journalists had all hit the deck.

"Whoa!" Jack commented. "What a scene! Sort'a reminds me of the killing of Lee Harvey Oswald. So much for police protection."

"I wonder what effect this will have on future similar witnesses?" Liz asked.

"Not good, I'm sure," Jack said.

Taylor's eyes immediately switched to CNN, which was at that moment about to show the same video. He watched the sequence again. It made him wince. At the end of the tape, CNN went live to a reporter outside the Office of the Chief Medical Examiner for the City of New York.

"The question now is whether there were one or two assailants," the reporter said over the sound of the traffic on First Avenue. "It's our impression that Franconi was shot twice. The police are understandably chagrined over this episode and have refused to speculate or offer any information whatsoever. We do know that an autopsy is scheduled for tomorrow morning, and we assume that ballistics will answer the question."

Taylor turned down the sound on the television, then picked up his drink. Walking to the window, he gazed out at the angry, dark sea. Franconi's death could mean trouble. He looked at his watch. It was almost midnight in West Africa.

Snatching up the phone, Taylor called the operator at GenSys and told him he wanted to speak with Kevin Marshall immediately.

Replacing the receiver, Taylor returned his gaze out the window. He'd never felt completely comfortable about this project although financially it was looking very profitable. He wondered if he should stop it. The phone interrupted his thoughts.

Picking the receiver back up, Taylor was told that Mr. Marshall was available. After some static Kevin's sleepy voice crackled over the line.

"Is this really Taylor Cabot?" Kevin asked.

"Do you remember a Carlo Franconi?" Taylor demanded, ignoring Kevin's question.

"Of course," Kevin said.

"He's been murdered this afternoon," Taylor said. "There's an autopsy scheduled for the morning in New York City. What I want to know is, could that be a problem?"

There was a moment of silence. Taylor was about to question whether the connection had been broken when Kevin spoke up.

"Yes, it could be a problem," Kevin said.

"Someone could figure out everything from an autopsy?"